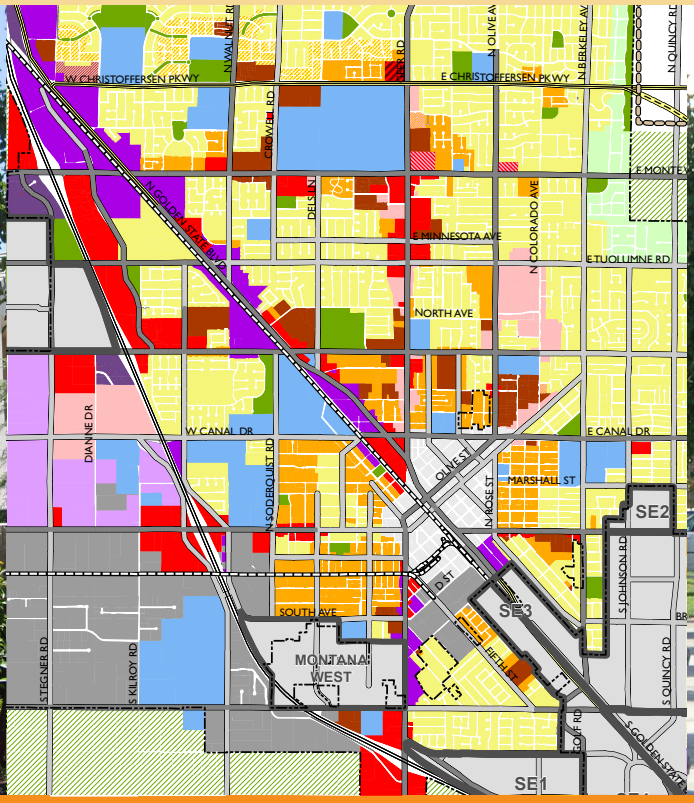
TURLOCK GENERAL PLAN

Final Environmental Impact Report

SCH NO. 2010122096



August 2012

CITY OF TURLOCK INC. 1908

TURLOCK GENERAL PLAN

Final Environmental Impact Report

SCH NO. 2010122096

August 2012

Prepared by

DYETT & BHATIA
Urban and Regional Planners

In association with

Onmi-Means, Transportation Planners and Engineers
West Yost Associates
Economic & Planning Systems
Charles Salter Associates

for the City of Turlock

Contents

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1 Introduction

This Program Final Environmental Impact Report (EIR) has been prepared by the City of Turlock (City) in accordance with the California Environmental Quality Act (CEQA). The City is the lead agency responsible for ensuring that the proposed Turlock General Plan (General Plan) complies with CEQA.

PURPOSE

The Final EIR includes the Draft EIR and this document, which includes Comments on and Responses to Comments on the Draft EIR, and minor corrections and clarifications to the Draft EIR. It is intended to disclose to City decision makers, responsible agencies, organizations, and the general public, the potential impacts of implementing the proposed General Plan. This program level analysis addresses potential impacts of activities associated with implementation of the General Plan, which are described in Chapter 2: Project Description, of the Draft EIR.

The primary purpose of the Final EIR is to revise and refine the environmental analysis in the Draft EIR, published May 30, 2012, in response to comments received during the 45-day public review period. The review period for the Draft EIR (State Clearinghouse No. 2010122096) was from June 5 to July 20, 2012. This document, combined with the Draft EIR, constitutes the Final EIR on the project. This Final EIR amends and incorporates by reference the Draft EIR, which is available as a separately-bound document from the City of Turlock Planning Division, 156 South Broadway, Suite 120, in Turlock, and also available online at: http://www.gpupdate.turlock.ca.us/documents.html#eir.

The Draft EIR contains some impacts that are significant and unavoidable despite extensive mitigating policies, specifically impacts to traffic and circulation, agricultural resources, climate change and greenhouse gases, air quality, and noise. Other potentially significant impacts can be avoided or reduced to levels that are less than significant through implementation of the policies identified in the Draft EIR.

ORGANIZATION

This document contains the following components:

- Chapter 2 lists all of the agencies and individuals that submitted written comments on the Draft EIR; reproduces all comments and provides a unique number for each EIR comment in the page margin.
- Chapter 3 provides responses to comments, numbered, and in order according to the comments in Chapter 2.

- Chapter 4 lists revisions to the Draft EIR by chapter and page, in the same order as the revisions would appear in the Draft EIR. Additional tables and graphics appear at the end of this chapter, also in the same order that they would appear in the Draft EIR.
- Appendix A lists revisions to the Draft General Plan.

PROCESS

Upon publication of the Final EIR, the City Council will hold a public hearing to certify the EIR and to consider adoption of the proposed General Plan. The City Council will determine the adequacy of the Final EIR, and, if determined adequate, will certify the document as compliant with CEQA. For impacts identified in the EIR that cannot be reduced to a level that is less than significant, the City must make findings and prepare a Statement of Overriding Considerations for approval of the Project if specific social, economic, or other factors justify the proposed Project's unavoidable adverse environmental effects.

If the City decides to approve the proposed Project for which the Final EIR has been prepared, it will issue a Notice of Determination.

Copies of the Final EIR have been provided to agencies and other parties that commented on the Draft EIR or have requested the Final EIR. The Final EIR is also available at the City of Turlock Planning Division, 156 South Broadway, Suite 120, in Turlock and the City's website at: http://www.gpupdate.turlock.ca.us/documents.html#eir.

2 Comments on the Draft EIR

This chapter contains copies of the comment letters and oral comments received on the Draft EIR of the proposed General Plan. A total of 10 comments were received during the 45-day comment period. Additionally, oral comments were heard at a public open house on the Draft EIR, on June 14, 2012. Each comment letter is numbered, and each individual comment is assigned a number in the page margin. Responses to each comment are provided in Chapter 3 of this document. Please note that only comments on the Draft EIR are addressed in this Final EIR. Where comments are on the merits of the proposed General Plan rather than on the Draft EIR, this is noted in the response. Where appropriate, the information and/or revisions suggested in these comment letters have been incorporated into the Final EIR. These revisions are included in Chapter 4 of this document.

TABLE 2-1: COMMENTS RECEIVED ON THE PROPOSED TURLOCK GENERAL PLAN DRAFT EIR

Letter #	*Date*	*Agency/Organization*	*Commenter*
Public Agencies (Federal, State Regional, Local) (A)			
A1	June 12, 2012	Native American Heritage Commission	Dave Singleton, Program Analyst
A2	June 14, 2012	California Valley Miwok Tribe	Silvia Burley, Chairperson
A3	July 16, 2012	California Department of Fish and Game	Jeffrey Single, Regional Manager
A4	July 19, 2012	Stanislaus LAFCO	Marjorie Blom, Executive Officer
A5	July 20, 2012	San Joaquin Valley Air Pollution Control District	Dave Warner, Director of Permit Services
A6	July 20, 2012	Stanislaus Council of Governments	Charles Turner, Associate Planner
A7	July 23, 2012 *(received after close of comment period)*	California Department of Conservation	Molly A. Penberth, Manager
Organizations/Individuals (B)			
B1	July 15, 2012		Milton Trieweiler
B2	July 18, 2012		Juan R. and Jessie M. Orosco
B3	July 20, 2012		Dennis Doo and Claudia Silva-Doo
B4	July 20, 2012	California Clean Energy Committee	Eugene S. Wilson
B5	July 20, 2012		Michael F. Schmidt
B6	July 20, 2012		Juan R. and Jessie M. Orosco (follow-up to July 18 comments)
Oral Testimony (C)			
C1	June 14, 2012	Public Open House	Various

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Comment A1

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

7/16/12 Deer

June 12, 2012

RECEIVED
JUN 14 2012
STATE CLEARING HOUSE

Ms. Debra Whitmore, Planner
City of Turlock
155 E. Broadway, Suite 120
Turlock, CA 95380

Re: SCH#2010122096; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the **"Turlock General Plan Update;"** located in the City of Turlock; Stanislaus County, California.

Dear Ms. Whitmore:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC did not conduct a Sacred Lands File (SLF) search within the 'area of potential effect (APE} in the absence of United Stated Geological Service (USGS) coordinates.

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

A1-1

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American

contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

A1-2 Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq*. and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

A1-3 Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

A1-4 Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

A1-5 To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

A1-6 Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Comment A2

June 14, 2012

Ms. Debra A. Whitmore
Deputy Director of Development Services/Planning Division
156 S. Broadway, Suite 120
Turlock, California 95380-5454
dwhitmore@turlock.ca.us

Re: CVMT Comments Regarding: SCH 201022096 (DEIR) for the City of Turlock – General Plan Update, proposed project located in Stanislaus County, California.

Dear Ms. Whitmore;

This letter is in response to an email (dated 06/13/2012, sent by Ms. Dorinda Siseth) in regards to SCH 201022096 (DEIR) for the City of Turlock – General Plan Update, proposed project located in Stanislaus County, California.

The tribe is of the understanding that the proposed project is comprised of 17, 460 acres or 27 square miles of both incorporated and unincorporated land bearing relation to the City of Turlock's future growth. The proposed General Plan is being offered because the City of Turlock is in need of an updated General Plan that can accommodate projected population growth, provide for jobs and economic development over the next 20 years. As of this writing, the California Valley Miwok Tribe has no issue with the proposed SCH 201022096 (DEIR) for the City of Turlock – General Plan Update, proposed project located in Stanislaus County, California.

Comments:

A2-1 The Tribe's only concern is that, since Miwok Indians regularly lived and traveled through this proposed project area, there is a heightened possibility that historic Miwok artifacts could be found, Therefore, the Tribe is requesting that it be kept apprised of Miwok artifacts if any are found at the proposed project site.

With Respect,

/s/
Silvia Burley, Chairperson
s.burley@californiavalleymiwoktribe-nsn.gov

CC: Ms. Dorinda Soiseth via email: DSoiseth@turlock.ca.us

Note: Due to the high cost of postage, and being that our Tribe oversees 10 counties, the Tribe will respond to this inquiry and future inquiries via email. If you need or require an originally signed hard copy, please provide a stamped, self-addressed envelope. Thank You!

.....
California Valley Miwok Tribe
10601 N. Escondido Pl.
Stockton, CA 95212
Tribal Office: (209) 931-4567
Fax: (209) 931-4333

http://www.californiavalleymiwoktribe-nsn.gov

DEPARTMENT OF FISH AND GAME
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.dfg.ca.gov

CHARLTON H. BONHAM, Director

Comment A3

July 16, 2012

Debra Whitmore
Turlock Development Services Planning Division
156 South Broadway, Suite 120
Turlock, California 95380

Subject: Draft Environmental Impact Report
Turlock General Plan Update
SCH No. 2010122096

Dear Ms. Whitmore:

The California Department of Fish and Game (Department) has reviewed the Draft Environmental Impact Report (EIR) for the Turlock General Plan Update. The City of Turlock is updating its General Plan, the policy document that guides future growth and development in the City. The State of California requires every city and county to have a comprehensive general plan, identifying current and future needs and establishing policy direction for the areas of land use, housing, transportation, open space, conservation, safety, and noise. Turlock's General Plan also covers issues of infrastructure, growth management, urban design, public facilities and services, and economic development. The purpose of this Project is to update the existing General Plan to accommodate and guide growth and development through 2030. The Project site includes the City of Turlock bounded by Taylor, Waring, Verduga, Harding, Commons, and Washington roads.

The Department has concerns regarding the potential of future development allowed by the Project to impact the State threatened Swainson's hawk (*Buteo swainsoni*). In order to adequately assess any potential impacts to this species, a protocol-level survey may need to be conducted for each development project that will subsequently be tiered off of the finalized City of Turlock General Plan. Surveys should be conducted by a qualified wildlife biologist at the appropriate timing no more than 30 days before beginning Project-related activities. Survey results can then be used to identify any avoidance, minimization, and mitigation measures and inform permitting needs. Our specific comments follow.

Department Jurisdiction

Trustee Agency Authority: The Department is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact plant and wildlife resources. Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used under CEQA (Division 13 (commencing with Section 21000) of the Public Resources Code).

Responsible Agency Authority: The Department has regulatory authority over projects that could result in the "take" of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code Section 2081. If the Project could result in the "take" of any species listed as threatened or endangered under the California Endangered Species Act (CESA), the Department may need to issue an Incidental Take Permit (ITP) for the Project.

Stream Alteration: The Department also has regulatory authority with regard to activities occurring in streams and/or lakes along with riparian habitat associated with, and supported by the features, that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 *et seq.* For additional information on notification requirements, please contact our staff in the Stream Alteration Program at (559) 243-4593.

Water Pollution: Pursuant to Fish and Game Code Section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. The Regional Water Quality Control Board also has jurisdiction regarding discharge and pollution to "Waters of the State" including storm water runoff into surface waters.

It is possible that without mitigation measures this Project could result in pollution of a "Waters of the State" from increased road, parking, stormwater runoff, or construction-related erosion. This could impact the fish and wildlife resources associated with the surface waters within and adjacent to the Project site including but not limited to: increased sediment input from structure and road runoff; toxic runoff from household chemicals, runoff from irrigated agriculture operations, and impairment of wildlife movement along riparian corridors.

Bird Protection: The Department has jurisdiction over actions which may result in the disturbance or destruction of active nest sites or the unauthorized "take" of birds. Sections of the Fish and Game Code that protect birds, their eggs and nests include sections 3503 (regarding unlawful "take," possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the "take," possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful "take" of any migratory nongame bird).

Potential Project Impacts and Recommendations

Riparian Habitat and Wetlands: Riparian habitat and wetlands are of extreme importance to a wide variety of plant and wildlife species. Riparian habitat and wetlands are known to exist within the proposed Project area along the Turlock Main Canal, Upper Lateral No. 6, and other surface water bodies located within the Project area. The Department considers projects that impact these resources as significant if they result in a net loss of acreage or habitat value. The Department has a no-net-loss policy regarding impacts to wetlands. When wetland habitat cannot be avoided, impacts to wetlands should be compensated for with the creation of new habitat, preferably on-site, on a minimum of an acre-for-acre basis. Potential impacts to special status resources posed by wetland creation should also be considered. Wetlands that have been inadvertently created by leaks, dams or other structures, or failures in man-made water systems are not exempt from this policy.

A3-1

A3-2

In addition, we also recommend delineating all surface waters and wetlands with the following minimum no-disturbance buffers:

- A 250-foot no-disturbance buffer from the high water outside edge around all marsh wetlands, vernal pools, and swales.
- The riparian vegetation along waterways should be protected with a 200-foot no-disturbance buffer delineated from the high water mark of each surface water body.
- A 100-foot no-disturbance buffer around the high water mark of each surface water channel that has no riparian vegetation.

A3-3

Depending upon what Project-related activities are proposed in these areas, larger buffers may be warranted to avoid impacts. Wetlands should also be designated on a site map included in the environmental documents prepared for this Project, and the size of the buffers should be clearly delineated both on the map and in the text of the mitigation measures.

Nesting Birds: The trees, shrubs, and grasses within the City of Turlock Project area likely provide nesting habitat for songbirds and raptors. If ground-disturbing activities must occur during the breeding season (February through mid-September), surveys for active nests should be conducted by a qualified biologist no more than 10 days prior to the start of the disturbance activities. The Department recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species; a 500-foot no-disturbance buffer around migratory bird species; and a ½-mile no-disturbance buffer from listed species and fully protected species until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

A3-4

Swainson's Hawk (SWHA): This State threatened species may nest in the large trees scattered throughout the the City of Turlock. If specific project activities are to take place during the normal bird breeding season (February 1 through September 15), the Department recommends that a qualified biologist conduct surveys for nesting raptors in all potentially suitable trees following the survey methodology developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC, 2000) prior to commencing Project-related activities. Additional pre-construction surveys for active nests should be conducted by a qualified biologist no more than 10 days prior to the start of construction and during the appropriate time to maximize detectibility. Should an active SWHA nest be found, a minimum no-disturbance buffer of ½ mile should be delineated until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. If such a buffer cannot be implemented, and work will occur during the avian nesting season, consultation with the Department should occur well in advance of ground-disturbing activities. These recommendations should be included as required mitigation measures in the final EIR prepared for this Project.

A3-5

Potential Project-related impacts to SWHA foraging habitat should be mitigated, regardless of whether or not "take" will occur. SWHA generally forage within 10 miles of their nest tree, and more commonly within 5 miles of their nest tree. Due to the loss of suitable foraging habitat that will occur incidental to agricultural use, mitigation measures compensating for the loss should be included in the CEQA document. The Department's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (DFG, 1994) recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. The Department gives the following recommendations:

- Projects within 1 mile of an active nest tree should provide a minimum of one acre of habitat management (HM) land for each acre of development authorized.

- Projects within 5 miles of an active nest but greater than 1 mile should provide a minimum of 0.75 acres of HM land for each acre of urban development authorized.

- Projects within 10 miles of an active nest tree but greater than 5 mile from an active nest tree should provide a minimum of 0.5 acres of HM land for each acre of urban development authorized.

More information on survey and monitoring protocols for sensitive species can be found at the Department's website (www.dfg.ca.gov/wildlife/nongame/survey_monitor.html). If you have any questions on these issues, please contact Jim Vang, Environmental Scientist, at the address provided on this letterhead or by telephone at (559) 243-4014 extension 254, or by email at jvang@dfg.ca.gov.

Sincerely,

for Jeffrey R. Single, Ph.D.
Regional Manager

Literature Cited

CDFG, 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo Swainsoni*) in the Central Valley of California. California Department of Fish and Game.

SWHA TAC, 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee, May 31, 2000.

Comment A4

Stanislaus
LAFCO
LOCAL AGENCY FORMATION COMMISSION

1010 TENTH STREET, 3RD FLOOR
MODESTO, CA 95354

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FAX: (209) 525-7643
www.stanislauslafco.org

July 19, 2012

Debra Whitmore, Deputy Director, Planning
City of Turlock
156 S. Broadway, Suite 120
Turlock, CA 95380

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT – CITY OF TURLOCK GENERAL PLAN UPDATE

Dear Ms. Whitmore:

Thank you for the opportunity to review and comment on the City's Draft Environmental Impact Report (DEIR) for the City of Turlock General Plan Update. LAFCO policy encourages cities and Stanislaus County to adopt general plans, policies, and agreements which protect farmland outside urban boundaries, encourage compact and efficient growth, and avoid unnecessary conversion of farmlands.

Much of the information provided in the CEQA documentation can also be utilized to meet other LAFCO application requirements, including preparation of a Municipal Service Review (for any future Sphere of Influence expansion). These LAFCO requirements were also outlined in our previous response letter regarding the project's Notice of Preparation, dated January 18, 2011 (attached). The following additional comments are provided for the City's consideration:

1. Sphere of Influence (SOI) – As the Project Description (page 2-3) states that, "the City will apply to LAFCO to expand the SOI to match the extent of planned urban development as part of the General Plan Update." Although a specific, proposed Sphere of Influence expansion is not identified at this time, LAFCO Staff notes that there is a small area northeast of the Waring Road / East Hawkeye Avenue intersection that is currently considered within the City's Sphere of Influence but lies outside the City's Study Area Boundary (and as such, does not have a General Plan land use designation). As one of the factors LAFCO considers is consistency with a City's General Plan, LAFCO will request clarification regarding this area during any future Sphere of Influence update.

A4-1

2. Fire Services – As the DEIR notes, subsequent annexations outside the City's limits but within the study area would be served by the City's Fire Department and detached from the special districts providing fire services in these areas (including Turlock Rural Fire Protection District, Keyes Fire Protection District, and Denair Fire Protection District). Likewise, Commission policies recognize that city spheres take precedence over those of rural fire districts. With regards to these districts, LAFCO will require the loss of tax revenue and any detrimental effect to the districts be addressed prior to application for annexation. Pursuant to LAFCO policy, the Commission will deny proposals that would result in significant unmitigable adverse effects upon other service recipients or other agencies servicing the affected area unless the approval is conditioned to avoid such impacts. The identification of the amount of property tax loss to the districts and their anticipated service cost savings would be helpful in assessing the effects of the annexation and detachment.

A4-2

3. Agricultural Resources – The Agricultural and Soil Resources section of the DEIR (page 3.1-2) identifies 7,541 acres of farmland in the Study Area (the majority of which is considered "Important Farmlands"). Later in this section, the DEIR states that development under the proposed General Plan could result in a permanent conversion of approximately 1,986 acres of farmland to urban uses, the majority of which is classified by the State's Farmland Mapping and Monitoring Program as Prime Farmland. According to the General Plan, the remaining 5,500+ acres of agricultural land within the Study Area is expected to remain in agricultural use at the end of the planning period. It is presumed that the impacts to this remaining area will be addressed during a future General Plan amendment and/or Sphere of Influence expansion request (which would then require further CEQA review). A4-3

   LAFCO is currently considering adoption of an agricultural preservation policy that, in its draft form, requests that agencies demonstrate a reduced impact to agricultural resources upon application to LAFCO for annexation or expansion of a Sphere of Influence. The City's DEIR describes many policies that are consistent with LAFCO goals, including prioritizing infill development within existing city limits, compact development, and buffers. The City is encouraged to retain these proposed policies throughout the adoption of the Final EIR and General Plan Update. A4-4

4. Disadvantaged Unincorporated Communities – Senate Bill 244 (Wolk, 2011) requires LAFCOs, as of July 1, 2012, to consider the present and future need for public facilities and services by disadvantaged unincorporated communities upon updating a city Sphere of Influence. The Municipal Service Review factors, as found in Government Code Section 56430 (and on page 3.2-8 of the DEIR) have similarly been updated to reflect this new requirement. A4-5

   SB 244 also prohibits approval of city annexations greater than 10 acres that are contiguous to a disadvantaged unincorporated community unless the city applies to annex the disadvantaged unincorporated community as well (with limited exceptions). This may affect future annexations involving an unincorporated island that also meets the criteria of a disadvantaged unincorporated community, as SB 244 would require the entire area be included in the annexation (as opposed to proposals that "chip away" at an island, based on property owner interest).

Presentation to the Commission

Stanislaus LAFCO has encouraged cities during their general plan update process to schedule a presentation before the Commission. In the past, this has been valuable in obtaining the Commission's comments prior to finalizing any general plan policies relating to the sphere of influence and annexation, as well as, developing a proposed sphere of influence boundary line for the Commission's consideration. If you would like to meet to discuss this matter further or to schedule a presentation before the Commission, please call me at your earliest convenience.

Should you have any questions regarding the above comments, please contact our office.

Sincerely,

Marjorie Blom

Marjorie Blom
Executive Officer

Attachment: LAFCO response letter to NOP dated January 18, 2011

Stanislaus
LAFCO
LOCAL AGENCY FORMATION COMMISSION

1010 TENTH STREET, 3RD FLOOR
MODESTO, CA 95354

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FAX: (209) 525-7643
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January 18, 2011

Debra Whitmore, Deputy Director, Planning
City of Turlock
156 S. Broadway, Suite 120
Turlock, CA 95380

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT – CITY OF TURLOCK GENERAL PLAN UPDATE

Dear Ms. Whitmore:

Thank you for the opportunity to review and comment on the City's Notice of Preparation of a Draft Environmental Impact Report (EIR) for the City of Turlock General Plan Update. LAFCO policy encourages cities and Stanislaus County to adopt general plans, policies, and agreements which protect farmland outside urban boundaries, encourage compact and efficient growth, and avoid unnecessary conversion of farmlands. The following comments are provided for the City's consideration, as Lead Agency in the preparation of the EIR:

Agricultural Resources

One of LAFCO's main charges, as put forth by the Legislature, is to protect and promote agriculture. The redesignation of land to a use other than Agriculture on an agency's general plan tends to prematurely cease the use of the land for agricultural purposes. The Williamson Act is considered a mechanism to preserve agricultural land both in the short and long term. The City's EIR should discuss the location of these lands as it relates to possible phasing, general plan policies, development, and financing scenarios which would preserve the agricultural viability of this land as long as possible.

Although it is unknown if a sphere of influence modification will be proposed with the General Plan update, the territory proposed for inclusion in the City's proposed General Plan Update includes prime farmland and numerous lands under active Williamson Act contracts. It should be noted, that Government Code Section 56426.5 prohibits LAFCO from approving a change to a sphere of influence if that territory is under a Williamson Act Contract, unless it makes certain findings.

According to the Notice of Preparation (NOP) the General Plan Study Area includes approximately 17,460 acres, including the City's existing limits (10,701+/- acres). While no specific mitigation measures have yet been identified to offset or reduce the impacts related to the conversion of agricultural lands, the City is strongly encouraged to include such mitigation measures in the EIR. For example, mitigation measures which encourage the use of agricultural conservation easements or other mechanisms for the direct loss of agricultural land should be considered in order to lessen the impact of the loss of important farmland.

Public Services and Facilities

The EIR should discuss what specific measures will be implemented to improve and/or maintain the current level of services (e.g. water quality and quantity, wastewater infrastructure and

capacity, adequate police and fire protection) prior to expansion of the City's boundaries. This information can also be utilized to prepare the "Plan for Services" required by LAFCO policy and State Law (Government Code Section 56653), which requires information on the present and future level of services, and evidence that the annexing agency can at least maintain the current level of public services already provided within its boundaries.

Sphere of Influence Policies

Although the subject Notice of Preparation does not indicate whether or not the City intends to request a proposed Sphere of Influence (SOI) revision following adoption of the Turlock General Plan Update, LAFCO offers the following comments regarding SOI policies.

Government Code Section 56076 defines a sphere of influence as "a plan for the probable physical boundaries and service area of a local agency, as determined by the commission". It is an area within which a city or district may expand, over an undefined period of time, through the annexation process. In simple terms, a sphere of influence is a planning boundary within which a city or district is expected to grow at some future time.

LAFCO will designate a Sphere of Influence line for each local agency that represents the agency's probable physical boundary and includes territory eligible for annexation and the extension of that agency's services within a zero to twenty-year period. LAFCO shall also designate a Primary Area line for a local agency, which represents the agency's short-term growth area. Areas within an adopted Primary Area shall be eligible for annexation and extension of urban services within a zero to ten-year period.

Territory not in need of urban services, including open space, agriculture, non-protested, or protested and not upheld Williamson Act contracted lands, shall not be assigned to an agency's sphere of influence, unless the area's exclusion would impede the planned orderly and efficient development of this area. LAFCO policy states that sphere amendments will not be approved if there is sufficient alternative land available for annexation within the existing SOI.

City/County Meeting

An expansion of the sphere of influence triggers a requirement for City of Turlock representatives to meet with the County to discuss the proposed sphere and explore methods to reach agreement on its boundaries, development standards, and zoning requirements within the sphere.

If an agreement is reached, LAFCO is required to give great weight to that agreement in the consideration of any proposed sphere of influence. If no agreement is reached, an application may be submitted and the Commission shall consider a sphere of influence for the City consistent with adopted policies.

Municipal Service Review

In accordance with Commission policies and Government Code Sections 56425 and 56430, when updating a Sphere of Influence, a Municipal Service Review (MSR) must be prepared.

Although the MSR may be prepared before the Commission's consideration of a sphere of influence expansion, the EIR should include the preparation of the MSR as it relates to the overall General Plan update.

The MSR requires the consideration of several factors such as: 1) growth and population projections for the affected area; 2) present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies; 3) financial ability of agencies to provide services; 4) status of, and opportunities for, shared facilities; 5) accountability for community service needs, including governmental structure and operational efficiencies; and 6) any other matter related to effective or efficient service delivery, as required by Commission policy.

Sphere of Influence Plan

In order for the Commission to establish a sphere of influence, a Sphere of Influence Plan, which outlines the City's probable 20-year service area boundaries, service capabilities and financing for development within the territory, is required. The City is expected to provide the required information and develop the plans based on their own specific situations and expertise regarding their services, infrastructure, and financing plans to provide the necessary services.

The Commission utilizes these documents in determining the sphere of influence and developing written determinations with regard to that sphere (Government Code Section 56425), with respect to each of the following:

1. The present and planned land uses in the area, including agricultural and open-space lands.
2. The present and probable need for public facilities and services in the area.
3. The present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide.
4. The existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency.

The Sphere of Influence Plan also guides the Commission in the review of subsequent annexation proposals to the City.

General Comments

- The Study Area Boundary Map (Figure 2) is difficult to read and/or ascertain how the proposed boundary aligns with existing parcels and/or roadways.

Presentation to the Commission

The Commission has encouraged cities during their general plan update process to schedule a presentation before the Commission. In the past, this has been valuable in obtaining the Commission's comments prior to finalizing any general plan policies relating to the sphere of influence and annexation, as well as, developing a proposed sphere of influence boundary line for the Commission's consideration. If you would like to meet to discuss this matter further or to schedule a presentation before the Commission, please call me at your earliest convenience.

Sincerely,

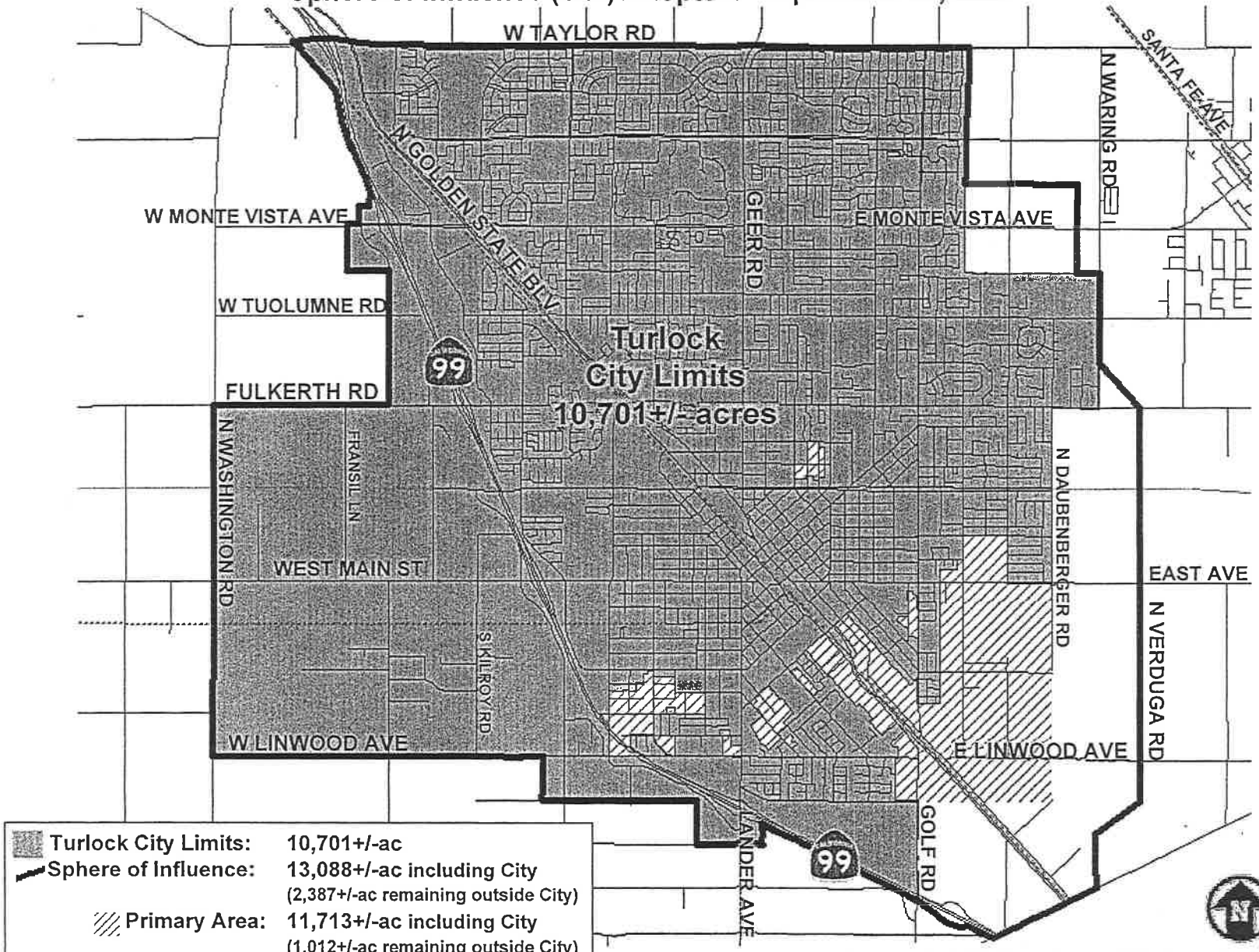
Marjorie Blom

Marjorie Blom
Executive Officer

Attachment: Boundary & SOI Map for the City of Turlock (Dec. 31, 2010)

Turlock

Sphere of Influence (SOI) Adopted: September 26, 2007



Source: *LAFCO Files, County GIS, Dec. 31, 2010*

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

July 20, 2012

Comment A5

Debra Whitmore
City of Turlock
Development Services / Planning
156 S. Broadway, Suite 120
Turlock, CA 95380-5454

Project: City of Turlock General Plan Update (SCH #2010122096)

District Reference No: 20120330

Dear Ms. Whitmore:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Environmental Impact Report (EIR) for the City of Turlock General Plan Update. At full buildout, the project would include a population increase of 55,700, supported by an additional 20,600 residential units and 32,000 jobs. The District offers the following comments:

1. Nearly all development projects within the San Joaquin Valley Air Basin, from general plans to individual development projects have the potential to generate air pollutants, making it more difficult to attain state and federal ambient air quality standards. Land use decisions are critical to improving air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence transportation needs and motor vehicle emissions are the largest source of air pollution. The District greatly appreciates the City's efforts to make land use decisions that have proven benefit for air quality and to support the implementation of various District programs, rules and regulations.

A5-1

2. Policies 8.1-j , 8.1-l , and 8.1-u require coordination between the City, the District, and project proponents to reduce potential impacts of future development projects. The District offers the following recommendations for the implementation of the CEQA process:

   - To reduce City staff time in responding to applicant inquiries regarding District programs and processes, such as Indirect Source Review (ISR), eTRIP, dust control, permitting, etc., the District recommends that CEQA referral documents

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

include applicant contact information: District receipt of the applicant information will allow District staff to contact developers directly and assist them in understanding how to reduce project related impacts on air quality and how to complete the appropriate application process.

- CEQA referral documents should include a project summary detailing, at a minimum, the land use designation, project size, and proximity to sensitive receptors and existing emission sources.

- CEQA referral documents should be submitted to the District's CEQA Division located at the District's Central Office. To minimize paper consumption and help expedite project review, the District recommends that CEQA referrals be submitted via e-mail at CEQA@valleyair.org.

- The District recommends that the City provide a copy of District comments to the applicant.

3. Policies 8.1-r and 8.1-s requires the City to support the District's efforts to promote public awareness and be an active partner in the District's "Spare the Air" program. The District appreciates the City's support and continued efforts to educate the public on the impacts that personal choices have on the valley's air quality. The District agrees that education is a key component of improving air quality in the San Joaquin Valley. The District has a variety of publications available to the public, including compliance assistance bulletins and brochures on the District's grant and incentive and Healthy Air Living (formerly "Spare the Air") programs. For more information on District publications and the availability of reference materials, please contact the District's Outreach and Communication Department staff by phone at (559) 230-6000 or e-mail at public.education@valleyair.org.

If you have any questions or require further information, please call Jessica Willis at (559) 230-5818.

Sincerely,

Dave Warner
Director of Permit Services

Arnaud Marjollet
Permit Services Manager

DW:jw

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • **FAX** 916 / 327-3430 • **TDD** 916 / 324-2555 • **WEBSITE** conservation.ca.gov

Comment A7

July 23, 2012

Ms. Debra Whitmore
City of Turlock
156 S. Broadway, Suite 120
Turlock, CA 95380

Subject: Draft Environmental Impact Report (DEIR) for the City of Turlock General Plan Update - SCH# 2010122096

Dear Ms. Whitmore:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the DEIR for the City of Turlock General Plan (GP) Update. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description

The proposed project is a comprehensive update and implementation of the City of Turlock GP. The planning area for Turlock encompasses the corporate city limits as well as portions of the County of Stanislaus' unincorporated land within the City's Sphere of Influence. Development of the Turlock GP within the proposed study area will result in the loss of 1,986 acres of farmland.

Division Comments

Per the 2010 Stanislaus Farmland Mapping and Monitoring Program (FMMP) map, almost the entire project site around the urbanized area of Turlock is designated as either Prime Farmland or Farmland of Statewide Importance. Prime Farmland alone consists of 56 percent of the farmland that will be converted to non-agricultural use. The conversion of both types of farmland is considered to be of importance under the California Environmental Quality Act (CEQA). Therefore, the Division recommends that the DEIR address the following items to provide a comprehensive discussion of potential impacts of the project on agricultural land and activities:

Agricultural Setting of the Area

A7-1

To help describe the full agricultural resource value of the soils on the site, the Department recommends the use of economic multipliers to assess the total contribution of the site's potential or actual agricultural production to the local, regional, and State economies. Two sources of economic multipliers can be found at the University of California Cooperative Extension Service and the United States Department of Agriculture (USDA).

General Plan Update Impacts on Agricultural Land

Land use conversion statistics derived from the Important Farmland Data Availability webpage[1] shows that Stanislaus County lost a total of 6,823 acres of Important Farmland from 1984 to 2010, with an annual average loss of 1,137 acres per year. This cumulative loss represents a significant and permanent impact to the agricultural resources of the County and the State, and shows why the remaining agricultural resources should be protected whenever feasible. In 2010, approximately $2,572,433 in farm sales was generated in Stanislaus County[2], which demonstrates the significance of agriculture to the economy of the region. The City of Turlock and the proposed GP update propose changes to and are adjacent to many large areas of Prime Farmland and Farmland of Statewide Importance. Any loss of this agricultural land should be avoided or mitigated whenever possible.

When determining the agricultural value of the land, it is important to recognize that the value of a property may have been reduced over the years due to inactivity, but it does not mean that there is no longer any agricultural value. The inability to use the land for agriculture, rather than the choice not to do so, is what could constitute a reduced agricultural value.

A7-2

Under California Code of Regulations Section 15064.7, impacts on agricultural resources may also be both quantified and qualified by use of established thresholds of significance. As such, the Division has developed a California version of the USDA Land Evaluation and Site Assessment (LESA) Model. The California LESA model is a semi-quantitative rating system for establishing the environmental significance of project-specific impacts on farmland. The model may also be used to rate the relative value of alternative project sites. The LESA Model is available on the Division's website at:

http://www.consrv.ca.gov/DLRP/qh_lesa.htm

[1] http://redirect.conservation.ca.gov/dlrp/fmmp/product_page.asp
[2] California Agricultural Resource Directory 2010-2011
http://www.cdfa.ca.gov/statistics/PDFs/ResourceDirectory_2010-2011.pdf

Mitigation

Although direct conversion of agricultural land is often an unavoidable impact under California Environmental Quality Act (CEQA) analysis, mitigation measures must be considered. The adoption of a Statement of Overriding Consideration does not absolve an agency of the requirement to implement feasible mitigation that lessens a project's impacts. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and, therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation. Rather, the criterion is feasible mitigation that lessens a project's impacts. Pursuant to CEQA Guideline §15370, mitigation includes measures that "avoid, minimize, rectify, reduce or eliminate, or compensate" for the impact.

As stated in the DEIR:

> *"The City of Turlock General Plan reflects a policy determination to allow a certain amount of growth to occur in the Study Area, which necessitates conversion of farmland to urban uses. The proposed Plan includes growth management policies to prevent the premature conversion of farmland, by encouraging infill development, by requiring new development to be built at considerably higher densities than Turlock has traditionally seen, and by phasing of new master planned growth areas. These policies are intended to offset the impact to agricultural land conversion to the greatest degree possible. Beyond limiting the amount of total growth permitted, which is proposed in the alternatives presented in Chapter 4, there are no feasible mitigation measures to agricultural land conversion that would also fulfill the objectives of and implement the General Plan as proposed."*

All potentially feasible mitigation measures which could lessen a project's impacts should be included in the DEIR. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible based on its elements. Because agricultural conservation easements have become more widely used by jurisdictions at the local and state level, they are an available mitigation tool that should be considered in the CEQA process.

A7-3

Although the County GP lacks mitigation measure policies that compensate for the loss of agricultural land, it does not mean that mitigation measures cannot be considered through the CEQA process. The Department believes that the GP policies do not adequately address the protection of agricultural land and agrees with mitigation measures proposed by farmland preservation groups. These measures would provide compensation by purchasing agricultural easements on farmland outside or adjacent to the proposed GP area, to replace or protect substitute farmland for land developed under the proposed GP.

The Department considers agricultural easements on existing farmland to be a viable, if not favored, mitigation mechanism. This is because their purpose is not to create new farmland (as indicated in the DEIR), but rather to protect the remaining agricultural resources from future impacts, thus providing the public with an insured benefit to compensate for the current loss.

The land immediately adjacent to the Study Area, being considered Important Farmland, could be a high priority for a conservation easement to control and direct future non-agricultural land uses.

The loss of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department recommends the use of permanent agricultural conservation easements on land of at least equal quality and size as compensation for the direct loss of agricultural land. Conservation easements will protect a portion of those remaining land resources and lessen project impacts in accordance with CEQA Guideline §15370. The Department highlights this measure because of its acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands need not be limited strictly to lands within the project's surrounding area, but should be roughly equivalent in proximity, acreage, and agricultural characteristics to the affected property.

The Department suggests that the County consider a mitigation program to be added to the General Plan based on the information provided or from other sources. This program can provide a list of options available when the CEQA process triggers a mitigation analysis for the development of Important Farmland, as defined by the FMMP.

One source that has proven helpful for regional and statewide land conservation is the California Council of Land Trusts (CCLT), which deals with all types of conservation easements. CCLT may provide the County with information regarding the mechanisms and fees associated with conservation easements, and with referrals to local land trusts. CCLT's web site is:

http://www.calandtrusts.org

Another source is the Division's California Farmland Conservancy Program (CFCP), which has worked with CCLT and other partners to secure conservation easements throughout the State of California. CFCP's web site is:

http://www.conservation.ca.gov/DLRP/CFCP/Pages/Index.aspx

The establishment of an easement in Stanislaus County is potentially feasible. If the City were not able to make arrangements for easement mitigation through one of these or many other land trusts operating in California, the Department would be glad to help. Of course, the use of

conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

Thank you for giving us the opportunity to comment on the Notice of Preparation for the City of Turlock General Plan Update. Please provide this Department with the date of any hearings for this particular action, and any staff reports pertaining to it. If you have questions regarding our comments, or require technical assistance or information on agricultural land conservation, please contact Meri Meraz, Environmental Planner, at 801 K Street, MS 18-01, Sacramento, California 95814, or by phone at (916) 445-9411.

Sincerely,

Molly A. Penberth, Manager
Division of Land Resource Protection
Conservation Program Support Unit

cc: State Clearinghouse

Comment B1

From: magictrain@aol.com
Sent: Sunday, July 15, 2012 3:52 PM
To: gpupdate@turlock.ca.us
Subject: Comments on the Turlock General Plan Draft EIR
Mayor and council members

We have studied and talked about our City of Turlock General Plan for three years now. As our elected officials and City leaders you must look forward into the future and plan for future generations. You should not be narrow minded and look just 15, 20 or 25 years ahead. This planning needs to be for 50, 75 and even 100 years into the future. I would hope you would look at this with an open mind. I would hope you would use your intellect and plan for our grand children and great grand children's future.

B1-1

All of us are aware that the earth is not getting any larger. All of us are aware that we only have so much prime farmland on our planet. That prime farmland is surrounding our great City, and you must have the foresight to preserve this farmland. I am asking you to support the plan to grow up and not out. Recently we heard from Joseph Minicozzi that upward and not outward is a smart revenue strategy for local governments. This is further reinforcement not to expand outward on to the farmland around us.

B1-2

A more condensed and denser population will also make the use of public transportation more practical. I believe the best option is to retain our existing general plan and not extent our City limits on any side of us. The second best option would be to expand to the South and not to the West, North or East at all. We should just retain the existing city boundaries in these prime farmland areas. We live on a finite planet and perpetual growth is a myth. We all know we do not have unlimited natural resources. Prime farmland is a natural resource.

B1-3

I was born in our City, I live and our City and I have had a business in our City for 36 plus years. You are our City leaders, would you please think this through and plan growth up and not out. Would you preserve the prime farmland surrounding our City for food production in the future?

Milton Trieweiler, Turlock resident

Comment B2

COMMENTS TO THE TURLOCK GENERAL PLAN EIR

Introduction: Date July 18, 2012

We have reviewed the Turlock General Plan Update, EIR and three Alternatives to the Proposed Plan. Alternative 1, Alternative 2, and No Project Alternative. We do have several questions regarding the method of implementation and other questions related to the EIR.

By all indications, we are facing many years of waiting for the economy to improve. In our opinion, the long term economic recession affecting the housing industry and filing for bankruptcy by California municipalities shows that Turlock should be very careful when recommending to the residents of Turlock to borrow and build to encourage unknown population growth. For example, recently Turlock borrowed $23 Million Dollars to expand the Water Treatment Plant to either sell services to Keyes, Ceres and Denair or for the expansion of growth that the City of Turlock has planned. That investment is in it's early stages and has not been proven as a necessity or a profitable endeavor. We have the Safety Building and Carnegie Hall and now this $23 Million-Dollar Loan for the Water Treatment Plant expansion. We need to learn by other Cities mistakes. Especially from the City of Stockton and The City of San Bernardino.

In the Southeast The Morgan Ranch Project is listed as SE 1. we were told that Morgan Ranch was already in it's own separate Master Plan and had to be totally completed before any of The Turlock Master Plan's phasing of master plans triggers for annexation would be ever annexed, touched or considered. I was told that The Morgan Ranch Master Plan was not in any implementation at this time. I was told that The Morgan Ranch Master Plan would take years to approve and build. In the General Plan EIR Draft Phase 1 states infill including Montana West, SE1, 2, and 3.

B2-1

- *Question: What is the correct information? It does not appear to be what we were told about when Phase 1 would trigger.*

- *Agriculture is the backbone industry of Turlock and the entire County. I might say, as well as California. "Conversion of farmland is not directly mitigate able, farmland cannot be replaced." Agriculture is the basis why employer's move to Stanislaus County. Blue Diamond for the nuts. Foster Farms to grow poultry, large acreage for pasture for Dairymen for milk and many products that are produced such as cheese, Sunnyside processes eggs that are consumed and are used for many other manufacturing industries etc etc. There are many sub industries that also move in to take care of the needs of these larger employers. Why on earth would we want to covert farmland to a shopping center a big Home Depot or even a school when the farmland would not be replaceable for the future?*

B2-2

- *Question: On Table 3 1-1 The Study area states that 17,460 acres is in the Study area, 4,998 acres Prime Farmland, 1740 acres Farmland of Statewide importance, 255 acres of Unique Farmland, 119 acres of Farmland of Local Importance, 144 acres Grazing Land, 286 acres Confined Animal Agriculture Total Farmland 7,541 acres. Is the 17,460 acres in the Study area the total acres that are triggered to be annexed to the City of Turlock City Limits? And only 7, 541 acres are Farmland?*

B2-3

- *Question: As I understand Agriculture will remain an important part of the regional economy. This is mentioned in the Turlock General Plan 3.1 Agriculture and Soil Resources. On page 3.1-5 states that we are going to lose $2.6 million dollars of direct agricultural income and $12.9 million including secondary impacts yearly if we proceed with the Turlock General Plan build out because agriculture productivity would be diminished in the thousands of acres and that will be annexed.*

B2-4

- *Please explain to us what advantage we have in building on this agricultural land?*

B2-5

- *Question: Please also explain on 3.1-5 "Economic losses would be offset by value of urban development and its multiplier effects". Explain this?*

- *On page 3.1-5 states that we are going to lose $2.6 million dollars of direct agricultural income and $12.9 million including secondary impacts yearly if we proceed with the Turlock General Plan because agriculture productivity would be diminished in the thousands of acres that will be annexed. What is the amount of*

B2-6

dollars we will recoup the value of urban development and its multiplier effects? How soon would this be realized?

- *Question: Land Use and Housing. 3.2-16 States, a Significant Land Use Impact would occur with the proposed General Plan if it would displace substantial numbers of existing housing units or people necessitating the construction replacement of housing elsewhere.*

B2-7

What impact would the plan have on the residents of the south east if a build out for a school and commercial complex on Verduga Road which would take over, as I understand, with the information on the Turlock General Plan, 7,541 acres of farmland which includes 4,998 acres of Prime Farmland for the entire build out?

B2-8

What estimate can you give me of what amount of Farmland is colored in Blue (Public) on the Map Alternative 1, SE 1, 2 & 3. What is the acreage at Verduga Road that will be a school and a commercial complex is in the future planning?

- *Question: There are several Tables in the EIR for the City of Turlock General Plan. For example 3.1 Agriculture and Soil Resources Table 3.1-1 Total Farmland for Study Area 17,460 acres, Table 3.2-1 Total Farmland for Study area 14,597 acres. Throughout the EIR and the Turlock General Plan there are Charts and Maps that confused us. These charts or maps could not be correct because they were dealing with the same information but had different numbers. Why is there a discrepancy in data that was populated in the Tables that have*

the information that is very important to make good judgments in the City of Turlock?

B2-9

What is the correct data?

- *Question: 3.2-1 States the proposed General Plan does not physically divide any established communities and would increase connectivity locally and regionally (considered Beneficial) Not true.*

B2-10

I attended the Turlock General Plan Workshop on June 14, 2012. The City of Denair residents out numbered the City of Turlock 15-1 at this meeting. The Denair residents were very anxious and upset about the plans to build to the East and Southeast. They were asking why Turlock kept grabbing land and what was City of Turlock's agenda with this behavior. They said, Turlock is trying to take over Denair. I read that the Denair Firemen and Fire Chief that attended the meeting were not acknowledged for their complaints on taking away budget or territory from their administrative area because it was not considered an environmental Impact. They explained that the residents of the east and southeast would be taken care of by Turlock Fire Department. It is still sad that the Firemen did not have a voice. The residents do come to Turlock for groceries and shopping. After this experience of not being heard at the workshop on June 14, 2012. They may now shop in Ceres or Atwater.

- *Question: Population will take care of itself. We don't need more stores or restaurants. Is the world going to end if we don't start working on preparing for growth? There are plenty of surrounding cities where people can reside. I noticed on Thor Street that a Senior Citizen or Adult high riser is being built on a large block lot down town. This is what we can do. We need to hear more from Joe Minicozzi.*

B2-11

- *Question: Hydrology and Water Resources 3.12-5 Regional Surface Water Supply Project. The City Of Turlock's share for a surface water treatment plant and water transmission mains would be at a $65 million cost. Also, the City of Turlock would need to construct a water storage reservoir, a booster pump station and water transmission lines within the City of Turlock at an additional $20 million cost. This surface water supply would*

provide over half of the cities future water needs and thus significantly reduce the cities use of ground water.

B2-12 . *What would be the significant reduction in ground water use?*

B2-13 . *Where is the $65 million and the $20 million coming from?*

B2-14 *Another error in the EIR Plan, is the non-renewal procedure of the Williamson ACT indicates on the Plan that the finalization is 10 years from initiating the date for non-renewal. It is my understanding that the completion date for non-renewal is 9 years from the initiating date of non-renewal for the Williamson Act non-contract. This knowledge of information or comments are important if you are attempting to take over agricultural land and it may be under the Williamson Act.*

This has been an unprecedented Recession. The Migration of people into municipality's changes for whatever reason. I can assure you that only God knows how many people will want to live in Turlock in the year 2030. It could be less than 70,000.

B2-15 *In addition, with all due respect, we do not believe that five people (Turlock City Council) should decide the fate of the Turlock General Plan. To make a decision to put us, our children and the future, residents in debt for many years. Remember, these 5 people were considering revitalizing downtown Turlock by creating a Wedding Ceremony Mecca. They should not singularly decide the destiny of the magnitude of this project in Turlock. We the people should asked to decide Yes or No on this important to project.*

Taking our rich agricultural land and building Home Depots, Office Max's, Targets and more fast food eateries that do not generate anything but huge parking lots and more area for our law enforcement to cover.

I attended speaker Joe Minicozzi, Urban3 llc ALCP Principal's presentation on June 26, 2012. Where he encouraged down town revitalization that will produce incredible increased tax revenues. His study has been proven and tested for over 15

years. His idea of Increasing property taxes and sales taxes means that families will not have to pay higher taxes for living in Turlock.

Intelligent good sound judgments when making decisions for growth will mean higher revenues for the city and preservation of agricultural land for our future. I recently contacted Joe Minicozzi and he sent the Email Below.

Email from Joe Minicozzi dated July 17 2012

"Is accepting more manufacturing than you have people to do the manufacturing?" If that is the question, off hand, I don't think that is a bad thing, as people will move to the jobs. The key is to keep the jobs from leaving once the people get there. That's the stickier problem. If the business is only showing up, because you are throwing money at it, than that may not be sustainable. Also, just because population grows does not mean one MUST blow through agricultural land in order to accomodate them. Additionally, y'all have a lot of space for housing in and around your downtown in a form of development that is consistent with housing that would be downtown. It may not be for you in particular, but there is a consumer demographic (around 30% of your population) that would choose that housing if it were available. Best that I can tell from my limited time there, I didn't see that much housing stock to meet that demand for your population. So even if you do create new economic investment, it isn't a mandate to consume new agricultural lands. Bigger questions should be asked on the underutilized land that is all sitting around, that is currently serviced by existing infrastructure. The key is to get those properties better utilized. Finally, couldn't some manufacturing be near downtown? That is unless its noxious or heavy industry, but for those lesser impact industries, why not place them where people can walk to lunch or walk/bike from their housing? Again, this isn't a mandate for everyone to walk/bike, but to provide that option for those that choose that. Because in the end, that will take some load off your infrastructure and make your community more efficient.
I hope that helps.
Regards,
Joe Minicozzi, AICP

Alternative 1 and Alternative 2 will impact Turlock, Stanislaus County. Because of the affects of farmland conversion, which is irreplaceable. And, those who are directing this project insist on building strip malls that become eye sores because the

merchants compete with each other for the debt ridden consumers and the debt ridden city.
Currently, there are numerous empty storefronts in all the strip malls in the City of Turlock.

I understand that we are currently under the 1992 Turlock General Plan. Which designated the direction of the City of Turlock to the East & Southeast in 1992. Actually, now, it may not be feasible to go to the Southeast because of a needed costly interchange for the residents to be able to have access to the State Highway. In addition, the City of Denair, neighbors to the East & Southeast, are upset about the annexation. There is a real visible hardship on these neighbors. We are impacting Denair's resident's lives and their plans for their families by insisting on building to the southeast. Adopting Alternative 1 or 2 will create disharmony and bitterness between our surrounding extended families in our neighboring cities.

B2-16

After reviewing the entire Turlock General Plan and the EIR we are compelled to select the No Project Alternative. So far that is the best alternative. Turlock has seven county Islands to incorporate in to the City. A whole lot of infill stabilization to correct, and many roads to build that are mentioned and planned in the 1992 General Plan. These roads were never built, widen or repaired.

Thank you for the opportunity to provide comments. I hope you will take our input seriously as we are very concerned citizens and both my wife and I have seen many mistakes by leadership throughout the decades. Please contact us if you need more clarification of information.

Juan R. and Jessie M. Orosco

209 634-8009
Date July 18, 2012

Comment B3

July 20, 2012

Dear Debbie:

B3-1

We are writing this letter to be on record opposing the proposed North/South Expressway as it now appears on the General Plan. The tentative plan runs at a diagonal through our property. We are farming almonds, and this plan would make that next to impossible to continue. We are VERY concerned at how little public information has been given to those of us that will be impacted by this tentative plan. All of our neighbors also need to be given the opportunity to express their feelings on this plan, as of right now the only way we have this information is from Turlock City News, and having friends send us e-mails. Please keep us informed when there are any meetings and deadlines concerning the expressway.

Thank you,

Dennis Doo
Claudia Silva-Doo

2880 N. Quincy RD
Turlock, CA. 95382
things2doo@att.net
209 765-5859

Comment B4

California Clean Energy Committee

July 20, 2012

Ms. Debbie Whitmore, Deputy Director
Development Services Department, Planning Division
City of Turlock
156 South Broadway, Suite 120
Turlock, California 95380-5454

Re: Turlock General Plan Environmental Impact Report
(SCH # 2010122096)

Dear Ms. Whitmore:

This letter will constitute comments by the California Clean Energy Committee on the Turlock General Plan Draft Environmental Impact Report (EIR).

The California Clean Energy Committee is a California non-profit corporation headquartered in Davis which seeks to promote energy conservation, greenhouse gas reduction, and the development of clean-energy resources throughout California. It actively supports the application of the California Environmental Quality Act (CEQA) to energy conservation and related project impacts.

Over 60 individuals in the Turlock area support the Committee's request that the city incorporate robust energy conservation and environmental stewardship into the new general plan. A copy of our petition is enclosed.

All notices regarding this project should be sent to 3502 Tanager Avenue, Davis, California 95616-7531. Please feel free to contact the undersigned for additional information.

Accompanying this letter there is a DVD containing electronic copies of all documents listed in the appendix to this letter in pdf format. Please let us know if you have any difficulty in displaying the documents.

We recognize and commend the city on its leadership on environmental issues. Based on a careful review of the proposed general plan and the EIR there are a number of areas

where either environmental impacts should either be more carefully evaluated or feasible mitigation measures should be adopted. The EIR should be revised and recirculated.

1. Agricultural Impacts

Impact 3.1-1 calculates the direct farmland conversion that would result from full implementation of the general plan in acres of important farmland that would be removed from agricultural production. It states that 1986 acres would be converted. (EIR at 3.1-9.) The city concludes that the plan would cause a significant and unavoidable impact to farmland.

The city identifies a number of policies that allegedly would "prevent excessive agricultural land conversion." (3.1-10) Those policies are described in sections 7.2, 3.1, and 3.2.
B4-1 Policy 7.2 vaguely calls for "limiting urban expansion to designated areas," requiring "densities higher than typical in recent years," and limiting annexation to land that is "needed for development of designated growth areas." The city's farmland mitigation policies are inadequate, ineffective, and unenforceable.

Farmland conversion impacts can be mitigated by establishing a farmland protection program requiring new development with significant farmland impacts to purchase farmland conservation easements of an appropriate size and in an appropriate location in the
B4-2 planning area or to pay an in lieu fee sufficient to acquire the necessary conservation easements. Funds from an in-lieu-fee program could also be used for regional marketing and other agricultural enterprise activities that help maintain or enhance agricultural viability thereby discouraging farmland conversion. The general plan should provide for creation and adoption of a farmland conversion impact program by ordinance.

The city can further mitigate farmland impacts by adopting a policy that public infra-
B4-3 structure investments such as roadway, sewer, flood control, and interchange expansions will be designed not to serve important farmland and that the city will work with StanCOG to implement that similar policies into regional plans.

The city can further mitigate farmland impacts by adopting, or putting before the voters,
B4-4 an urban growth limit. An urban growth limit is a regulatory line drawn around a city outside which little or no development can occur within a given time frame, usually 20 to 30 years.

Farmland impacts can also be mitigated by adopting a right-to-farm ordinance in the City
B4-5 of Turlock protecting agricultural operations in and adjacent to the city. There is considerable farmland within the city including almond, pasture, grain, hay, field, truck, berry, nut, fruit, and other crops.

B4-6 Agricultural mitigation should include revising zoning regulations to facilitate agricultural processing facilities and establishing an incentive program to encourage development of local processing capacity to serve local and regional markets and removing barriers to agricultural development by streamlining the permit processes for agriculture-supporting uses including, but not limited to, barns, farm stands, and agricultural processing plants. The city can mitigate agricultural impacts by creating a separate permitting fee structure for these types of projects and by promoting economic investment in agricultural improvements.

B4-7 Mitigation for agricultural impacts can include preparation of a comprehensive plan for roadway improvements that supports agricultural needs. Such a plan should include increased connectivity across major roads and U.S. 99, turnouts on agricultural roads, and strategies to reduce automobile conflicts with agricultural operations in and around the city.

B4-8 Mitigation should include developing an agricultural marketing plan for the City of Turlock that serves farmland within the area. The plan should address the area's specific needs and opportunities for agricultural economic growth, the marketing efforts the city could accomplish, and what the city can provide through development impact fees, grants and other sources. Specific growth areas can include creation of a locally-grown identity, ag tourism, and support for value-added production.

B4-9 The city should establish a farmland advisory committee consisting of successful small-scale producers to advise the city on small-scale value-added agriculture and pertinent land use, permitting, and other issues.

B4-10 The city treats its waste water to Title 22 standards, which is suitable for agricultural irrigation, and discharges that water into the San Joaquin River via the Harding drain. The city's agricultural mitigation should include steps to make its Title 22 water available to agriculture on a cost-effective basis.

B4-11 The foregoing conservation measures may reasonably be expected to reduce farmland conversion resulting from the revised general plan sufficiently to render the impact less than significant.

2. Energy Conservation

B4-12 The EIR should contain an analysis of the potential energy impacts of the project including an analysis of how the project will affect per capita energy consumption, reliance on fossil fuels, and the use of renewable energy resources with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Cost effective energy conservation should be required through the general plan.

B4-13 All potentially significant energy implications and potential energy conservation measures relevant to the project should be considered including energy consumed during construction and operation of the project, total energy requirements of the project by fuel type and end use, energy conservation equipment and design features, identification of energy supplies that would serve the project, and the energy consumed by daily vehicle trips.

B4-14 The EIR should identify the energy requirements of the project and energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, and maintenance. It should include a discussion of the requirements for additional energy capacity, effects on peak and base period demand, cumulative effects on energy resources, projected transportation energy use requirements, and overall use of efficient transportation alternatives. Potential energy efficiency impacts connected with transportation, sewage treatment, refuse disposal, water supply systems, and other major categories should be evaluated.

B4-15 The EIR should include a description of the energy setting in both a local and regional perspective emphasizing energy resources in the region such as solar and biomass. Potential renewable energy supplies should be identified and evaluated including solar, small and large wind, biomass, biogas, cogeneration, and small-scale hydro. Since urban development has considerable potential to restrict the development of renewable energy resources, local resources should be mapped and the potential constraints on implementation identified.

B4-16 Potential mitigation measures should be discussed for all phases of the project including the potential of siting, orientation, and design regulations to minimize energy consumption as well as transportation energy efficiency, water conservation, and solid waste reduction. Alternatives should be compared in terms of overall energy consumption and in terms of reducing the wasteful, inefficient, and unnecessary consumption of energy.

B4-17 The EIR should evaluate the secondary impacts of permitting further investment into fossil-fuel dependent projects and outdated energy distribution technologies and infrastructure. Such outdated project designs impact the overall interoperability of generation, storage, and demand regulation technologies and impose high retrofitting costs on utilities, government agencies, consumers, businesses and landlords.

B4-18 The EIR should reflect a comprehensive analysis of energy efficiency opportunities addressing both efficacy and feasibility issues and addressing feasible implementation strategies. The EIR should evaluate the project for consistency with the San Joaquin Valley Blueprint.

B4-19 Particular attention should be given to mandating the installation of proven and cost-effective solutions such as rooftop solar photovoltaic, ground source heat pumps, demand response, energy management systems, home energy monitors, micro-grid technology, advanced solar thermal water heating, passive solar design, cogeneration, absorption chillers, and energy education. Performance standards should be identified and mitigation should be made enforceable.

B4-20 The general plan should require a quantitative energy analysis from project proponents and establish a net-zero threshold for energy causing all projects with potentially significant energy impacts to scientifically evaluate, report on, and implement feasible energy efficiency measures, renewable generation, and storage. The EIR should evaluate the potential for an enhanced feed-in-tariff by TID.

B4-21 The EIR should quantify the potential energy savings from efficient transportation modes such as rail, transit, street cars, electric vehicles, bicycles, car-pooling, neighborhood electric vehicles (NEVs), etc. The EIR should evaluate the facilities and capacity for re-charging of electric vehicles and require that homes be EV-ready and that apartments provide for electric vehicle charging.

3. Greenhouse Gas Emissions

The climate impact analysis starts with certain data collected by the city. "Electricity delivery data" was obtained from the Turlock Irrigation District. An estimate of vehicle miles travelled (VMT) for existing conditions, for the proposed project, for the no project analysis, and for the alternatives was obtained from the transportation consultant, Omni-Means. The EIR uses "Turlock's current share of waste accepted at the Fink Landfill" for solid waste. (EIR at 3.5-17 - 19.)

B4-22 No supporting data has been provided to explain the factors contributing to the particular distribution of GHG emissions reflected or to compare them with similar communities leaving the reader with no relevant point of comparison to understand the local emissions circumstances. The analysis does not discuss agricultural, food processing, wastewater treatment, or high global-warming-potential emissions. GHG emissions connected with pumping water by TID should be included. Methane and nitrous oxide emissions from the wastewater treatment process should be included. The city should determine and factor in whether the university or other large users are using direct access. Off-road emission sources including lawn and garden equipment, construction emissions, and industrial equipment emissions should be included.

GHG emissions in the study area were calculated in terms of CO2 equivalent based on factors and data that were not disclosed. For GHG emissions related to electricity usage, the city states that it used factors obtained from the California Climate Action Registry (CCAR) and the "energy characteristics of the sub-regional grid." Emissions were calculated for residential electricity use and for commercial/industrial electricity use. This this data is not in the EIR, and no justification for the use of those factors was provided. The city should use emissions data from Turlock Irrigation District that reflects local conditions. The city should contact SJAPCD to obtain CO2 and CH4 emissions factors using the EMFAC model.

B4-23

CCAR factors were used to calculate transportation GHG emissions. This analysis allegedly took into account the impacts of changes in the land use pattern under the proposed plan and under the alternatives. There is no explanation of how this was done or statement of what data was used.

B4-24

Solid waste emissions were calculated using the U.S. EPA's LandGem model, but no data from these calculations is disclosed and the result of the calculations was not reported. The EIR fails to justify the use of the LandGEM model which estimates emissions rates for landfill gas from MSW landfills. The Fink Landfill is not located within the city, and the LandGEM model is inappropriate. Methane emission factors for lifetime decomposition associated with waste generation should be taken from the EPA WARM model in order to account for waste management practices and to develop mitigation measures. Current GHG emissions have been erroneously calculated using City of Turlock data for solid waste emissions, rather than data for the planning area.

B4-25

The EIR fails to provide discussion or data on the assumed population and employment increases that are the basis for the GHG's per capita and per service population analyses. The EIR provides no data showing how the 2020 and 2030 GHG targets were derived.

B4-26

The EIR refers to a number of state-wide GHG-reduction programs that are anticipated to reduce GHG emissions. It draws data about those programs from the AB 32 Scoping Plan. For example, the EIR notes that based on the adoption of a 33% RPS standard, the Scoping Plan calculated a reduction of 21.3 million metric tons of CO2 equivalent (MMTCO2E) from business-as-usual (BAU) by 2020. The EIR notes that under BAU, the Scoping Plan projected year 2020 transportation sector emissions of 225.4 MMTCO2E statewide. From this information, the EIR concludes that statewide GHG emissions from the building sector would fall by 9.5% as a result of the 33% RPS standard (21/225=9.5%). (EIR at 3.5-20.) These data are not carried forward in the EIR.

B4-27

The EIR "assumes that [statewide] emissions reductions will apply proportionately" in the study area, but there is no comparison of existing emissions to statewide patterns to corroborate this assumption.

B4-28

B4-29 The analysis uses undisclosed numbers and methods to factor in population growth and concludes that the study area will have a 4.4% reduction in GHG emissions compared to BAU in 2020 from the 33% RPS standard. As with the other reductions, the city fails to report any data on how these reductions were done.

B4-30 The EIR lists the local reductions in GHG emissions expected in each sector. (EIR at 3.5-20.) It then totals the percentages and concludes that total reductions will be 36.4% and 78.2%. This is misleading. Percentages of different numbers cannot be totaled.

The discussion of transportation impacts fails to recognize that annual per capita VMT is projected to increase. (EIR at 3.5-18.)

B4-31

	ANNUAL VMT PER CAPITA			
	Population	Total VMT	VMT per Capita	> 2008
2008	71,100	511,219,000	7,190	
2020	97,470	740,298,000	7,595	5%
2030	126,770	1,020,285,000	8,048	11%

(EIR at 3.5-46.) The city has failed to incorporate effective transportation mitigation.

B4-32 AB 32 does not constitute a plan or program or regulation containing specific requirements that would avoid the cumulative GHG problem. Nor will AB 32 reduce cumulative climate change impacts to a level that is not considerable. AB 32 relies on a business-as-usual baseline, rather than existing conditions. AB 32 does not provide a threshold for local GHG emissions. A cumulative impact analysis should be done based upon current conditions.

B4-33 The EIR concludes without explanation or supporting data that the per service population GHG emissions will be 6.8 in 2020 and 6.3 in 2030. Those numbers are compared to the level of per-service-population emissions identified in the AB 32 Scoping Report leading to a conclusion that the project will make a cumulatively significant contribution to climate change. (EIR at 3.5-21.)

The analysis has not been organized and presented in a fashion that is meaningful and useful to decisionmakers and to the public. The GHG analysis is inaccurate, incomplete, and unsupported and it must be revised and recirculated.

B4-34 The EIR contains a list of vague policies that are intended to help mitigate the climate impacts of the project. (EIR at 3.25-25 – 44.) The 19-page list of measures does not evaluate the measures and is not a useful informational document for the public and decisionmakers. The EIR fails to identify how these measures would change existing development practices and how any such changes would reduce GHG emissions. The pro-

posed measures are remote, speculative and undefined. The measures would not implement the CAPCOA recommendations. They are not enforceable. They defer the formulation of specific measures to the future and do not contain performance standards.

B4-35 The city should use CalEEMod, URBEMIS, INDEX or another recognized modeling tool to model GHG impacts and emission reduction strategies for the project. URBEMIS quantifies construction and operation emissions from land use projects. ICLEI provides the ICLEI Clean Air and Climate Protection Software which supports the development of local GHG inventories and climate mitigation planning. The Air Resources Board provides EMFAC which models GHG emissions for all motor vehicles operating on highways and local roads. The Air Resources Board provides OFFROAD that calculates GHG emissions from off-road vehicles. The EIR would improperly delay the evaluation and development of climate mitigation by providing that a strategic plan to mitigate GHG emissions may not be developed for three years from the general plan adoption.

The proposed GHG Emissions Reduction Plan is so undefined that it is impossible to gauge its effectiveness.

B4-36

INCREASE IN GHG EMISSIONS OVER BASELINE			
	Emissions in MT	Increase in MT	Percent Increase
2008	748,400		
2020	948,200	199,800	27%
2030	1,174,800	426,400	57%

(EIR at 3.5-21, 3.5-5.)

B4-37 There is no analysis of compliance with the S-3-05 target for year 2050 in the EIR and consequently the conclusions with respect to whether the project is compliant with S-3-05 are unfounded. GHG emissions have not been calculated for any of the alternatives.

B4-38 Among the mitigation measures that should be included is a requirement that all new residential and commercial construction in the city include solar photo-voltaic panels, except in those circumstances where it is infeasible. The mitigation should further require that all new construction include solar water heating or ground source heat pumps, except where infeasible. These measures are cost-effective and would significantly reduce GHG emissions connected with electricity and natural gas usage in new projects.

B4-39 An urban growth boundary should be established with related ordinances or programs to limit suburban sprawl. The city should consider the value of starting planning for a street car system, and it should evaluate the potential for rail connections over the life of the plan.

B4-40 The general plan should require new large-scale developments to purchase renewable energy credits or other forms of carbon credits to off-set climate impacts. The city should focus the renewable energy credit purchases on long-term energy contracts that make feasible building new renewable energy facilities within the planning area including solar rebates to city residents or funding for energy retrofits. This effort should be coordinated with TID. Alternatively, developers can be required to purchase Green-e certified RECs to mitigate climate impacts.

B4-41 Mitigation should include parking strategies including unbundling parking from rents and there should be a charge for parking at new commercial development. Free-parking policies should be evaluated and minimized insofar as feasible. The city should create a parking benefit district which invests meter revenues in pedestrian infrastructure, city core marketing and development, and appropriate public infrastructure upgrades and amenities to encourage development in the downtown. Performance parking should be adopted to promote frequent turn-over and to keep 15 percent of spaces empty at all times.

B4-42 The city should implement a housing overlay zone for transit centers and corridors providing an average residential density of 25 units per acre within one quarter mile of transit centers and an average of 15 units per acre within one quarter mile of transit corridors to encourage transit use. Affordable housing should be located in transit-oriented developments.

B4-43 The mitigation should include a review and adoption of infrastructure funding policies and developer fee scaling based on general plan policies such as redevelopment sites, mixed use projects, transit-orientation, and relative distance from the city core.

B4-44 Mitigation should include a city commitment to containerize all greenwaste collection including food scraps and yard waste and to either compost or digest that waste and to eliminate organic material from landfills and consequently to stop increasing landfill GHG emissions and wasting valuable compost material. The city is already using a three-container system including a 95-gallon "garden refuse" container that could be used to collect all organic material including food-scraps from homes and restaurants. The EIR fails to report the percentage of organics that are currently land-filled or to justify the continued land-filling of yard waste, food scraps, and organic material from food processing and other industrial sources.

B4-45 The climate mitigation should include annual tracking and reporting on the effectiveness of the climate mitigation. This should include an update of the GHG inventory every five years. Climate mitigation should be reviewed on a five year cycle to maintain currency with new technology.

B4-46

Further mitigation should include a commitment to upgrade the city's wastewater treatment facilities (WWTF) to include anaerobic digestion of biosolids including commercial food waste and fats, oil and grease for the production of biogas and combined heat and power (CHP) leading to greatly reduced energy costs for those facilities. Anaerobic digestion would allow the city to produce Class A biosolids reducing regulatory requirements and making disposal less expensive. The EIR fails to account for the energy or GHG impacts of the wastewater treatment process. The electrical cost of a a WWTF can be up to 25% of the total operating costs. Some WWTF are energy self-sufficient.

B4-47

The City of Turlock Building Department confirms that the city has adopted only the mandatory CalGreen requirements. Feasible mitigation for GHG emissions would include adopting local amendments to the California Green Building Standards Code to require buildings to be designed to use 15% less energy than the allowed energy budget established by the California Energy Code, to require new heated pools to be heated by renewable energy, to require all new buildings to be solar ready, and to require commercial buildings to comply with a feasible LEED certification. Pursuant to Public Resources Code section 25402.1(h)(2) a local enforcement agency may adopt more restrictive energy standards when they are cost-effective and approved by the California Energy Commission.

4. Health Impacts

B4-48

The EIR should identify and evaluate the effect of the project on physical activity, obesity, and chronic disease. Obesity has reached epidemic levels. The EIR should use the urban sprawl index to determine the extent to which the general plan will lead to greater or lesser physical activity.

Respectfully submitted,

Eugene S. Wilson

APPENDICES

Appendix 1	Ag Futures Alliance of Yolo County. Farmland Mitigation Principles (October, 2006).
Appendix 2	City of Davis, Agricultural Preservation Program (Nov. 1995).
Appendix 3	Heimlich, R. and Anderson, W., Development at the Urban Fringe and Beyond: Impacts on Agriculture and Rural Land (Jun. 2001).
Appendix 4	Stanislaus County, Stanislaus County General Plan Agricultural Element
Appendix 5	Institute for Local Self-Government, Farmland Protection Action Guide: 24 Strategies for California.
Appendix 6	Contra Costa County Code, Contra Costa County Code, Chapter 82-1 - 65/35 Land Preservation Plan.
Appendix 7	Greenbelt Alliance, Sustaining Our Agricultural Bounty (Mar. 2011).
Appendix 8	Wacker, M. et al, County Right-to-Farm Ordinances in California: An Assessement of Impact and Effectiveness (May, 2001).
Appendix 9	Solano County, General Plan Agricultural Element
Appendix 10	Solano County, Suisan Valley Agricultural Marketing Plan.
Appendix 11	Wong, H., Urban Growth Boundaries and Urban Limit Lines (Jan. 2006).
Appendix 12	Richter, K. & Sokolow, A, The Future of Solano County Agriculture: What County Government Can Do (Dec. 2007).
Appendix 13	Powers, B., Bay Area Smart Energy 2020 (Mar. 2012).
Appendix 14	California Energy Commission, Energy Aware Planning Guide.
Appendix 15	City of San Jose, Integrated Waste Management Zero Waste Strategic Plan (November, 2008).
Appendix 16	City of San Jose, City of San Jose Strategic Energy Plan (Spring, 2009).

Appendix 17 California Energy Commission, Home Builder's Case Study: Laureate, Ironcrest and Wayfarer - Roseville, CA

Appendix 18 California Energy Commission, Home Builder's Case Study: Wisteria - Rocklin, CA

Appendix 19 Building Industry Research Alliance, Seastar Communities: Sonata

Appendix 20 U.S. Department of Energy, Premier Oaks - Roseville, California.

Appendix 21 U.S. Department of Energy, Vista Montana, Watsonville, California - Moving Toward Zero Energy Homes.

Appendix 22 Woody, T., Now, Starter Homes Boast Solar Arrays, New York Times (Mar. 24, 2011.)

Appendix 23 U.S. Department of Energy, Case Study: Grupe - Carsten Crossings.

Appendix 24 U.S. Green Building Council, Toyota Motor Sales South Campus Office Development, Torrance,California.

Appendix 25 SunPower, Case Study: Macy's Go Solar and Improves Energy Efficiency in 28 California Stores with SunPower.

Appendix 26 SunPower, Case Study: FedEx Goes Solar with SunPower.

Appendix 27 U.S. Green Building Council, USGBC Project Profile: Emeryville Marketplace, Emeryville, California.

Appendix 28 U.S. Green Building Council, USGBC Project Profile, Jackson Square Redevelopment Initiative.

Appendix 29 U.S. Department of Energy, Energy Savers: The Economics of a Solar Water Heater (July, 2012).

Appendix 30 D. Kolozsvari & D. Shoup, Turning Small Change into Big Changes.

Appendix 31 J. Tumlin, Getting Parking Right (Aug. 2008).

Appendix 32 City of San Jose, San Jose Yard Trimmings Recycling Program (July, 2012).

Appendix 33 BioCycle, Energy Efficiency and Biogas Generation at Wastewter Plants (July, 2012).

Appendix 34 Public Works, Upgrading to Class A Anaerobic Digestion (Jan. 2006).

Appendix 35 Brown and Caldwell, Evaluation of Combined Heat and Power Technologies for Wastewater Facilities (Dec. 2010).

Appendix 36 U.S. EPA Region 9, Beyond Recycling-Composting Food Scraps and Soiled Paper (Jan. 2010).

Appendix 37 MSW Management, LandGEM: the EPA's Landfill Gas Emissions Model (Feb. 2012).

Appendix 38 U.S. EPA, User's Guide for WARM (July, 2012).

Appendix 39 Green Magazine, A Case Study: Ground-Source Heat Pumps (Feb. 11, 2010).

Appendix 40 Federal Energy Management Program, Geothermal Heat Pumps: Using the Earth to Heat and Cool Buildings (Sept. 1999).

Appendix 41 GeoExchange, Scenic St. George, Utah, Enjoys Low Energy Bills.

Appendix 42 GeoExchange, Hudson Valley Builder Features GeoExchange.

Appendix 43 U.S. DOE, How to Buy an Energy-Efficient Ground-Source Heat Pump (July, 2001).

Appendix 44 Oak Ridge National Laboratory, Assessment of National Benefits from Retrofitting Existing Single-Family Homes wiht Ground Source Heat Pump Systems (Aug. 2010).

Appendix 45 California Natural Resources Agency. Final Statement of Reasons for Regulatory Action (Dec. 2009).

Appendix 46 California Air Resources Board, Climate Change Scoping Plan (Dec. 2008).

Appendix 47 California Attorney General's Office, Climate Change, the California Environmental Quality Act, and General Plan Updates: Straightforward Answers to Some Frequently Asked Questions (2009).

Appendix 48 City of San Jose, The Envision San Jose 2040 General Plan EIR, App. K (2011).

Appendix 49 U.S. EPA, Guide to Purchasing Green Power (March 2010).

Appendix 50 California Air Pollution Control Officers Association, Model Policies for Greenhouse Gases in General Plans (June, 2009).

Appendix 51 California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures (August, 2010).

Appendix 52 San Joaquin Valley Air Pollution Control District, New California Emissions Estimator Model (CalEEMod) (July, 2012).

Appendix 53 South Coast Air Quality Management District, CalEEMod Technical Paper - Methodology Reasoning and Policy Development (July, 2011).

Appendix 54 Criterion Planners, INDEX Scenario Planning Software.

Appendix 55 ICF Jones & Stokes, URBEMIS - GHG Edition.

Appendix 56 Sacramento Metropolitan Air Quality Management District, CEQA Tools.

Appendix 57 Redwood City, New General Plan for Redwood City, Section 4.16 Greenhouse Gas Emissions (May, 2110).

Appendix 58 Bay Area Air Quality Management District, GHG Plan Level Guidance (May 2012.)

Appendix 59 City of Santa Monica, Green Building Standards Code.

Appendix 60 City of Mountain View, Application to CEC for Green Building Standards Code Local Amendments (April, 2011).

Appendix 61 City of Healdsburg, Ordinance Adopting by Reference Part 11 of the 1010 California Building Standards Code and Amendments Thereto (April, 2011).

Appendix 62 B. McCann & R. Ewing. Measuring the Health Effects of Sprawl (September 2003).

Appendix 63 Centers for Disease Control and Prevention. CDC Recommendations for Improving Health through Transportation Policy.

Appendix 64 American Public Health Association, The Hidden Health Cost of Transportation (May, 2010)

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

Page 1 of ______

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
Sandra Cisneros Date: 7/18/12	3770 Mira Sol DR Ceres CA	sandracisneros209 @yahoo.com
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Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
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Sonia Sanchez Date: 7/18/12	3001 Red Oak Turlock CA 95382	
BOB QUEVEDO Date: 7/18/2012	2528 BLACKWALNUT MODESTO, CAL.	
Sharee Felt Date: 7/18/12	2941 Carleton Dr. Turlock, CA 95382	
KATHY AGUILAR Date: 7/18/12	2182 ROYAL WOOD LN TURLOCK, CA 95380	
Jarmen Gvargis Date: 7/18/12	4229 Ferreira Ranch Dr Turlock, CA 95382	
DICK E. MOORE Date: 7/18/12	2280 E. CANAL DR TURLOCK, CA. 95380	
Sheila Scott Date: 7/18/12	555 Zinfandel St Los Banos CA 93635	

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
Diana Nevgren Date: 07.18.12	1400 N. Tully Rd Turlock, CA 95380	
Amanda Taylor Date: 7-18-12	1642 Brier rd Turlock, CA 95380	
Kassey Brackett Date: 7/18/12	261 Washington Ave Turlock, CA 95380	
Kathi Warden Date: 7/18/12	1220 Valley View Dr Turlock Ca. 95380	
Simo N Cordova 2878 Date: Turlock CA 95	381	
Diana Gonzalez 381 Date:	3949 N Kilroy Rd TURLOCK 95382	
Brad Ott Date: 7-18-12	1508 Link Rock Denair CA	
Juli Lang Date: 7-18-12	1200 N. Tully Rd #D124 Turlock CA 95380	

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

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We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
Wayne Rickey Date: 7-18-2012	4105 Cecilia Ct Denair 95316	
[illegible] Date: 7-18-2012	5042 Livingston Crossing Rd Livingston CA	
Cherelle Lambert Date: 7-18-12	4160 N. Olive Ave Turlock, CA 95382	
[illegible] Date: 7-18-12	2726 So Gratton Rd Denair, CA	
[illegible] Date:	2225 Castleview - Turlock - 95382	
Joanne Martinez Date: 7-18-2012		
Nicole Aguiniga Date: 7/18/2012	2670 Explorer Way Turlock, CA 95382	
Brittney Pores Date: 7/18/12	2385 Celebration Turlock CA	

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

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Name	Address	Email
Hannah Silva Date: 7/18/12	416 W Springer Dr Turlock CA 95382	hanali94@me.com
Elizabeth Lachin Date: 7-18-12	2205 Tokay Ave Turlock 95380	
Wendy Mendoza Date: 7-18-12	2167 Sorrel Dr. Turlock 95380	
Danielle Allen Date: 7/18/12	1050 Kiwi Ct. Merced, CA 95340	danielle_allen35@yahoo.com
Stephanie Kendle Date: 7-18-12	214 Paint Way Patterson, CA	
Randy Porter Date: 7-18-12	1269 Jodi Dr. Turlock, Ca. 95380	
Chris Hennesmaa Date: 7/18/12	2344 Shire Way Turlock, CA 95380	
Jonathan Hammonds Date: 07/18/12	2630 Rocking RD Ceres, CA	Jonhammonds@yahoo.com

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

Page 6 of ____

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
Daniel Thomason Date: 7-18-12	2373 High St. Atwater, CA, 95301	ucmerced1333@yahoo.com
Gina Bonnici Date: 7/18/12	4551 Countrywalk Turlock Ca 95382	ginabonnici@sbcglobal.net
Tracy Davis Date: 7/18/12	2324 Trotter way Turlock CA	
Jillian Romero Date: 7/18/12	1320 Kevin way Turlock, Ca.	
Meredith Dodge Date: 7/18/2012	1900 Wyndfair Turlock, CA	
Zac Sahlstrom Date: 07/18/2012	1001 Carleen Ct. Turlock, CA 95380	
Dmitriy Kozlov Date: 7/18/12	5424 Verbena ct Keyes, CA 95328	
Tammy Warren Date: 7/18/12	1690 Jeffery Dr Delhi ca 95315	kchcowboy@yahoo.com

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
Benjetta Harrison Date: 7/18/12	2690 Explorer Way Turlock, CA	
Bonnie Lusack Date: 7-18-12	3208 Berg Ave Denair, Ca 95316	
Cailey Heiler Date: 9/24/95	5313 Saddle creek ln modesto, Ca 95355	
Kenney Wright Date: 7/18/12	2131 Drew Av Turlock Ca 95382	
Ronald Barlow Date: 7/18/12	1491 Tramway Place Turlock CA 95380	
Ronald Smith Date: 7/18/12	3401 Gagosian Ct Modesto, CA 95356	
Juanita Doornbrack Date: 7/18/2012	2561 Roberts Rd Turlock Ca 95382	
Ryan Fan Date: 7/18/2012	One University Cir Turlock CA 95382	

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
7/18/12 Date: Dana Blum	1608 S. Johnson Turlock 95380	danaktorias@att.net
7.18.12 Date: Veda Sanchez	~~3602~~ 3602 Quincy Rd Denair. Ca. 95316	veda_Sanchez@yahoo.
Date: 7/18/12	3006 Silver Oak ct Turlock CA 95382	Johnson.max55@yahoo.com
Date:		
Date:		
Date:		
Date:		
Date:		

Petition for an Energy Efficient Plan
Turlock General Plan Draft EIR

We, the undersigned, support the effort of the California Clean Energy Committee that the City of Turlock require robust energy conservation and environmental stewardship in the Turlock General Plan and Environmental Impact Report:

Name	Address	Email
GARRY MCCORMICK Date: 7-18-12	1700 N. TULLY RD APT B147	
TROY AKERSON Date: 7/18/12	112 West Main St Apt 3 Turlock, CA	
Date: 7-18-12	1882 Winter Haven Dr. Turlock, CA	
Date:		
Date:		
Date:		
Date:		
Date:		

Comment B5

Debbie

I have been a resident at 1430 N. Daubenberger Rd. for several years. My understanding is that the city is planning to allow for a “compact mixed use neighborhood” to the east of Daubenberger Rd. and south of Hawkeye. I was born and raised here, and the current estate lots on the east side of Daubenberger have always been a natural boundary for the city of Turlock. I strongly object to “leapfrogging” over this long established boundary with the proposal of a high density development. I just learned of this a few hours ago, so admittedly I’m not up to speed on all the issues, however, I wanted to go on record as objecting to any high density development to the east of Daubenberger.

B5-1

Thank you, for your time and consideration.
Mike

Michael F. Schmidt
Certified Public Accountant
Schmidt, Bettencourt & Medeiros
865 Geer Road
Turlock, CA 95380
Voice: 209-668-4857
Fax: 209-669-0995
Email: mschmidt@sbm-cpa.com
Website: www.sbm-cpa.com

Comment B6

RE: Additional questions to the Turlock General Plan EIR Comments for Juan R. and Jessie M. Orosco Date 07/20/2012

The Turlock General Plan EIR Table 3.1 , Page 3.1-5 Agriculture and Soil Resources. Full question is on our Comments regarding the City of Turlock General Plan EIR.

- Please explain to us what advantage we have in building on this agricultural land?

B6-1

- *Follow-up Question: Please explain how achieving the goals and objectives of the Proposed General Plan are more desirable than preserving productive agricultural land?*

- Question: Please also explain on 3.1-5 "Economic losses would be offset by value of urban development and its multiplier effects". Explain this?

B6-2

Follow-up Question: Where is the development of jobs in other sectors of the community mentioned in the General Plan and what partnerships with educational institutions will be formed with the General Plan to prepare the local workforce for these jobs?

Regarding 3.4 Page 3.4-28-3-429 Operations-Related Emissions.

New Question or Follow Up to above. 3.4-29 The comment from the EIR on page 3.4-29 is as follows
Net annual mobile source emissions in the future to existing conditions would exceed the significance thresholds for PM10 and PM2.5 as a result of increased dust raised from paved Roadways with increased traffic, resulting in a significant impact. Further, this impact would be greater under the proposed Plan than under the No Project scenario because the proposed Plan would accommodate a larger population and more VMT. The proposed plan establishes a compact land use pattern and numerous policies intended to promote walking biking and transit use, and Policies supporting the application of dust suppression rules. Never the less, the impact is cumulatively considerable.

. Question: follow up and new question. Should the city

B6-3

continue this proposed plan without considering the above information and basically ignoring the information which will make our city's air

quality less desirable and unhealthy? All the mentioned or proposed band aids may be very expensive or ineffective in keeping the air quality from deteriorating. Shouldn't the city reevaluate this serious issue? We continue to elect to choose the No Project Alternative.

Comment C1

SUMMARY OF PUBLIC COMMENTS ON THE TURLOCK GENERAL PLAN DRAFT EIR

Public Open House

June 14, 2012

	#	*Comment*
C1-1	1	Why isn't there an alternative that evaluates expanding in the northwest only? [instead of southeast] Wouldn't that be environmentally superior?
C1-2	2	Turlock should not develop on Prime Farmland at all. Develop "up," not "out."
C1-3	3	Denair Fire Department – Does this plan come before LAFCO? By annexing county land, it will reduce the revenue of the Denair Fire District by about $5,000.
C1-4	4	Denair Fire Department – We also provide EMT services to this area.
C1-5	5	It seems that by developing in the southeast, you are going to cause increased carbon dioxide emissions as people drive from neighborhoods in the east to jobs in the west. Also, where will these people shop?
C1-6	6	Moved from the Bay Area; want to keep the areas as a small town. The city has taken over too much farmland.
C1-7	7	Why not focus on infill development – that will lessen the impacts on Denair.
C1-8	8	Don't grow at all. Turlock should keep its current General Plan. Focus on preserving agricultural land, reducing CO2 emissions. Work with what we have and build up. Why can't we have a no-growth option?
C1-9	9	There was a feasibility study done in the past on development in the southeast, which concluded that it would cost too much money. There should be a moratorium on growth.
C1-10	10	Freeze the city boundary and don't take over any more farmland. This EIR shows that we are decreasing quality of life. We need to think of our grandchildren. Perpetual growth is a myth. Recent studies show that growth does not pay its own way and will lead to financial meltdown for the City of Turlock.
C1-11	11	Planning Commission should recommend a freeze on development to the City Council. Agriculture is our most consistent industry. It would be a shame to reduce its capacity.
C1-12	12	Kingsburg has population control as a policy – why can't Turlock do that? We don't need to grow more before we fix the infrastructure in the current city; fix what we have.
C1-13	13	Does the General Plan contain any Agenda 21 material? That needs to be removed.
C1-14	14	I moved to Turlock because I like it – the small town separated from other communities. I can see Denair and see why they are concerned. Does the EIR address impacts on Denair? Also concerned that the alternatives do not address a Northwest-only option.
C1-15	15	If you want to grow, you must bring in the jobs.
C1-16	16	Denair Fire Department – We are trying to prevent a land grab. Denair Fire District is expected to lose $5,000 per year due to annexation of its territory. We need to have fee-sharing. There is a 15% unemployment rate now. Where are these new people going to work? We need private sector jobs too.
C1-17	17	Southeast Master Plan should be removed from the General Plan to avoid fiscal impact to the Denair Fire District.
C1-18	18	Turlock has plenty of empty houses due to foreclosure. There is no need to grow.
C1-19	19	The General Plan does not provide a buffer to Merced County. What will happen when houses are located immediately adjacent to the County line? The City will have no control over what Merced County does.

3 Response to Comments on the Draft EIR

This chapter includes responses to each comment, and in the same order, as presented in Chapter 2. The responses are marked with the same number-letter combination as the comment to which they respond, as shown in the margin of the comment letters.

Proposed General Plan policies are referenced in several responses below. During preparation of the Draft EIR and this Final EIR, additional policy measures and edits to proposed policies were identified to further reduce potential impacts. Throughout the following text and in the Draft EIR, policies marked with an asterisk are those that were introduced subsequent to the release of the October 2011 Public Review Draft General Plan. The policy number refers to the current policy that the new one will follow. For example, a policy labeled "3.2-c*" would follow the policy currently numbered 3.2-c in the October 2011 Public Review Draft. These policies, as well as revisions to any existing policies, and their updated language, are all included in the General Plan Errata memorandum was prepared to accompany the Draft EIR and the October 2011 Draft General Plan. The policy changes and other revisions described in that memorandum will be incorporated into the General Plan document for the Hearing Draft. Policies throughout the document will be renumbered at that time. Text additions are noted in underline and text deletions appear in ~~strikeout~~.

AGENCIES

A1: Native American Heritage Commission (NAHC)

A1-1: The comment indicates that the project proponent should make contact with the Native American tribes listed in the attachment in order to see if the proposed project would impact known cultural resources and obtain their recommendations. The comment also recommends *avoidance* as defined by CEQA Guidelines Section 15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2138.2 that requires documentation and data recovery of cultural resources. Pursuant to SB 18, the City of Turlock conducted Tribal Consultation and Sacred Lands File searches with the tribes identified at the outset of the General Plan Update process. The 90-day consultation period extended from June 3, 2009 to August 7, 2009. The sacred lands file did not contain any known cultural resources information for the Study Area, and no responses from any of the tribes were received during the consultation period.

A1-2: The comment provides further direction for projects under the jurisdiction of the National Environmental Policy Act (NEPA). The proposed Turlock General Plan does not meet that criterion, thus no further action is required for this EIR. However, specific projects under the General Plan may be subject to NEPA, and the proper procedure will be followed for those projects.

A1-3: The comment states that confidentiality of "historic properties of religious and cultural significance" should also be considered and may be protected if not eligible for the National Register of Historic Places. Policy 7.5-a in the proposed General Plan directs the city to protect significant cultural or archaeological resources in the Study Area that may be identified during construction. In addition, Policy 7.5-c states "Should archaeological or human remains be discovered during construction, work shall be immediately halted within 50 meters of the find until it can be evaluated by a qualified archaeologist. If it is determined to be historically or culturally significant, appropriate mitigation measures to protect and preserve the resource shall be formulated and implemented."

A1-4: The comment references sections of the California Government Code, Public Resources Code, and Health and Safety Code that provide provisions for inadvertent discovery of human remains. See A1-3.

A1-5: The comment states that in order to be effective, consultation on specific projects must be the result of an ongoing relationship between the lead agency and Native American tribes. As noted in the response to comment A1-1, the City of Turlock engaged in Tribal Consultation efforts as part of the General Plan Update process and is committed to continuing this outreach as subsequent projects are developed under the Plan. In addition, SB 18 consultation is required for all General Plan amendments; therefore, consultation will continue as the General Plan is changed over time.

A1-6: The comment again recommends "avoidance" of the project site where Native American burial sites are present. See response to comment A1-1 and A1-3.

A2: California Valley Miwok Tribe

A2-1: The comment requests that the California Valley Miwok Tribe be kept apprised of whether any Miwok artifacts are found at the project site. As described in Draft EIR Section 3.8, Cultural Resource, the proposed General Plan includes two policies that ensure that any discovered artifacts will be protected and that the appropriate tribe would be consulted upon discovery. Policy 7.5-a in the proposed General Plan directs the city to protect significant cultural or archaeological resources in the Study Area that may be identified during construction. In addition, Policy 7.5-c states "Should archaeological or human remains be discovered during construction, work shall be immediately halted within 50 meters of the find until it can be evaluated by a qualified archaeologist. If it is determined to be historically or culturally significant, appropriate mitigation measures to protect and preserve the resource shall be formulated and implemented." Finally, SB 18 consultation is required for all General Plan amendments, so the tribe will be notified at the time that any new amendments are proposed.

A3: California Department of Fish and Game (DFG)

A3-1: The comment states, "Riparian wetlands and habitat are known to exist in the proposed Project area along the Turlock Main Canal, Upper Lateral 6, and other surface water bodies located within the Project area." The City wishes to clarify that Upper Lateral 6 is actually located south of the Study Area, closer to the cities of Hilmar and Delhi. The only two surface water channels (canals) through the Turlock Study Area are Upper Lateral 3 (along Taylor Road) and Upper Lateral 4, which the comment refers to as the Turlock Main Canal. These canals are concrete lined to minimize seepage, and lack vegetation. The only other surface water bodies in the Study Area are stormwater drainage basins, most of which are intermittent (depending on rainfall), and several small freshwater ponds and emergent wetlands on agricultural properties. The majority of the storm drainage basins are co-located with public parks and are lined with turf. Wetlands are mapped on Draft EIR Figure 3.9-1. Storm drainage basins and TID laterals are shown on Draft EIR Figure 3.12-4.

A3-2: The comment recommends delineating surface water bodies with minimum no-disturbance buffers:

1. 250 feet from the high water outside edge around marsh wetlands, vernal pools, and swales
2. 200 feet from the high water edge of surface water bodies with riparian vegetation
3. 100 feet from the high water edge of surface water channels with no riparian vegetation

Regarding the first category, the Study Area does not contain any marsh wetlands or vernal pools. There are a number of intermittent storm drainage basins and swales located within public parks or other public rights of way, which tend to be vegetated with turf, but not native riparian vegetation. These are located in areas of the city that are already built out, and/or in public parks where no development shall occur.

The Study Area does not contain any surface water bodies with riparian vegetation (second category).

In the third category, as stated in response to comment A3-1, the only surface water channels in the Study Area are TID upper laterals 3 and 4 (along Taylor Road and Canal Drive, respectively). Where Upper Lateral 3 traverses the Study Area, the south side is already entirely built out (primarily as single family housing). The homes themselves are set back approximately 100 feet from the high water mark of the canal, but within that 100 foot distance is a paved multi-use trail, a landscaped parkway strip, and a local road. North of the canal, Taylor Road is immediately adjacent, followed by actively cultivated agricultural land that is outside of the Study Area boundary. While the EIR could show a 100-foot "no disturbance" buffer around Upper Lateral 3, it will not have the effect of limiting impacts as the area is already developed.

The same is true for the Turlock Main Canal, Upper Lateral 4, through the majority of the Study Area. Between SR 99 to west and the current city limits to the east (at Daubenberger Road), the area within 100 feet of the canal to both the north and south is already developed or impacted, with a divided roadway and multi-use trail. West of SR 99 to the western edge of the Study Area boundary, the design for the canal is specified in the Westside Industrial Specific Plan (WISP). Namely, a Class I multi-use path will parallel the canal, and the remaining area within the TID-owned right of way will remain undeveloped. Walls or landscaped buffer areas will separate the right of way from adjacent development, which will consist of the extension of Canal Drive and industrial development with appropriate setbacks. Recent development projects in the Turlock Regional Industrial Park (TRIP) have followed these specifications.

East of the current city limits, Upper Lateral 4 bisects the proposed master plan area Southeast 2. The conceptual land uses and infrastructure proposed for this area show Canal Drive being extended to the east, likely with the same configuration as it has through the city (a divided roadway with the canal and multi-use trail and landscaping in the median, respecting TID right of way property). Following this configuration, urban development would be set back from the canal by at least 60 to 80 feet on each side, but this would include the future roadway and bike path. Given the lack of habitat in this concrete, channelized waterway and the urban nature of existing and proposed development, the City does not believe that a 100-foot "no disturbance" buffer on each side of this canal is appropriate or necessary. In addition, wildlife such as birds will still have access to the canals, just as they do in other urbanized parts of the Study Area.

A3-3: As noted in response to comment A3-1 above, maps of the waterways and storm basins are included in the Draft EIR. Buffers are not specified, for reasons described in the response to comment A3-2.

A3-4: The comment provides recommendations to mitigate any impacts to nesting habitat for songbirds and raptors. In response, the City will add a policy to the Biological Resources section of the General Plan (Section 7.4), Policy 7.4-d* (which will also function as a mitigating policy in the EIR), requiring specific projects on greenfield sites under the General Plan that propose construction during the nesting season to conduct a survey by a qualified biologist and avoid/mitigate impacts accordingly. The text of the policy is included in Chapter 4 of this document and Appendix A: Revisions to the Draft General Plan.

A3-5: The comment provides recommendations to mitigate any construction-related impacts to Swainson's Hawk, a State threatened species. The comment also provides recommendations for Project-specific (on sites that have potential for suitable nesting habitat) mitigation for loss of Swainson's Hawk foraging land, which involve providing specified amounts of Habitat Management (HM) land for each acre of development in the event that active nests are found. In response, the City will add a policy to the Biological Resources section of the General Plan (Section 7.4), Policy 7.4-d**, (which will also function as a mitigating policy in the EIR), requiring specific projects under the General Plan that propose construction during the normal bird breeding season to conduct a survey by a qualified biologist and avoid/mitigate impacts accordingly. The text of the policy is included in Chapter 4 of this document and Appendix A: Revisions to the Draft General Plan.

A4: Stanislaus Local Agency Formation Commission (LAFCO)

A4-1: The comment requests that upon any future Sphere of Influence (SOI) update, the City provide clarification for a small area northeast of the Waring Road/East Fulkerth Road intersection that is within the City's current SOI, but not within the proposed Plan's Study Area, and thus does not have a General Plan land use designation and is not part of a proposed master plan area for future development. The General Plan assumes that the parcel's land use will remain Agriculture. Any changes to this area's land use will be considered when the SOI is next updated.

A4-2: The comment discusses annexations of areas currently served by rural fire districts that, upon annexation, would be served by the Turlock City Fire District. The comment requests that the amount of property tax loss to the rural districts and their anticipated service cost savings would be helpful to assess the impacts of detachment and annexation. The City understands LAFCO's concern and has received similar comments from the Denair Rural Fire District. No annexation is proposed at this time, but the City recognizes that a portion of Southeast Master Plan Area 2 falls within the Denair Rural Fire District's service area. The City and the Fire District will need to negotiate an agreement at that time; the City has already met with the Fire District and suggested that a general agreement be drafted in anticipation of future annexations. Prior to these agreements being finalized, the City cannot provide precise property tax loss and service cost savings numbers.

A4-3: The comment refers to the 5,500+ acres of agricultural land in the Study Area that are not proposed to be developed during the planning period, and presumes that impacts to this remaining area would be addressed with a future General Plan Amendment and/or SOI expansion request. The City has no plans to expand its SOI into this area, or to provide for any development of this agricultural land. The comment is correct that, prior to ever developing any such plans, the City would have to go through a new planning process.

A4-4: The comment encourages the City to retain its policies on agricultural preservation through the Final EIR and General Plan adoption, which align with LAFCO's priorities. The City appreciates LAFCO's support and intends to retain these policies, though as with any other policies in the document they are subject to City Council's approval and adoption.

A4-5: The comment corrects the regulatory language pertaining to Municipal Service Review factors found on page 3.2-8 of the Draft EIR, per Senate Bill 244 (Wolk, 2011) which updated Government Code Section 56430 on this topic. The revised statute took effect July 1, 2012. Revisions have been provided on page 3.2-8 of the Draft EIR. See Chapter 4 for revisions (page 4-1).

A5: San Joaquin Valley Air Pollution Control District (SJVAPCD)

A5-1: Comments noted. The City appreciates the Air District's acknowledgement of its efforts to improve air quality through land use and transportation planning. The City will communicate the District's requests for project-level CEQA referral documents to project applicants as appropriate.

A6: Stanislaus Council of Governments (StanCOG)

A6-1: Comment noted. The City appreciates StanCOG's acknowledgement that the proposed Plan and the alternatives are consistent with the San Joaquin Valley Blueprint and adequately address issues relating to mixed housing types and public transportation relative to AB 32 and SB 375.

A6-2: The comment recommends that all access into and out of industrial/commercial areas be designed to meet STAA standards and consider off-street truck parking. Policy 5.5-1 in the proposed Plan requires that truck routes and facilities are designed to meet STAA standards for intersections and turning movements, and policy 5.5-n encourages high-security off-street parking for tractor-trailer rigs in industrial areas.

A7: California Department of Conservation

A7-1: The comment recommends the use of economic multipliers to fully value agricultural land. The Draft EIR includes a calculation of agriculture's economic impact, including the use of multipliers, on page 3.1-5.

A7-2: The comment suggests the use of the California version of the USDA Land Evaluation and Site Assessment (LESA) Model for "establishing the environmental significance of project-specific impacts on farmland." The City appreciates the recommendation of this tool; however, the Draft EIR for the proposed General Plan evaluates impacts at a plan or programmatic level. This tool would be more appropriate for project-level EIRs that evaluate impacts of specific development proposals. It is not appropriate for use on an entire planning area.

A7-3: The Draft EIR explains that future development which will result from adoption of the General Plan Update will result in the loss of up to 1,986 acres of farmland, including 1,127 acres of prime farmland. The General Plan Update has been designed to minimize the loss of farmland by focusing development in specific, identified areas, and leaving significant other areas preserved for agricultural use, but this impact will still occur. The Draft EIR briefly explains that the purchase of agricultural easements on farmland outside or adjacent to the proposed General Plan area is not feasible mitigation as defined by the CEQA Guidelines (Section 15370), since it would not create any new farmland to replace lost farmland.

Comment A7-3 from the Department of Conservation's Division of Land Resource Protection argues in favor of requiring the purchase of "agricultural easements on existing farmland" as "a viable, if not favored, mitigation mechanism" for the "significant and unavoidable" loss of prime (and other important) farmland. The Department suggests that such mitigation can be implemented either through the outright purchase of easements by the City, or through the donation of mitigation fees to another agency "whose purpose includes the acquisition and stewardship of agricultural conservation easements." In terms of other such other agencies, the Department suggests either the California Council of Land Trusts (CCLT) or the Division's own "California Farmland Conservancy Program." The Department further suggests that, due to the regional significance of the loss of farmland, "the search for replacement lands need not be limited strictly to lands within the project's

surrounding area, but should be roughly equivalent in proximity, acreage, and agricultural characteristics to the affected property."

As an initial matter, the City disagrees that the purchase of agricultural easements on other land that is already being used for agricultural purposes—either in the surrounding area or elsewhere in the County or region—would provide any mitigation for the loss of farmland within the City. As the Draft EIR already explains, such mitigation does not meet the definition of "mitigation" set forth in CEQA Guidelines section 15370, as it certainly would not "replace" or provide "substitute" resources and thus would not provide "compensation" under subdivision (e) of section 15370.

Furthermore, the City finds that a program consisting of the required purchase of agricultural easements on other land would be of limited utility or benefit. It is inherently dependent upon voluntary agreements by farm owners to sell such easements over their property upon an agreed price. If the land in question is remote and not in an area planned for development in the near term, then the owner may be more willing to sell such an easement at a reasonable price, but it would make little practical difference. If the land in question is in an area already subject to development pressures, then most landowners likely will be resistant and will oppose efforts to "target" their area for the purchase of easements, or only sell them at very high cost. The most likely result will be a "patchwork" of easements, with some owners more willing than others to sell them.

Indeed, efforts by local agencies to develop mandatory programs for the purchase of agricultural easements can have the effect of actually elevating the market cost of such easements. That appears to have been the experience of neighboring San Joaquin County, where the cost of agricultural easements increased significantly after a countywide program was developed providing for their purchase. In that county, costs per acre of farmland purchased for easements averaged $1,690 when the program was first established in 2002, and have risen to $14,372 per acre in 2012 (San Joaquin Council of Governments, 2012).

Sound land use planning, including the planning for the preservation of agricultural land, is best accomplished through the general plan and zoning processes, rather than through a program which depends on voluntary participation of individual landowners. In other words, the preservation of agricultural land can be achieved by adopting general plan, zoning, and annexation policies that provide for the long-term preservation of such land. This is exactly what the General Plan Update is designed to achieve by planning for future growth in limited, identified areas in the future.

Notwithstanding the above, the City of Turlock is currently working collaboratively with Stanislaus County and other cities in the County to explore the development of a program to promote and support preservation of agricultural land. A brief summary of these efforts to date follows:

- *Stanislaus LAFCO Draft Agricultural Preservation Policy*. Since 2010, the Stanislaus Local Agency Formation Commission (LAFCO) has discussed and received input regarding the development of an agricultural preservation policy, similar to those adopted by other LAFCOs in the State. The first Draft Agricultural Preservation Policy was circulated for review on April 17, 2012, and has been a focus of several LAFCO meetings. The LAFCO is due to discuss and possibly adopt a policy again on September 26, 2012. The policy would allow local agencies to develop a "Plan for Agricultural Preservation" that could include a range of strategies, including but not limited to, removal of lands from an existing sphere of influence, adoption of agricultural mitigation program, establishment of a permanent greenbelt, voter approval of an urban growth boundary or other adopted local policies that encourage efficient urban development accompanied by information demonstrating the proposal's reduced impact on agricultural lands.

- *Mayors' Growth Strategy*. In December 2010, in considering the policy mentioned above, the LAFCO invited the Stanislaus County Mayors Group (an informal group that meets monthly and is comprised of all of the mayors in Stanislaus County) to discuss their efforts to develop a Stanislaus County Growth Management Plan. The item was delayed until the July 27, 2011, LAFCO meeting, where Mayor Virginia Madueno, Riverbank, presented a draft map. The draft map outlined a long-term (perhaps 50-year) growth envelope, or urban growth boundary, outside of which the mayors felt comfortable designating an area as an agricultural preservation area. A preliminary countywide map has been prepared in consultation with all of the cities and the County of Stanislaus. The goal is to create a map that can serve as the centerpiece for a countywide agricultural preservation ballot initiative that might be taken to the voters as early as the summer of 2012, but no definitive time line was established. The earliest that such an initiative could come forward at this time is 2013. Although the details of the voter initiative have not been formalized, the Mayors Group has discussed establishing the year 2050 as the sunset year for the program, at which time a new initiative would need to be prepared. The Mayors Group continues to discuss the possibility of a countywide growth strategy that would involve the County of Stanislaus as well as all of the cities. The models currently under consideration are similar to the growth initiatives passed in Napa County and Ventura County to preserve agricultural lands and open space.

Policy 7.2-f*, added to the Draft General Plan, confirms the City of Turlock's continued involvement in these efforts:

> 7.2-f* **Participation in county-wide agricultural mitigation program**. Continue to work collaboratively with Stanislaus County and jurisdictions within the county on the development of a countywide agricultural mitigation program, which would mitigate the loss of Important Farmland to urban development through the required purchase of agricultural easements or other similar measures.

Ultimately, such a countywide program could well include the creation of a fee on new development that impacts agriculture, with the proceeds of such a fee being used to assist and support remaining agricultural uses, possibly even including some purchase of agricultural easements. However, the City does not believe that such a fee would qualify as mitigation as that term is identified under CEQA. Further, such a program would most feasibly and strategically be developed and implemented on a countywide or other regional basis, as it would not be feasible or effective for the City to implement such a program on its own.

ORGANIZATIONS/INDIVIDUALS

B1: Milton Trieweiler

B1-1: The comment suggests that the time horizon for the General Plan be 50, 75, or 100 years. The horizon year for this update to the City of Turlock's General Plan is 2030, or just short of 20 years. State law requires that every city and county must adopt "a comprehensive, long term general plan" (Government Code Section 65300).The State Office of Planning and Research (OPR), which prepares guidelines for local jurisdictions on preparation of general plans, describes the typical timeframes for long-range planning (15-20 years), noting that the appropriate time horizon may vary based on topic (e.g. infrastructure systems are often designed with 30 to 50 year lifespans, whereas housing policy is reconsidered every five to eight years). Good planning relies on the availability of sound data and the ability to respond to changing conditions, both at the local level and beyond. While a truly long-range view is always important to bear in mind, good planning practice suggests that a 15- to 20-year timeframe is appropriate for a General Plan Update.

B1-2: The comment implores decision-makers to choose a plan that grows "up, not out" as a means to preserve Prime Farmland and increase revenue for the City. The Draft EIR contains and assesses two alternatives that have smaller urban footprints than the proposed Plan, thus having lesser impacts on agriculture. The City Council will consider these alternatives in making its decision on the General Plan Update.

B1-3: The commenter states that he would prefer retaining the existing General Plan and not extend the city limits at all, and that the second best option would be to expand to the south only. It is important to note that the existing General Plan (evaluated in the Draft EIR as the "No Project Alternative") does, in fact, allow development to extend beyond the current city limits to the south and the east.

B2: Juan R. and Jessie M. Orosco

B2-1: The comment concerns phasing of master plan development and Morgan Ranch (Southeast Master Plan 1). Morgan Ranch is the same as Southeast Master Plan 1 and, as such, is part of the Phase 1 development, as the comment notes. The policy for moving to the next master plan (Southeast 2) is that 70 percent of the building permits must be issued for Southeast 1, or Morgan Ranch, before the City will annex the next master plan area, Southeast 2.

B2-2: The question concerns the conversion of agricultural land to urban uses. The City understands the need to protect agricultural land and the importance of agricultural industry to the local, regional and State economy. In order to protect these vital resources while also ensuring there is adequate affordable housing for the future population, the City has proposed a more stringent growth management strategy in this updated General Plan. As part of the General Plan Update process, the City prepared an existing conditions report and alternatives assessment that show that the available capacity for infill development ranged from 3,500 units to 5,000. The low end forecast (also presented in that report but was not selected by the City Council for the preferred land use plan) shows the need for approximately 11,800 housing units to accommodate future residential growth. The estimated infill includes the Morgan Ranch project (as it exists in the current General Plan), along with all additional vacant and under-utilized sites. The preferred land use plan carried forward in the General Plan would accommodate the high end forecast (approximately 20,000 additional units by 2030). Due to the growth management policy that states that the City will not annex additional land until at least 70 percent of the units in a previous master plan have been issued building permits, the City will not prematurely annex additional territory. This policy allows the City to annex land as it needs it, but also assures that agricultural land is not annexed until it is needed.

B2-3: The comment concerns agricultural land to be annexed to the City of Turlock. The 17,460 acres represents the entire Study Area, including the current City Limits, the area the Council has included in the preferred land use plan, and areas outside the preferred land use plan that were studied throughout the General Plan Update process (the total Study Area). The total acres of agricultural land that will be lost if the entire preferred plan is developed is shown in Table 3.1-2 under the column "Net Loss" (or 1,986 acres total). Moreover, the total 1,986 acres are not triggered for annexation by the adoption of the General Plan. Annexation is a process that requires the City to apply to the Stanislaus County Local Agency Formation Commission (or LAFCO). The General Plan identifies the total amount of land that could be developed and annexed, at a future date, if the high end population growth that forms the basis of the preferred plan happens. Annexation will occur, on a master plan by master plan basis, based on the growth management policy described above.

B2-4: The comment questions the advantages of building on agricultural land. The purpose behind allowing development on agricultural land adjacent to the city is the achievement of the goals of the General Plan, which are to provide a community that will house the future projected population and economic growth of the City in a manner consistent with the policies and objectives of the General Plan.

B2-5: The comment seeks clarification on economic losses associated with loss of agricultural land being offset by urban development. This comment pertains to urban economics and the General Plan, rather than the substance of the Draft EIR, which evaluates physical environmental impacts. The proposed General Plan provides for the development of jobs in other sectors of the economy, which would generate tax revenue for the city, ultimately compensating for the economic loss associated with development of farmland.

B2-6: The question asks how quickly the estimated economic losses associated with development of farmland would be recouped through other urban development. This comment pertains to urban economics and the General Plan, rather than the substance of the Draft EIR, which evaluates physical environmental impacts. The revenue for the city and economic multiplier effects of urban development have not been calculated at this time.

B2-7: The comment questions the impact that development of a school and commercial uses on Verduga Road would have on current residents of the southeastern are of Turlock. Again, the total acreage of agricultural land is 1,986. Acquisition of property for schools has typically been done as a negotiation between property owner and the school district. The same is typically true for the development of residential land. Adoption of the General Plan or subsequent master plan does not dictate that a specific property owner has to move, and there are many examples where property owners have remained in their homes while new development has occurred around them.

B2-8: Land designated as "Public" in master plans Southeast 1, Southeast 2, and Southeast 3 totals 100 acres. However, it is important to note that the specific land use designations in the master plan areas are conceptual only; precise acreage of land for public use will be finalized with preparation of the individual master plans and subject to property acquisition.

B2-9: The comment notes that the total Study Area acreage listed in Table 3.1-1 (Farmland in the Study Area) is 17,460 acres, while the total Study Area acreage listed in Table 3.2-1 (Existing Land Use) is 14,597 acres. The total in Table 3.1-1 represents all of the land of all uses, including roadways and other public rights of way, whereas the total in Table 3.2-1 does not include roadways and other public rights of way. Table 3.2-1 in the Draft EIR is amended to include an additional row with this land use, so that the totals sum to the same amount. See page 4-1 of this document.

B2-10: The comment pertains to the finding in Impact 3.2-1, which discusses whether the plan physically divides an established community. The City is not proposing to annex the unincorporated community Denair as it has been defined by Stanislaus County. As the City of Turlock and the urbanized area of Denair are not contiguous, the proposed Plan does not physically divide these communities. A portion of the Denair Rural Fire District falls within Southeast Master Plan 2, and the City and Fire District will need to negotiate an agreement on how fire services will be provided to that area. This will be done at the time of annexation. The City has met with the Fire District and has suggested that a general agreement be drafted in anticipation of future annexations.

B2-11: The comment pertains to accommodating future population and business growth in Turlock. The Council has evaluated potential growth projections and has determined there is a need to

accommodate growth beyond the city's current boundaries based upon the existing conditions report. Alternatives have been presented to Council that would allow them to accommodate alternative population growth assumptions. The environmental review process is intended to allow the public to provide comments to encourage the Council to look at alternatives if they do not support the proposed Plan.

B2-12: The comment questions what the reduction in groundwater use would be with implementation of the Regional Surface Water Supply Project (RSWSP). The amount of surface water assumed to be used is the same amount as the reduction in ground water use. Per page 3.12-5 of the Draft EIR, the RSWSP could ultimately provide Turlock with up to 22,400 acre-feet per year or 20 million gallons per day. The Urban Water Management Plan estimates that Turlock's water demand in 2030 will be approximately 37,220 acre-feet per year. Groundwater can sustainably supply no more than 24,550 acre-feet per year. The difference between total demand in 2030 (37,220 acre-feet per year) and sustainable groundwater supply (24,550 acre-feet per year) is 12,670 acre-feet per year. At minimum, this is the amount that the RSWSP would supply, and likewise, would *not* be supplied by groundwater. Because the RSWSP has the capacity to supply even more surface water, it is possible that additional groundwater use could be avoided.

B2-13: The comment asks about the funding source for Turlock's share of the RSWSP. The costs would be covered largely from development impact fees and special outside grants. To the extent that these changes may be driven by new health standards, they may also come from a change in water rate charges.

B2-14: The comment concerns the non-renewal process for Williamson Act contracts. The Draft EIR incorrectly states that term is 10 years, whereas the nonrenewal period is usually nine years. The Draft EIR has been corrected to reflect this information (see Chapter 4 of the FEIR, page 4-1).

B2-15: Comment noted. The comment recommends that the adoption of the General Plan not be solely a City Council decision, but instead put to a vote of the Turlock citizenry. This is not common, but not unprecedented; it would have to go through the regular procedure for placing measures on the local ballot.

B2-16: Comment noted. The comment states a preference for the No Project Alternative as a means to encourage infill development. It should be noted that the "No Project Alternative" means that the current General Plan will stay in place, and that involves the development of the entire Southeast area at a much lower density than the updated General Plan proposes. The proposed Plan also increases the allowable residential density on many infill sites, allowing for more housing to be accommodated within current city limits than the No Project Alternative. If the No Project Alternative were adopted, the need to annex more land in response to population growth would likely occur sooner than it would under the proposed Plan.

B3: Dennis Doo and Claudia Silva-Doo

B3-1: The comment expresses concern about the tentative alignment of the northeast expressway, specifically the impacts that the future roadway would have on the commenters' property and their ability to farm almonds. The City recognizes the commenters' concern and emphasizes that the northeast expressway as depicted in the proposed Plan and Draft EIR is symbolic only and does not represent a finalized alignment. Figure 3.3-4 in the Draft EIR, Roadway Network (2030), shows a "Roadway Circulation Study Area" in which the future alignment of the northeast expressway will eventually be established. Policy 5.2-ar in the proposed General Plan requires that the City undertake

a plan line study to determine the exact alignment of this proposed expressway, and requires that the study be initiated within one year of the adoption of the General Plan. The City intends to make the plan line study an open, public process with outreach to and involvement of all affected property owners.

B4: California Clean Energy Committee

Agricultural Impacts

B4-1: The comment maintains that policies put forward in the EIR as limiting farmland impacts are vague and unenforceable. The City notes that these policies are backed up by a regulatory land use plan for the phased development of future master plan areas. Urban development outside of these areas would not be permitted under the General Plan, and development within the master plan areas must meet minimum overall density standards which will ensure a relatively small urban growth footprint. The proposed compact development pattern is expected to be an effective tool to minimize the loss of agricultural land, and will be enforced through the City's review process for new development. See response to comment A7-3 for a full discussion of impacts to agriculture.

B4-2: The comment proposes that a farmland protection program be adopted. Please refer to the response to comment A7-3 for a full discussion of this issue.

B4-3: The comment notes that the City can reduce farmland impacts through planning and design of infrastructure. Indeed, the proposed General Plan would continue Turlock's successful growth management approach, in which future growth areas are identified and a phasing plan is provided. The expansion of public infrastructure is limited to planned growth areas, a fact that has contributed to the city's lack of leapfrog development and success in farmland preservation. The proposed Plan also provides specific guidance for coordinating with local and regional agencies to "ensure consistency between local and regional actions including but not limited to the Regional Transportation Plan, Regional Expressway Study, Regional Transit Plan, and Regional Bicycle Action Plan" (Policy 5.2-f) and to "work with Stanislaus County and other relevant entities to implement a new interchange on State Route 99 at Youngstown Road" (Policy 5.2-l). Local access to the potential expressway connection would generally not be permitted from private property (Policy 5.2-v), limiting the potential impact of new transportation infrastructure in inducing development of farmland. Section 3.3 of the proposed General Plan details the City's needs for water, wastewater, and stormwater infrastructure, and reinforces that future infrastructure development will be coordinated with the direction, extent, and timing of growth (Policy 3.3-d).

B4-4: The comment proposes use of an urban growth limit. The growth management strategy outlined in the proposed Turlock General Plan is effectively the same as an urban growth limit. New urban development will not be permitted beyond existing city limits and the master plan areas, where development will be allowed in phases.

B4-5: The comment proposes adoption of a Right-to-Farm ordinance. The proposed General Plan contains a policy supporting the County's Right-to-Farm Ordinance (Policy 7.2-i) and to allow existing agricultural uses within City limits to continue (7.2-g). It is the City's position that over the long term, urban uses are most appropriate for the city, and agricultural uses are most appropriate outside the city. There, the County's Right-to-Farm ordinance and other Agricultural Element policies apply.

B4-6: The comment proposes zoning regulations that facilitate agricultural processing facilities. As the proposed General Plan recognizes, food processing is Turlock's primary industry, providing the

largest number of industrial jobs in Turlock. Through the creation and implementation of the Westside Industrial Specific Plan (WISP), the City has reaffirmed the continuing importance of industrial development. Proposed General Plan policies reinforce the WISP, which is designed to facilitate the location agriculture-related industry. Other areas of the city are also zoned for industrial uses, such as south of Downtown.

B4-7: The proposed General Plan's approach to minimizing transportation conflicts between urban and agricultural road users is to maintain a distinct separation between urban and rural areas. Development of roadways and other infrastructure will be closely tied to development following the Plan's phased growth strategy, as described under the response to comment B4-3.

B4-8: There may be value in developing an agricultural marketing plan for Turlock, as proposed by the comment. However, this is beyond the scope of the General Plan Update, and the City does not consider this an effective mitigation strategy for the loss of agricultural land with urban development.

B4-9: There may be value in establishing a farmland advisory committee focusing on small-scale producers. As above, this is beyond the scope of the General Plan and is not considered an effective mitigating policy.

B4-10: As noted by the commenter, the Regional Water Quality Control Facility treats Turlock's wastewater to Title 22 standards, suitable for agricultural irrigation as well as other uses (landscaping, industrial cooling). The proposed General Plan includes policies to expand recycled water infrastructure (Policy 3.3-n) and to prepare and update a recycled water master plan to facilitate increased use of recycled water (3.3-t). Greater use of recycled water has the potential to improve the cost-effectiveness of water investments and agricultural irrigation.

B4-11: The commenter maintains that adoption of additional, recommended mitigation policies would reduce the farmland impact to less than significant. Development of the Turlock General Plan will result in the loss of 1,986 acres of farmland. Conversion of agricultural land to urban use is not directly mitigable, aside from preventing development altogether. The Plan reflects a policy determination to allow a certain amount of growth to occur in the Study Area, which necessitates conversion of farmland to urban uses. The proposed Plan includes growth management policies to prevent the premature conversion of farmland, by encouraging infill development, by requiring new development to be built at considerably higher densities than Turlock has traditionally seen, and by phasing of new master planned growth areas. Additionally, in response to comments received on the Draft EIR, the City has added Policy 7.2-f* to the Draft General Plan, which states that the City will work collaboratively with Stanislaus County and other cities in the County to explore the development of a program to promote and support agriculture, which could include an agricultural mitigation fee. These policies are intended to offset the impact to agricultural land conversion to the greatest degree possible. The City still considers this impact to be significant and unavoidable.

Energy Conservation

B4-12: The comment states that the EIR should contain an analysis of potential energy impacts, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, and that cost effective energy conservation should be required through the General Plan. Consistent with Appendix F and Appendix G of the CEQA Guidelines, the EIR does not have a separate chapter analyzing energy impacts, and instead incorporates its analysis of such impacts in the other EIR chapters, including an extensive analysis in the Climate Change chapter and also including the relevant impacts of energy use in the Air Quality chapter. The General Plan Update will not have

energy-related impacts that are not already addressed in these other chapters. And, consistent with Public Resources Code section 21100(b)(3), both the General Plan and the EIR include extensive policies to reduce wasteful, inefficient, or unnecessary consumption of energy.

The proposed Plan aims to play an important role in helping to bring about energy conservation through land use patterns, public investments, and policies supporting increased energy efficiency. These policies call for encouraging greater energy efficiency in new development (policy 8.2-o), requiring energy efficiency above and beyond Title 24 standards for projects receiving public assistance (8.2-p), improving energy efficiency in public buildings (8.2-m), in the wastewater and water systems (8.2-m*), and in outdoor lighting (8.2-m**), and promoting energy conservation programs (8.2-o). Plan policies also aim to support renewable energy generation (policies 8.2-q, 8.2-r, and 8.2-s). These policies are listed in Table 3.5-11 (previously Table 3.5-5) in the DEIR. Turlock enforces the California Green Building Standards (Title 24), and these standards are expected to continue to be strengthened during the planning period. These improvements will be driven in part by measures in the Climate Change Scoping Plan (ARB, 2008). Energy efficiency may reasonably be expected to improve in the Study Area during the planning period. Nevertheless, climate change impacts are projected to be cumulatively significant, with the proposed General Plan's contribution cumulatively considerable.

B4-13: The comment states that the EIR should cover all potentially significant energy implications and potential energy conservation measures relevant to the project, including breaking down energy use by period (construction and operations), by fuel type, end use, and energy sources. This level of detail is appropriate for project-level analysis but is beyond the scope of a General Plan EIR. However, in response to this and other similar comments, the DEIR has been revised to include a summary discussion of energy use by type in the Study Area. This new section, "Energy Use in the Study Area," summarizes existing building energy use in Turlock, including electricity and natural gas use, provision, and sources, and State-mandated requirements for renewable energy. It includes discussion of transportation energy use (gasoline) and State mandates for reducing the carbon intensity of fuels. Third, Turlock's current solid waste system is described, and State mandates summarized along with local efforts. Revised text is provided in Chapter 4, Revisions to the EIR. The proposed Plan also includes policies to support energy conservation measures, including those identified in response to Comment B4-12.

B4-14: The comment states that the EIR should identify the energy use and efficiencies of the project by amount, fuel type, and project phase. The cumulative impacts on energy resources should be studied, and all energy efficiency measures evaluated. As noted under B4-13, this level of detail is beyond what may be expected of Plan-level analysis, which seeks to consider the effects of urban growth over a 20-year period.

Building energy and transportation energy account for by far the largest share of GHG emissions, as described in the DEIR, and improving energy efficiency in these sectors is a very important aspect of the City's approach to climate change. The Plan is designed to contribute to lower per service population GHG emissions by reducing tailpipe emissions and encouraging more energy-efficient buildings. See Table 3.5-10 in the FEIR (Table 3.5-5 in the DEIR) for a comprehensive list of proposed General Plan policies that seek to improve the energy efficiency and conservation.

B4-15: The commenter argues that the EIR should describe the energy setting in the local and regional perspective with a focus on evaluating potential renewable energy supplies including solar, biomass, and others. As noted in response to Comment B4-13, the EIR has been revised to include a summary of the existing chief sources and uses of energy in the Study Area. This new section is

included in Chapter 4 of the FEIR. Electricity and natural gas are provided by Turlock Irrigation District and PG&E, respectively. These energy suppliers are required by State legislation to meet renewable energy targets. The City did not receive comments from the suppliers that the proposed General Plan would make it more difficult to meet those targets. An estimate of renewable energy use by type of renewable energy source would be speculative and is not required under CEQA. Further detail and analysis of the potential impacts of development on energy resources, and especially renewable energy resources, may be appropriate as part of master plan-level or project-level environmental review.

B4-16: The comment proposes that the Plan include mitigation measures involving building siting and orientation, energy efficient design requirements, energy-efficient transportation, water conservation, and solid waste reduction. The proposed General Plan's Section 6.4, Sustainable Site Planning, does in fact include policies to facilitate site plans that reduce the urban "heat island" effect (Policy 6.4-g), building orientation with regard to solar exposure that promotes energy efficiency (Policy 6.4-h), water-conserving landscaping (Policy 6.4-i), and design that facilitates bicycle and pedestrian use (6.4-j). Quantification of the potential impacts of these measures may be completed at the project level. Other policies in Chapter 8 of the General Plan call for greater energy efficiency, as outlined in response to comment B4-12.

The alternatives are compared in terms of their projected GHG emissions. This EIR has evaluated potential energy impacts through the lens of climate change, since energy use accounts for the great majority of GHG emissions.

B4-17: The comment states that the EIR should evaluate the secondary impacts of permitting further investment into fossil-fuel dependent projects, energy distribution technologies and infrastructure. The proposed General Plan supports energy conservation and energy efficiency improvements through land use, transportation, design and site planning, and other policies. Table 3.5-11 (formerly Table 3.5-5) in the DEIR contains a comprehensive list of these policies. The City does not control energy production or distribution infrastructure in the Study Area. Detailed analysis of the impacts of energy investments may be appropriate as part of environmental review of future energy facilities.

B4-18: The comment states that the EIR should comprehensively analyze energy efficiency opportunities, as well as consistency with the San Joaquin Valley Blueprint. Concerning the need for evaluation of energy efficiency measures, see responses to Comments B4-12, B4-14, and B4-16. Regarding the second point, StanCOG has found the proposed Plan, and the alternatives, to be consistent with the Blueprint. See Comment A6-1.

B4-19: The comment proposes that the EIR should consider mandating various measures to improve building energy efficiency, including rooftop solar, ground source heat pumps, passive solar design, home energy monitors, and others. The City has determined that it will use the California Green Building Code, the official requirement of the State. The General Plan does include policies to encourage greater energy efficiency in new development (8.2-o), to require additional energy efficiency measures for projects receiving public assistance (8.2-p), and to encourage solar power generation and other onsite renewable energy systems (policies 8.2-q and 8.2-r).

B4-20: The comment proposes that the General Plan should establish a net-zero threshold for energy, above which energy impacts would be potentially significant and would require evaluation at the project level. As stated above, the City of Turlock has determined to follow the California Green Building Code, and does not go beyond State guidance in establishing project-level significance thresholds.

However, quantitative energy analysis from specific project proponents may take place at the project level.

B4-21: According to the commenter, the EIR should quantify potential energy savings from efficient transportation modes including various forms of transit, bicycles, carpooling, and electric vehicles. The proposed Plan provides extensive direction for development on non-motorized transportation and transit, as well as encouragement for carpooling and electric vehicles. These measures are included in Table 3.5-11 (previously Table 3.5-5) of the EIR. These include extensive policies in Section 5.3 of the proposed Plan that require complete streets and a complete network of bikeways; policies in Section 5.4 that call for improving local transit service and linking with future regional rail efforts; and support for alternative fuel vehicles as provided in Policy 8.2-j* in the revised Plan.

The effects of these measures are quantified to the extent they are captured in the transportation model, as described in the Methodology sub-section of the Impact Analysis section in the EIR. Other measures may require more detailed analysis as part of environmental review of master plans for the seven future growth areas identified in the General Plan or as part of analysis of a GHG Emissions Reduction strategy.

Greenhouse Gas Emissions

B4-22: The comment states that the EIR does not provide evidence supporting the claim that the emissions sources studied account for their stated shares of overall emissions, and suggests that other important emissions sources have been omitted. Other sources mentioned include agricultural, food processing, wastewater treatment, water pumping, off-road vehicles and equipment, and construction sources.

The EIR has been revised to draw a clearer relationship between the estimated share of each emissions source statewide and in the Planning Area. The text notes that certain sub-categories of emissions sources in California are not present in the Study Area. These include refineries (6 percent of statewide emissions); oil and gas extraction (3 percent); cogeneration heat output (2 percent); cement plants (2 percent); ships and commercial boats (1 percent); and interstate aviation (1 percent). Therefore the proportionate share of emissions from the transportation; building energy; and waste categories are expected to be larger in the Turlock Study Area than in the state as a whole, as these other sources are absent.

At the same time, the EIR's emissions analysis does not account for certain other potential sources of greenhouse gases in the Planning Area: process emissions from wastewater treatment and composting; agriculture; and High GWP gases. A discussion has been added to the EIR to explain why these sources can be reasonably excluded from a Plan-level projection of GHG emissions. First, estimated emissions associated with wastewater treatment, based on the City of Turlock 2005 Government Operations Greenhouse Gas Emissions Inventory, would account for a less than one percent of the total emissions calculated in Table 3.5-1 of the EIR. Second, preliminary estimates of emissions from cropland (related to application of fertilizer) suggest that this source accounted for less than one percent (2,750 $MTCO_2e$) of total estimated emissions in the Study Area, due to the type of crops under cultivation. The impact of livestock was not calculated due to the relatively small amount of land (27 acres) used for raising livestock in the Study Area. Thus, while emissions associated with agriculture make up approximately 6 percent of the statewide total, the expected share of agricultural emissions in the Study Area is assumed to be less based on these preliminary calculations and expected to decline during the planning period as more land is converted from farming to urban uses. Third, High Global Warming (GWP) chemicals are common and widespread, used in refrigerators, air conditioning, fire suppression systems, and insulating foam, and account for

3 percent of emissions statewide. These sources are the subject of four ARB Discrete Early Action measures to reduce GHG emissions, and future reductions will come from specifications for future equipment and protocols for recovery and destruction and will not be determined locally.[1]

It is important to state that the General Plan concerns urban development over a 20-year period in a 27-square mile area with a great diversity of land uses. Analysis of the impacts of development is necessarily less detailed than analysis of an individual development project. See Chapter 4 for the revised EIR discussion.

B4-23: The commenter states that the data used to formulate the estimated GHG emissions is not provided in the EIR, and the use of emission factors obtained from the California Climate Action Registry (CCAR) was not justified. A brief explanation of our approach to estimating indirect emissions that result from the purchase and use of electricity and natural gas follows, and is added to the EIR (see Chapter 4).

While electricity itself does not create emissions, emissions do result from the process of using other fuels to create electricity. Those fuels may be carbon-based (such as coal), or may be "clean" sources such as wind, solar, or hydro. The fuel mix used by electricity providers determines the climate impact of fuel consumption. Turlock is located in eGRID Subregion CAMX. Based on the typical fuel mix in this subregion, CCAR provides the following "emission factors" for each greenhouse gas:

EMISSION FACTORS FOR EGRID SUBREGION CAMX

Greenhouse Gas (GHG)	*Emission factor (lbs/kWh)*
CO2	0.72412
CH4	0.0000302
N2O	0.0000081

Source: CCAR GRP 3.1, Table C.2 (eGRID2007 Version 1.1, Dec 2008)

When weighted by their global warming potential (GWP), CO2 typically represents over 99 percent of the greenhouse gas emissions from the stationary combustion of fossil fuels. The approach required to estimate CO2 emissions differs significantly from that required to estimate CH4 and N2O emissions. While CO2 can be reasonably estimated by applying appropriate emission factors to the fuel quantity consumed, estimating CH4 and N2O depends not only upon fuel characteristics, but also on technology type and combustion characteristics, usage of pollution control equipment, and ambient environmental conditions. Emissions of these gases also vary with the size, efficiency, and vintage of the combustion technology, as well as maintenance and operational practices. Due to this complexity, a much greater effort is required to estimate CH4 and N2O emissions from the consumption of purchased electricity, heat, and/or steam, and a much higher level of uncertainty exists.[2] There would thus be very limited utility in providing any actual estimate of CH4 and N20—rather, the analysis of CO2 alone is deemed sufficient to fairly estimate greenhouse gas emissions from stationary combustion.

[1] ARB (2008).

[2] World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), Greenhouse Gas Protocol, Consumption of Purchased Electricity, Heat, and/or Steam Guide to Calculation worksheets v. 1.2A, 2007. Accessed at http://www.ghgprotocol.org/

To calculate GHG emissions from electricity, the emission factors above are applied to electricity use (in kilowatt-hours, or kwh) by Turlock customers in 2008, using the following formulae:

- Total CO2 Emissions from Indirect Electricity Use = Electricity Use in kWh x Emissions Factor ÷ 1,000 to convert to kWh ÷ 2,204.62 (to convert pounds into metric tons)
- Converting Non-CO2 GHGs to CO2 Equivalent = Metric tons of non-CO2 GHGs x Global Warming Potential multiplier (CCAR GRP V3.1, Appendix C, Table C.1, SAR Column)

TID reported the following electricity use for Turlock customers in 2008, by customer type, as shown in the new Table 3.5-3 (see Chapter 4 of the FEIR). Since TID reported usage only for City of Turlock customers, usage by farm customers was adjusted based on the proportion of farmland in the Study Area that is within City limits.

The EIR indeed uses electricity usage data from Turlock Irrigation District. The California Climate Action Registry (CCAR) provides a strong model for estimating GHG emissions. San Joaquin Valley Air Pollution Control District (SJVAPCD) has not indicated that EMFAC or any other model be used, nor has SJVAPCD objected to the use of the CCAR model, which has been used widely in California.

B4-24: The commenter notes that there is no explanation of the factors used to calculate transportation GHG emissions. These emission factors are provided in the table below, from the CCAR General Reporting Protocol (GRP) version 3.1. The table and summary are also added to the EIR, and can be found in Chapter 4 of the FEIR.

Both N20 and CH4 emissions factors are averages of the emissions factors per mile of all tiers of light duty gas vehicles (LDGV), light duty gas trucks (LDGT) and heavy duty gas vehicles (HDGV), from EPA's Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles 2004. The GRP may be consulted for further detail.

TRANSPORTATION EMISSION FACTORS

Factor	
CO2 for Motor Gasoline (kg/gallon)	8.81
CO2 for Diesel (kg/gallon)	10.15
N20 Emissions Factor (g/mile)	0.034
CH4 Emissions Factor (g/mile)	0.094

Sources: CCAR GRP 3.1, Table C.3 (US EPA Inventory of GHG Emissions and Sinks: 1999-2005 (2007), Annex 2.1).

Only the emission factor for gasoline (California reformulated gasoline, with 5.7 percent ethanol) was used, for all vehicles. This is because the impact of diesel use by trucks results in only about 3 percent higher emissions (when allocated 20 percent of vehicle miles travelled (VMT)), and because the proportion of diesel is not predicted to differ across scenarios in 2030, meaning the relative impact of this assumption on each alternative will be in the same direction.

The emission factors are applied to estimated and projected VMT and gasoline using the following formula:

- Total CO2 Emissions from On-road Transportation = Annual VMT x Average Fuel Economy x Emissions Factor x 0.001 (to convert kg to tons)

- Converting Non-CO2 GHGs to CO2 Equivalent = Metric tons of non-CO2 GHGs x Global Warming Potential multiplier (CCAR GRP V3.1,Appendix C, Table C.1, SAR Column)
- Average fuel efficiency for 2008 and for 2030 was estimated based on the MTC T2035 Plan EIR for the Bay Area.

The transportation model generates projected trips based on existing and future land use patterns, and so is sensitive to the future land use pattern proposed by the Draft General Plan.

B4-25: The comment notes that the EIR does not justify use of the U.S. EPA LandGem model to estimate solid waste GHG emissions, and does not provide data from these calculations.

The major challenge with the solid waste emissions calculators is that they are typically designed to determine the emissions from an entire landfill, rather than from one community's share of a landfill's waste. Furthermore, the emissions from landfills accumulate over time, so emissions calculated using these models for, say, 1990, would be counting emissions from any waste deposited in the landfill prior to 1990. Some of these models are also designed to account for details about the types of waste and the treatment of waste, not all of which will necessarily be available for Plan projects.

The LandGem model was chosen because it is an accepted model, and best fit the available data. LandGem calculates output for the whole landfill, not just Turlock's share, so we provide calculations of emissions from both the entire annual acceptance rate as well as Turlock's share alone (as if it were the only city contributing to the landfill). The Fink Landfill "close date" is 2023. However, it will continue to emit GHGs, it might not fill up by that date, and even if it does, Turlock waste contributions will have to go somewhere, and waste emissions needed to be calculated through the buildout year (2030). Therefore, these model runs assume a close year of 2030. The EIR analysis did not have historic data on landfill waste contributions, but did have Turlock's waste contribution in 2008. Turlock's per-service-population waste contribution in 2008 was assumed to remain constant through the planning period, and multiplied by estimated service population in 2030. Contributions and emissions for each year are calculated using the estimated service population growth rate of 2.7 percent. Contributions for landfill open years before 1990 were conservatively assumed to be the same as the 1990 contribution—a conservative assumption.

While the analysis was based on contributions for the City of Turlock and not the larger Study Area, the difference is expected to be minimal given the very low population of the Study Area outside City limits. As before, this is an appropriate level of detail for Plan-level analysis.

B4-26: The comment states that future population and employment assumptions are not explained, and that the 2020 and 2030 GHG emissions targets were not justified. First, population and employment assumptions are based on buildout of the proposed General Plan Land Use Diagram and the assumptions for each master plan area, as described in detail in Section 2.4, Buildout Under the Proposed Plan.

As for the GHG emissions targets, the EIR establishes targets for the Turlock Study Area that would meet State targets on a per-service-population basis, as explained under Impact 3.5-1. Under AB 32, the State must reduce GHG emissions to 1990 levels by 2020, an overall reduction of approximately 15 percent. When projected population and job growth are taken into account, this goal translates to a per service population reduction of about 27 percent from "business as usual." Therefore the 2020 threshold for this EIR represents a 27 percent reduction from current per-service-population emissions in California. Since current emissions statewide are estimated at 9.1 MTCO2e per service

population, the target for 2020 is set at 6.6 $MTCO_2e$, or 27 percent of that number. Executive Order S-3-05 sets a long-range goal for the State to reduce GHG emissions to 80 percent below 1990 levels by the year 2050, or 85.4 million metric tons per year. Charting an even annual growth rate between existing conditions (2008) and 2050 in terms of service population and GHG emissions, this target requires a per service population reduction to 3.8 $MTCO_2e$ annually at the State level. This threshold is thus set as the target for the Turlock Study Area for 2030. This explanation and a new table, Table 3.5-4, are added under "Significance Criteria" to clarify this methodology. This new table is included in Chapter 4 of the FEIR.

B4-27: The comment states that the estimated emissions reductions resulting from State mandates, provided in Table 3.5-2 (Chapter 3.5-8 in the revised DEIR) and referred to in the Methodology section, are not carried forward in the EIR. In fact, these estimated reductions are applied to the future emissions analysis. Statewide reductions, provided in the Scoping Plan as absolute numbers, are adjusted to account for Turlock's faster growth rate compared to the State.

B4-28: The commenter states that no justification is provided for the assumption that statewide emissions reductions will apply proportionately in the Study Area. The analysis assumes that the percent reduction per sector estimated by the Scoping Plan will also occur in the Study Area. In other words, if the State projects the Low Carbon Fuel Standard to reduce emissions in the transportation sector by 6.7 percent by 2020, we expect this policy to have the same effect in the Study Area. There is no basis on which to assume the reductions will take place differently in Turlock than in the State overall.

B4-29: The comment seeks more information about the EIR's adjustment of estimated emission reductions to account for Turlock's faster population growth. First, population and job growth projections are described in detail in Section 2.4 of the EIR, and used throughout the report. Second, estimated statewide emissions reductions from each Scoping Plan measure are provided as absolute numbers. To scale these numbers to the Turlock Study Area, the absolute reduction of each measure was converted to a proportion of total reductions in each sector (e.g., Building Energy). Then projected emissions reductions are adjusted to account for the fact that Turlock is projected to grow more quickly than the State, which would cut into emissions reductions. The following calculation is used:

- Projected Reduction as % of Total Sector Emissions in the Study Area in 2020 = Projected Reduction as % of Total Sector Emissions Under Scoping Plan / (Turlock's Projected Service Population Growth Rate/California's Projected Service Population Growth Rate)

B4-30: The comment notes that Table 3.5-2 adds the percentage emission reduction by sector for each Scoping Plan measure, and identifies a total amount, and that "percentages of different numbers cannot be totaled." The City acknowledges the error and removes the stated figures from the table—Table 3.5-7 in the revised EIR. See correction included in Chapter 4.

B4-31: The comment states that the discussion of transportation impacts [under Impact 3.5-2] does not recognize that per capita VMT is projected to increase. In fact, the EIR does state that "the 78 percent growth in population projected under the proposed General Plan is estimated to result in a 100 percent increase in VMT over existing conditions, the faster growth rate for VMT being attributable to slightly faster projected job growth under the proposed Plan as well as an expanded urbanized area" (page 3.5-45). The City recognizes that this projected dynamic is part of the reason that the General Plan would result in a significant impact with regard to transportation-related GHG emissions.

B4-32: The comments regarding AB 32 are noted. This General Plan EIR does not evaluate whether AB 32's statewide greenhouse gas reduction goals are set appropriately for California to avoid a cumulative GHG impact. However, these goals have been used as part of the basis for cumulative impact analysis in this EIR, following available guidance. The Natural Resource Agency's CEQA Guidelines Appendix G includes the following significance criterion for evaluation climate change impacts: "would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?" The State Attorney General's Office has concluded that "one reasonable option" for a Lead Agency is to set targets based on Executive Order S-3-05 and AB 32 and use those as thresholds below which impacts would be less than significant (*Attorney General's Guidance on Addressing Climate change in General Plan Updates Under CEQA*, January 2010.) The San Joaquin Valley Air Pollution Control District (SJVAPCD) has not established thresholds for Plan-level analysis of greenhouse gas emissions. The City chose thresholds pegged to the targets established in key State legislation (EO S-3-05 and AB 32, as well as SB 375).

The letter writer states that a cumulative impact analysis should be done based on current conditions rather than on business-as-usual future conditions. In the case of GHG emissions, State legislation is based on the understanding that remaining at existing emissions levels is not sufficient to avoid a cumulative impact on climate change. Rather, emissions must be reduced in order for climate change impacts to be less than significant. The analysis establishes the per capita emissions needed to achieve these reductions as the significance thresholds, and determines that the proposed General Plan would result in a cumulatively considerable contribution to a significant cumulative impact.

B4-33: The comment points to the EIR findings that future GHG emissions in the Study Area are projected to be 6.6 and 3.8 metric tons CO2e per service population in 2020 and 2030, and reiterates the opinion that the findings are inaccurate and unsupported. With due respect, the findings are based on analysis that used the best information and models available, at a level of detail appropriate for Plan-level environmental analysis. The EIR has sought to communicate the findings clearly. Background discussion is added in response to comments, as provided in Chapter 4 of the FEIR.

B4-34: The comment states that the General Plan policies listed in Table 3.5-5 (Table 3.5-10 in the EIR as revised) would not implement CAPCOA recommendations as stated because they are "remote, speculative, and undefined." To respond to this broad statement, the City will point out first that the Draft EIR does not seek to quantify the beneficial impacts of these measures, and finds a significant cumulative impact, with the General Plan's contribution being cumulatively considerable. Second, these measures are not "remote" but are in fact either expected to be implemented following General Plan adoption, or to be further detailed as part of a strategic plan for reducing GHG emissions, to be prepared within three years of Plan adoption. Many of the measures reinforce the Land Use Diagram and the Phasing Plan, which will serve as the fundamental guide for future development over the course of the planning period. Other policies provide specific requirements for multi-modal roadways, pedestrian-friendly design characteristics, funding for transit services, and energy efficient buildings. It is the City's intent that CEQA review of future development projects will tier off the General Plan Update EIR. Thus there will be ample opportunity to confirm and reconfirm the status of the implementation of the measures identified here.

B4-35: The writer states that the City should use specific and additional modeling tools to estimate GHG emissions and the potential emission reductions that would result from mitigation policies. As described in response to preceding comments, the General Plan analysis uses established methodology, primarily based on the California Climate Action Registry General Reporting Protocol (GRP) version 3.1 as well as the US EPA's LandGEM, version 3.02, to model future emissions. Analysis provided here is at a level appropriate for Plan-level analysis.

B4-36: The comment suggests that it is not possible to gauge the effectiveness of a GHG Emissions Reduction Plan [proposed in Policy 8.2-f] and whether such a plan could adequately slow GHG emissions. The City concurs that it would be premature to quantify the emissions reduction potential of this future GHG Emissions Reduction strategy. The proposed General Plan includes a broad range of policies that seek to lower per capita GHG emissions by fostering a compact land use pattern, ensuring development of complete streets, proposing linear parks and a bikeway system, encouraging energy conservation and renewable energy generation, and other means. These policies are quantified to the extent they could be captured in the transportation model or through estimating typical building energy use.

B4-37: The commenter indicates that the Draft EIR does not analyze emissions for the year 2050 and so cannot make a conclusion about consistency with the target established under Executive Order S-3-05. The General Plan's planning horizon is the year 2030. In other words, the changes proposed in this Plan are expected to be implemented by 2030, and future growth would need to be directed by a future plan. It would not be possible or appropriate to estimate emissions in 2050. Instead, this Plan sets a 2030 target based on the trajectory between the 2020 target established by AB 32 and the EO S-3-05 target.

The second part of the comment states that GHG emissions have not been calculated for the alternatives. This is not true. Projected emissions under each of the alternatives is discussed in Section 4.3 (Comparative Impact Analysis) and summarized in Table 4.3-4: Projected Greenhouse Gas Emissions by Alternative.

B4-38: The comment argues that the General Plan should include requirements for solar photo-voltaic panels and solar water heating or ground source heat pumps, except where infeasible. The City has determined that it will use the California Green Building Code, the official requirement of the State. The General Plan does include policies to encourage greater energy efficiency in new development (8.2-o), to require additional energy efficiency measures for projects receiving public assistance (8.2-p), and to encourage solar power generation and other onsite renewable energy systems (policies 8.2-q and 8.2-r).

B4-39: The comment states that the General Plan should establish an urban growth boundary with related ordinances or programs. The General Plan's New Growth Areas and Infrastructure Element, including a phasing plan and detailed guidance for each future master plan area, functions as an urban growth boundary system. The City agrees with the commenter that this is an effective means to limit sprawl. The comment also proposes that the City should plan for a streetcar system and future rail connections. The General Plan does contain policies in support of regional rail efforts. Specifically, Policy 5.4-n calls for linkages with potential future commuter and/or high-speed rail, and Policy 5.4-o calls for supporting regional commuter rail or high-speed rail efforts. The Plan also has policies for improving local transit service, including pursuing funding sources (Policy 5.4-h), improving the comfort and convenience of using transit (Policy 5.4-i), and ensuring that new development is designed to support transit use (5.4-l), among other policies.

B4-40: The comment proposes that the City require new large-scale developments to purchase renewable energy credits (or something like them) to help fund renewable energy development. The General Plan supports renewable energy development through existing incentives (policies 8.2-q and 8.2-r) and will explore enhancing methane capture at the Regional Water Quality Control Facility if feasible (policy 8.2-r*.) The City does not support the approaches proposed by the commenter at this time.

B4-41: The comment recommends parking-related strategies to encourage pedestrian travel and downtown development. The proposed General Plan includes a policy (Policy 5.2-av) that features a number of parking strategies for downtown. Pedestrian-oriented street design is emphasized in the City Design chapter of the proposed Plan, including Policy 6.3-l to create "Pedestrian Priority Areas." The section on Downtown features a number of policies for enhancing the city core, including Policy 2.4-c, to maintain the Downtown Property-Based Improvement District as a funding source for improvements. No additional policies are merited at this time, as there is not believed to be a sufficient market for pricing parking in Turlock.

B4-42: The comment proposes a housing overlay zone for transit centers and corridors. Both the Downtown Mixed Use and the High Density Residential land use classifications in the proposed General Plan would allow multi-family housing at up to 40 units per acre, or 48 units per acre with the affordable housing density bonus. The HDR zone is concentrated along transit corridors and near the transit center. Several policies reinforce the goal of providing higher-density development near transit, including policies 2.5-g (Locations for high-density development); 2.5-h (Transit and pedestrian accessibility from housing); 2.5-i (Housing downtown); and 2.5-j (Redevelopment in existing neighborhoods).

B4-43: The comment proposes infrastructure funding policies that reward development on sites well-served by existing infrastructure and transit. In fact the proposed Plan calls for updating the Capital Facility Fee (CFF) program to more closely reflect the reduced contribution of walkable neighborhoods to the need for additional roadway and operational infrastructure, in Policy 5.3-l, Reduced fees for Downtown and Pedestrian and Priority Areas. The policy is reinforced by Policy 2.5-i, Housing Downtown. The CFF update will adjust the fees for these areas downward in correlation with the reduced impacts that this type of development has on city infrastructure.

B4-44: The comment proposes that the City should commit to containerizing greenwaste collection and to either compost or digest that waste. The proposed Plan describes the recent introduction of a three-bin system for household waste collection in Turlock, with the largest bin reserved for green waste. Policies in Chapter 3 reaffirm the City's commitment to reducing solid waste (Policy 3.3-ag), implementing measures in the Source Reduction and Recycling Element (Policy 3.3-ai); and enhance the composting program, including studying the feasibility of adding food waste (Policy 3.3-ak).

B4-45: The comment states that annual tracking and reporting on the effectiveness of climate change mitigation policies should be required. The proposed General Plan calls for the development of a GHG Emissions Reduction Implementation strategy (Policy 8.2-f) within three years of Plan adoption. In order for this Plan to be relied upon for cumulative analysis of GHG impacts by future projects, it will need to include a mechanism to monitor progress toward achieving emission reduction goals.

B4-46: The commenter proposes that the Plan include a commitment to upgrade the City's wastewater treatment facilities to produce energy. The Turlock Regional Water Quality Control Facility currently features a 1.2-megawatt fuel cell that captures methane gas to produce energy and heated water. The proposed General Plan calls for exploring feasible opportunities to enhance waste-to-energy generation (Policy 8.2-r*). As noted under Comment B4-10, the Plan also proposes further expansion of the use of recycled water from the RWQCF. As the comment notes, the EIR does not cover GHG emissions from High GWP sources such as wastewater treatment facilities. This category of sources accounts for only 3 percent of GHG emissions statewide. See the response to Comment B4-22 for further discussion.

B4-47: The comment advocates that the City adopt local amendments to the California Green Building Standards Code to require 15 percent additional energy efficiency and other changes. The proposed General Plan confirms that the City will implement the California Green Building Code, which is the level of green building required by the State of California. The City would encourage developers to achieve greater energy efficiency through existing incentives (Policy 8.2-o), require greater energy efficiency for projects receiving public assistance (Policy 8.2-p) and improve energy efficiency in public buildings (Policy 8.2-m).

Health Impacts

B4-48: The comment states that the EIR should evaluate the proposed project's effect on physical activity, obesity, and chronic disease. While the City agrees that the public health issues identified are important considerations in city planning, they are not environmental impacts appropriately analyzed in EIRs under CEQA. Still, the proposed Plan calls for the development of compact new neighborhoods, complete streets, linear parkways, a high-quality bike system, and other features that support public health objectives.

B5: Michael F. Schmidt

B5-1: The comment objects to high density development east of Daubenberger Road. Under the proposed Plan, high density development, as part of a Compact or Very Compact Neighborhood, would be permitted east of Daubenberger as part of master plan areas Southeast 2 and Southeast 3. The objective of allowing higher density development (which, as part of a mixed use neighborhood, would be interspersed with lower density residential development and other neighborhood-oriented non-residential uses) in this area was to concentrate more intense development closer to Downtown Turlock, fostering development that relies less on long car trips and places residents closer to jobs. This is also an area that requires few upgrades to the existing transportation system in order to accommodate growth. Other utility infrastructure would be extended to the area in tandem with new development; these infrastructure impacts are described in sections 3.12 and 3.15 of the Draft EIR.

While the commenter notes that "the current estate lots on the east side of Daubenberger have always been a natural boundary for the city of Turlock," it is important to note that the City's existing General Plan does allow urban development to take place east of Daubenberger Road—though in the form of low density residential development. Thus, the existing General Plan (the "No Project Alternative" as it is assessed in the Draft EIR) would satisfy the request of the commenter. The City Council will have the opportunity to choose the No Project Alternative over the proposed Plan when the Plan comes forward for adoption.

B6: Juan R. and Jessie M. Orosco

B6-1: The comment questions why meeting other project goals and objectives should be prioritized over preserving productive agricultural land. The General Plan Update process involved extensive community engagement, from visioning and issue identification through evaluating land use alternatives and reviewing proposed policies. Agricultural preservation emerged as a high priority for community members, but not the only priority. Residents sought for the plan to grow the local economy, provide housing for all income levels, preserve Turlock's small-town feel, and increase recreation opportunities, among others. The full list of project objectives, in the form of eight General Plan "Themes," is found in the Draft EIR on pages 2-6 through 2-7. The proposed Plan aims to preserve as much farmland as possible while still meeting the other goals for the project.

B6-2: The comment asks where the development of jobs in non-agricultural sectors is discussed in the Draft General Plan, and what partnerships with educational institutions will be formed to help prepare the local workforce. General Plan Section 2.11, Economic Development, covers this topic. The reader will find policies pertaining to industry targeting and recruitment, workforce training, local start-up business support, supporting Downtown, and city marketing. Specifically, Policy 2.11-ac directs the city to "partner with CSU-Stanislaus in workforce training."

B6-3: Comment noted. The comment points out the finding on page 3.4-29 that the proposed Plan would have a greater impact on air quality than the No Project Alternative because the proposed Plan supports a larger population and thus greater vehicle miles traveled (VMT). The commenters reaffirm their support for the No Project Alternative over the proposed Plan. The City Council will have the opportunity to choose the No Project Alternative when it considers the proposed General Plan for adoption.

ORAL TESTIMONY

C1: Public Open House on Draft EIR

C1-1: The comment asks why an alternative that consisted of growing only to the northwest, and not the southeast, was not evaluated. The alternatives evaluated in the Draft EIR were largely drawn from the alternatives analysis completed as part of the General Plan Update—an evaluation that resulted in the selection of the Preferred Plan that was carried forward. In the General Plan alternatives analysis, an alternative consisting of expanding to the northwest only was included. However, the assessment found that this option did not compare favorably to the others discussed in a number of issue areas: roadway improvements, Prime Farmland conversion, and cost of infrastructure improvements. Therefore, this alternative was not carried forward. The Alternatives discussion in the Draft EIR, Chapter 4, has been revised to include a discussion of why this alternative was not included (see Chapter 4 of this document, page 4-2).

C1-2: The comment states a preference for not developing Prime Farmland at all, and building "up, not out" instead, i.e. increasing density. Alternative 1, which is the most compact alternative, would convert approximately half of the amount of Prime Farmland as the proposed Plan. However, some conversion of Prime Farmland to urban uses would still occur (approximately 570 acres). No alternative was assessed that did not expand Turlock's city limits onto Prime Farmland at all; the densities resulting from that development alternative—if enough housing were to be provided on infill sites to meet projected population growth—would be substantially higher and more characteristic of large cities than Turlock's historic form and character. Introducing an alternative that does not expand the city limits at all is a policy matter for the City Council.

C1-3: The comment concerns the Denair Rural Fire District and future annexation agreements. Please refer to the response to comment A4-2.

C1-4: Comment noted. The comment states that the Denair Rural Fire District also provides EMT services to the area in question. Please refer to the response to comment A4-2 for further discussion.

C1-5: The comment questions the carbon emissions related to future residents of southeast master plan areas driving to jobs that are located on the west side of the city, and where these residents will shop. While it is true that the Turlock Regional Industrial Park (TRIP) is located on the west side of the city, and that many more jobs may be located there as Turlock continues to grow, overall, job distribution in Turlock is relatively dispersed. The largest employers in Turlock currently are the Turlock Unified School District, which has locations scattered across the entire city; Emanuel Health

Center, located in the northeast; and Foster Farms, located just south of Downtown, close to new neighborhoods in the southeast. Moreover, commute trips account for less than 20 percent of all vehicle trips and less than 30 percent of vehicle miles traveled (National Household Travel Survey, 2009). Other trips are for family, shopping, social, and recreation purposes, among others. All new neighborhoods in Turlock—both in the southeast and northwest master plan areas—are designed to have a mix of land uses, including housing, shopping, jobs, parks, and schools, enabling residents to accomplish many of their daily tasks through short vehicle trips or other transportation modes, such as walking and bicycling.

C1-6: The comment states the preference for development of less farmland. Please see responses to comments A4-4, A7-3, B1-2, and C1-2.

C1-7: The comment expresses a desire for a greater focus on infill development. Please see responses to comments A4-4, A7-3, B1-2, and C1-2.

C1-8: The comment expresses a desire to reduce greenhouse gas emissions, focus on infill, and convert less farmland to urban uses. Please see responses to comments A4-4, A7-3, B1-2, and C1-2.

C1-9: The feasibility study to which the comment refers is the Feasibility Report for a proposed Southeast Area Specific Plan, conducted in 2003. The study concluded that residential development under the specific plan as proposed could be financially feasible, but that nonresidential development could be less feasible. The proposed General Plan includes a new mix and distribution of land uses, so the conclusions from this study are no longer applicable. As part of the alternatives analysis for the General Plan Update, preliminary development impact fees were calculated for each potential growth area, and found to be largely consistent with the fees previously required for development in other parts of Turlock. Moreover, financial feasibility is only one consideration for determining location of growth. The Draft EIR focuses on the physical environmental impacts associated with urban development.

C1-10: The comment expresses a preference to freeze the current city boundary and not convert any additional farmland to agricultural uses. Please see responses to comments A4-4, A7-3, B1-2, and C-2. Also, as stated in the response to comment B1-3, it is important to note that the existing General Plan (evaluated in the Draft EIR as the "No Project Alternative") does, in fact, allow development to extend beyond the current city limits.

C1-11: Comment noted. The comment recommends a moratorium on development for the purpose of preserving agricultural land. This is a policy decision to be addressed by the Planning Commission and City Council. Please see responses to comments A4-4, A7-3, B1-2, and C1-2 regarding preservation of agricultural land and its relationship to infill development.

C1-12: Comment noted. The commenter also expresses a preference for a policy that would limit or control Turlock's population. This is a policy decision for City Council; it is not the subject matter of the Draft EIR. The comment also mentions existing infrastructure deficiencies, a matter addressed through the City's Capital Facilities Fee Program. Please also refer to the responses to comments B2-1 and B2-2 for a description of the growth management policy that controls the timing at which new development may occur.

C1-13: The comment questions the overall content of the General Plan and does not concern the substance of the Draft EIR, which evaluates environmental impacts and physical changes. Agenda 21 has not been utilized or referenced in preparation of the General Plan Update.

C1-14: The comment questions whether the Draft EIR evaluates the impacts on the unincorporated community of Denair. Denair is located in the General Plan's Planning Area, which, as stated on page 2-3 of the Draft EIR, is the area "bearing relation to [Turlock's] planning." The City believes that Denair bears relation to planning activities that the City undertakes, and in some cases benefits from City services. Turlock provides wastewater services to Denair, for example. The Draft EIR does evaluate impacts to Denair with respect to many potential impact areas, specifically transportation, noise, and public utilities. For instance, Policy 5.2-p directs the City to establish an Area of Influence Fee for transportation infrastructure (both city and county roadways), which would expand upon the current SOI fee to ensure that impacts to adjacent unincorporated areas outside Turlock's SOI (i.e. Denair) are accounted for. Noise and other cumulative impacts assume that Denair would be fully developed (according to the Denair Community Plan) at the planning horizon. In the analysis of utilities, the contribution of Turlock's growth was also examined in conjunction with Denair's and other community's contributions to these systems at General Plan buildout, as the City is a service provider to other jurisdictions.

However, the City recognizes Stanislaus County's role in land use planning for this unincorporated community. The area evaluated in the Draft EIR is the Study Area: a subset of the Planning Area, defined as the area in which the City might need to expand in order to accommodate future growth. All areas designated for urban uses are within the Study Area boundary, but not all of the Study Area has urban uses; a large portion remains in Urban Reserve/agriculture. In many cases, the Draft EIR evaluates physical and environmental impacts resulting from urban growth in the Study Area only. It is understood that some environmental issue areas have regional or cumulative effects, such as impacts on roadways, regional air quality, and greenhouse gas emissions.

The comment also asks about an alternative that examines growth only in the northwest. Please refer to the response to comment C1-1.

C1-15: Comment noted. The comment pertains to job growth supporting residential growth. While this is largely a topic pertaining to the proposed General Plan itself and not the substance of the EIR, it can be noted that the draft Plan land use mix accommodates a full range of uses, both residential and employment-related. As shown in Table 2.4-4 of the Draft EIR, the proposed Plan would, at buildout, increase the ratio of jobs to employed workers in Turlock from 1.06 in 2007 to 1.19 in 2030. Section 2.11 of the proposed General Plan focuses on economic development and contains policies aimed at attracting and retaining businesses in Turlock.

C1-16: The comment concerns the Denair Rural Fire District and future annexation agreements, as well as the need for additional private sector jobs. Please refer to the response to comment A4-2 pertaining to the Fire District and response to comment C1-15 regarding jobs.

C1-17: The comment refers to fiscal impacts to the Denair Rural Fire District. Please refer to the response to comment A4-2.

C1-18: Comment noted. The City appreciates the acknowledgement of foreclosed homes as a potential housing source for future residents. Please refer to the General Plan Housing Element, adopted in January 2012 and certified by the Department of Housing and Community Development, for an in-depth analysis of housing needs in Turlock and policies pertaining to reuse of foreclosed homes. According to ForeclosureWarehouse.com and ForeclosuresListing.com, as of August 2012 there are approximately 88 homes currently on the market in Turlock due to foreclosure. Turlock's current foreclosure rate is 1 in 218 homes versus Statewide of 1 in 288 homes and 1 in 157 homes Stanislaus County as a whole. The proposed General Plan and Draft EIR emphasize and encourage infill

development as a means to accommodate anticipated population growth; assessment of vacant and underutilized properties within current city limits show that as much as one-fourth of new housing needed could be met by infill development. However, without significantly increasing allowable residential density, the remainder of the city's future housing need must be met by developing outside of current city limits. Please see response to comment C1-2 for more information.

C1-19: Comment noted. The commenter is concerned that the proposed General Plan Land Use Diagram shows residential development in the southeast extending all the way to the Merced County line, providing no formal open space or agricultural buffer. While the proposed Plan does not include parcels designated as agriculture or Urban Reserve along the county line, the proposed Plan does include policies pertaining to agricultural edge conditions and buffer design on private property at the urban edge. These policies ensure that development on parcels that form the edge of the Study Area is designed to create a natural transition to agricultural or rural land beyond. Please refer to Policy 6.1-k, "Agricultural Buffer Design," for further details and to Figure 3.7-1 in the Draft EIR, "Urban/Agricultural Edge Conditions," for illustrations of what these buffers may look like. In addition, the Draft EIR includes two alternatives that do have agricultural or Urban Reserve land along the Merced County line: Alternative 1 and the No Project Alternative. The City Council will have the opportunity to choose one of these alternatives. However, the General Plan as currently drafted does ensure that an appropriate transition or buffer at the Study Area edge will be provided.

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4 Revisions to the Draft EIR

This chapter includes the revisions to the Draft EIR. These revisions have been made in response to comments or based on review by the EIR preparers. The revisions appear here in the order they appear in the Draft EIR. Text additions are noted in underline and text deletions appear in ~~strikeout~~.

The City may refine the proposed General Plan based upon agency and public comments. These changes will not alter the conclusions presented in the Draft EIR regarding significant environmental impacts or mitigation measures and therefore do not trigger recirculation. Revisions to the Draft EIR are described in Table 4-1 and organized by chapter, page and table or figure, where applicable. Certain revised pages (including revised figures) have been appended to the end of this chapter, for clarity purposes; these pages are referenced in the table.

TABLE 4-1: REVISIONS TO THE DRAFT EIR

Chapter/ Section	*Page*	*Correction*
3.1	3.1-6	The second paragraph under the subheading "Williamson Act and Farmland Security Zone Contracts" is amended as follows: Williamson Act contracts are for 10 years and longer. The contract is automatically renewed each year, maintaining a constant, 10-year contract, unless the landowner or local government files to initiate nonrenewal. Should that occur, the Williamson Act would terminate ~~10~~ nine years after the filing of a notice of nonrenewal. Only a landowner can petition for a contract cancellation. Tentative contract cancellations can be approved only after a local government makes specific findings and determines the cancellation fee to be paid by the landowner.
3.1	3.1-11	Add the following policy following 7.2-f under the "Conservation Element Policies" subheading: 7.2-f* **Participation in county-wide agricultural mitigation program**. Continue to work collaboratively with Stanislaus County and jurisdictions within the county on the development of a countywide agricultural mitigation program, which would mitigate the loss of Important Farmland to urban development through the required purchase of agricultural easements or other similar measures.
3.1	3.1-12	The last paragraph on the page is amended as follows: This General Plan reflects a policy determination to allow a certain amount of growth to occur in the Study Area, which necessitates conversion of farmland to urban uses. The proposed Plan includes growth management policies to prevent the premature conversion of farmland, by encouraging infill development, by requiring new development to be built at considerably higher densities than Turlock has traditionally seen, and by phasing of new master planned growth areas. These policies are intended to offset the impact to agricultural land conversion to the greatest degree possible. In addition, Policy 7.2-f* directs the City to work collaboratively with Stanislaus County and its other jurisdictions to develop a countywide agricultural mitigation program. Stanislaus LAFCO has developed a draft agricultural preservation policy that is due to be considered for adoption in September 2012. Such a countywide program could well include the creation of a fee on new development that impacts agriculture, with the proceeds of such a fee being used to assist and support remaining agricultural uses, possibly even including some purchase of agricultural easements. However, the City does not believe that such a fee would qualify as mitigation as that term is identified under

TABLE 4-1: REVISIONS TO THE DRAFT EIR

Chapter/ Section	*Page*	*Correction*
		CEQA. Further, such a program would most feasibly and strategically be developed and implemented on a countywide or other regional basis, as it would not be feasible for the City to implement such a program on its own. Beyond limiting the amount of total growth permitted, which is proposed in the alternatives presented in Chapter 4, there are no feasible mitigation measures to agricultural land conversion that the City of Turlock can pursue independently prior to the development and implementation of the countywide program that would also fulfill the objectives of and implement the General Plan as proposed. The City cannot guarantee that the countywide program will be developed, so the impact remains significant and unavoidable.
3.2	3.2-2	Add an additional line to Table 3.2-1, Existing Land Use in the Study Area, and revise the total and percentages. See updated table at the end of this chapter.
3.2	3.2-8	The paragraph under the subheading "LAFCO Municipal Service Review" is amended as follows: State Government Code Sections 56425 and 56430 require that when updating a Sphere of Influence (SOI), a Municipal Service Review (MSR) must be prepared. The MSR must consider growth and population projections for the affected area; present and planned presence of public facilities and adequacy of public infrastructure in place to serve the new growth; financial ability of relevant agencies to provide services; accountability of community service needs, including governmental structure and operational efficiencies; and any other matter related to effective and efficient service delivery, as required by LAFCO policy. As of July 1, 2012, Senate Bill 244 (Wolk, 2011) also requires LAFCOs to consider the present and future need of disadvantaged unincorporated communities upon updating a Sphere of Influence. SB 244 also prohibits approval of city annexations greater than 10 acres that are contiguous to a disadvantaged unincorporated community unless the city applies to annex the disadvantaged unincorporated community as well (with limited exceptions).
3.5	3.5-4 to 3.5-6	Add additional documentation to describe statewide greenhouse gas emissions by source, and compare statewide and Study Area emissions sources. Sources that are not included in the subsequent analysis are briefly outlined, and an explanation is provided for not further quantifying them. See revised pages at the end of this chapter.
3.5	3.5-7 to 3.5-9	Add new sections summarizing energy use and the solid waste system in the Study Area. The first section covers existing building energy use in Turlock, including electricity and natural gas use, provision, and sources, and State-mandated requirements for renewable energy. It also includes discussion of transportation energy use (gasoline) and State mandates for reducing the carbon intensity of fuels. The second section describes Turlock's current solid waste system is described, and State mandates summarized along with local efforts. See revised pages at the end of this chapter.
3.5	3.5-20	Add a more detailed explanation is added of GHG emissions targets based on statewide reduction goals under AB 32 and EO-S-05, with new table summarizing Statewide expectations. See revised page at the end of this chapter.
3.5	3.5-22 to 3.5-24	Add more detailed explanation of methodology for estimating and projecting GHG emissions from electricity use; from transportation; and from waste. See revised pages at the end of this chapter. The additional explanation includes two new tables: Table 3.5-5: Emission Factors for EGRID Subregion CAMX, and Table 3.5-6: Transportation Emission Factors. See revised pages at the end of this chapter.
3.5	3.5-25	Table 3.5-2 is re-titled as Table 3.5-7 after addition of tables as part of revisions described

TABLE 4-1: REVISIONS TO THE DRAFT EIR

Chapter/ Section	*Page*	*Correction*
		above. Numbers in "Total" row under "Projected Reduction as % of Total Sector Emissions in the Study Area, 2020," and "Projected Reduction as % of Total Sector Emissions in the Study Area, 2030" are removed. See revised pages at the end of this chapter.
3.5	3.5-26	The second paragraph in the Summary of Impacts section is revised to clarify that the GHG emissions analysis was limited to the three primary sources, as follows: The proposed General Plan would not meet the significance threshold for overall GHG emissions reduction to meet State goals under AB 32 and EO-S-05. In 2020, emissions <u>from the three top sources</u> are projected to drop from 7.5 to 6.8 $MTCO_2e$ per SP, not quite meeting the target 6.6 $MTCO_2e$ per SP rate <u>while potentially not accounting for all GHG emissions</u>. …
3.5	3.5-28, 3.5-30	Add language to text and table titles to clarify that the GHG emissions analysis conducted for the Study Area was limited to three top sources. See revised pages at the end of this chapter.
3.5	Various	Table numbers and references to table numbers revised to account for addition of new tables.
3.9	3.9-12	The following two policies are added to the end of the list of policies under subheading "Conservation Element Policies": <u>7.4-d*</u> **<u>Identify and protect nesting habitat.</u>** <u>Projects on greenfield sites proposing to commence construction or other ground-disturbing activities during the typical nesting season (February through mid-September) shall be required to conduct a survey by a qualified biologist no more than 10 days prior to the start of disturbance activities. If nests are found, no-disturbance buffers around active nests shall be established as follows until the breeding season has ended or until a qualified biologist determines that the birds have fledged and are no longer dependent on the nest for survival:</u> • <u>250 feet for non-listed bird species;</u> • <u>500 feet for migratory bird species; and</u> • <u>One-half mile for listed species and fully protected species.</u> <u>7.4-d**</u> **<u>Swainson's Hawk protection.</u>** <u>If Swainson's Hawks are found foraging in an agricultural area prior to or during construction, project proponents shall consult a qualified biologist for recommended proper action, and incorporate appropriate mitigation measures. If specific project activities on sites where suitable nesting habitat may exist are to take place during the normal breeding season (February through mid-September), project proponents shall be required to conduct a survey by a qualified biologist for nesting raptors in all potentially suitable trees no more than 10 days prior to the start of disturbance activities. If an active Swainson's Hawk nest is found, appropriate mitigation measures may include, but are not limited to:</u> • <u>Establishing a one-half mile buffer around the nest until the breeding season has ended or until a qualified biologist determines that the birds have fledged and are no longer dependent on the nest for survival</u> • <u>Mitigating habitat loss within a 10 mile radius of known nest sites as follows:</u>

TABLE 4-1: REVISIONS TO THE DRAFT EIR

Chapter/ Section	*Page*	*Correction*
		– Providing a minimum of one acre of habitat management land for each acre of development for projects within one mile of an active nest tree – Providing a minimum of 0.75 acres of habitat management land for each acre of development for projects within between one and five miles of an active nest tree – Providing a minimum of 0.5 acres of habitat management land for each acre of development for projects within between five and 10 miles of an active nest tree
4.2	4-3	Following the discussion of the No Project Alternative, add a subheading and discussion of "Alternatives Not Carried Forward" as follows: **Alternatives Not Carried Forward** Section 15126(c) of the CEQA guidelines states, "The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts." Four alternatives were considered during the Alternatives Evaluation stage of the Turlock General Plan Update, and not all were not carried forward as alternatives to be evaluated in the Draft EIR. Specifically, the City considered an alternative called "Northwest Emphasis," which concentrated the majority of future development in the northwest part of the Study Area, with residential neighborhood development extending from Fulkerth Road all the way north to Taylor Road. This alternative was shown to have a high impact on farmland, converting the greatest amount of Prime Farmland and the second greatest amount of overall Important Farmland to urban uses when compared to the other alternatives. Additionally, this alternative was determined to be one of the least feasible with respect to required investment in transportation and utility infrastructure, and would have the greatest infrastructure cost per acre. Given these conclusions, and that the alternative was not likely to reduce any other significant impacts, it was not carried forward for EIR analysis.

TABLE 3.2-1: EXISTING LAND USE IN THE STUDY AREA

Land Use	*Acres*	*Percent*
Agriculture	6,260	~~42.9%~~ 35.9%
Residential: Low and Medium Density (3-15 du/ac)	3,283	~~22.5%~~ 18.8%
Industrial	1,126	~~7.7%~~ 6.4%
Vacant	1,131	~~7.7%~~ 6.4%
Commercial and Mixed Use	811	~~5.6%~~ 4.6%
Residential Estate (Less than 3 du/ac)	734	~~5.0%~~ 4.2%
Public/Semi-Public/Community Facility	696	~~4.8%~~ 4.0%
Residential: High Density (15-30 du/ac)	229	~~1.6%~~ 1.3%
Park and Open Space	209	~~1.4%~~ 1.2%
Office	118	~~0.8%~~ 0.07%
Roadways and Other Public Rights of Way	2,863	16.4%
Total	**~~14,597~~ 17,460**	**100.0%**

Note: Items may not sum to total due to rounding.

Source: Dyett & Bhatia, City of Turlock; 2009

Climate Change

Full-page excerpts from Draft EIR Section 3.5, Climate Change, follow. Additions and amendments are shown in underline and ~~strikeout~~. Only pages with amendments are included.

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forestry practices—have elevated the concentration of GHGs in the atmosphere beyond naturally-occurring concentrations, contributing to the larger process of GCC. The six primary GHGs are:

Carbon Dioxide (CO_2), emitted when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned;

Methane (CH_4), produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion;

Nitrous oxide (N_2O), typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning;

Hydrofluorocarbons (HFCs), primarily used as refrigerants;

Perfluorocarbons (PFCs), originally introduced as alternatives to ozone depleting substances and typically emitted as by-products of industrial and manufacturing processes; and

Sulfur hexafluoride (SF_6), primarily used in electrical transmission and distribution.

Though there are other gases that can contribute to global warming,[6] these six are identified explicitly in California legislation and litigation as being of primary concern. GHGs have varying potentials to trap heat in the atmosphere, known as global warming potential (GWP), and atmospheric lifetimes. GWP ranges from one (CO_2) to 23,900 (SF_6). GHG emissions with a higher GWP have a greater global warming effect on a molecule-by-molecule basis. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2.[7] GWP is alternatively described as "carbon dioxide equivalents", or CO_2e. The parameter "atmospheric lifetime" describes how long it takes to restore the system to equilibrium following an increase in the concentration of a GHG in the atmosphere. Atmospheric lifetimes of GHGs range from tens to thousands of years.

California GHG Emissions

The State of California alone produces about 2 percent of the world's GHG emissions. Major emission sources in California include transportation (37 percent), electric power (~~23~~ 25 percent), commercial and residential buildings (9 percent), industrial (~~19~~ 18 percent), recycling and waste (1 percent), High Global Warming Potential (GWP) sources (3 percent), and agricultural (6 percent). Forestry is expected to have a net

[6] Diesel particulate matter, which is also referred to as black carbon, is a strong absorber of solar radiation; scientists have known for many years that when black carbon particles combine with dust and chemicals in air they become more efficient in absorbing solar radiation, and black carbon mixtures may be the second biggest contributor to global warming. See California Air Resources Board, Health Effects of Diesel Particulate Matter pages 4-5, available at http://www.arb.ca.gov/research/diesel/dpm_draft_3-01-06.pdf [as of October 14, 2008].

[7] California Climate Action Registry (CCAR) (2009) General Reporting Protocol Version 3.1.

reduction on total emissions by about 1 percent.[8] Certain sub-categories of emissions sources are not present in the Study Area. These include refineries (6 percent of statewide emissions); oil and gas extraction (3 percent); cogeneration heat output (2 percent); cement plants (2 percent); ships and commercial boats (1 percent); and interstate aviation (1 percent). Therefore the proportionate share of emissions from the transportation; building energy; and waste categories are expected to be larger in the Turlock Study Area than in the state as a whole.

The State of California has taken steps to greatly reduce GHG emissions with the aim of delaying, mitigating, or preventing at least some of the anticipated impacts of GCC on California communities. The Global Warming Solutions Act of 2006 (AB 32) required that the California Air Resources Board (ARB) determine the statewide greenhouse gas emissions level in 1990, and set that level as the goal for total emissions in 2020. Based on its 1990-2004 inventory work, ARB staff estimated that 427 million metric tons of carbon dioxide equivalent (CO_2e) emissions were released in California in 1990, and established this as the 2020 emissions limit.[9] AB 32 is further discussed in the *Regulatory Setting* section below.

Greenhouse Gas Emissions in the Planning Area

The City has prepared a baseline inventory of GHG emissions from three top sources, as shown in Table 3.5-1. This emissions inventory is based on vehicle-miles-traveled, as estimated by the traffic model created for the General Plan update, and data from electricity, natural gas, and waste service providers for 2008. Greenhouse gas emissions factors are based on IPCC's *Guidelines for National Greenhouse Gas Inventories* (2009) and the California Climate Action Registry (CCAR) General Reporting Protocol (version 1.) Waste-related emissions are calculated using the EPA's LandGem model.

Electricity and natural gas, primarily for building energy, is the largest source of emissions in the Planning Area, accounting for an estimated 50 percent of emissions from the sources analyzed. Within this broad category, nearly half (48 percent) of the electricity is used by industrial customers and one-third by residential customers. On-road transportation accounted for 35 percent of communitywide greenhouse gas emissions from major sources, and solid waste generated an estimated 14 percent. ~~Smaller sources of GHG emissions include stationary industrial sources and off-road vehicles such as construction and agricultural equipment.~~

Other potential sources of greenhouse gases in the Planning Area include process emissions from wastewater treatment and composting; agriculture; and High GWP gases. These are briefly discussed here. First, according to the City of Turlock 2005 Government Operations Greenhouse Gas Emissions Inventory, wastewater treatment was associated with approximately 836 metric tons of CO2-equivalent nitrous oxide process emissions, and approximately 349 metric tons of CO2-equivalent emissions from flared and burned methane.[10] Together these emissions would account for a fraction of a percent of the total emissions calculated in Table 3.5-1. Second, preliminary estimates of emissions from cropland (related to application of fertilizer) suggest that this source accounted for less than one percent (2,750 $MTCO_2e$) of total estimated emissions in the Study Area, due to the type of crops under cultivation. The impact of livestock was not

[8] California Air Resources Board (ARB) (2009) Greenhouse Gas Inventory Data 2000-2008, available at http://www.arb.ca.gov/cc/inventory/data/data.htm, accessed January 2012.

[9] ARB, (2008) Climate Change Proposed Scoping Plan, October 2008.

[10] City of Turlock (2011) City of Turlock, CA 2005 Government Operations Greenhouse Gas Emissions Inventory

calculated due to the relatively small amount of land (27 acres) used for raising livestock in the Study Area. Thus, while emissions associated with agriculture make up approximately 6 percent of the statewide total, the expected share of agricultural emissions in the Study Area is assumed to be less based on these preliminary calculations and expected to decline during the planning period as more land is converted from farming to urban uses. Third, High GWP chemicals are common and widespread, used in refrigerators, air conditioning, fire suppression systems, and insulating foam. These sources are a subject of four ARB Discrete Early Action measures to reduce GHG emissions, and future reductions will come from specifications for future equipment and protocols for recovery and destruction and will not be determined locally.[11]

It is important to state that the General Plan concerns urban development over a 20-year period in a 27-square mile area with a great diversity of land uses. Analysis of the impacts of development is necessarily less detailed than analysis of an individual development project.

TABLE 3.5-1: COMMUNITYWIDE GREENHOUSE GAS EMISSIONS IN TURLOCK FROM THREE TOP SOURCES, 2008

Source	*Total CO_2e Emissions (metric tons)*	*Share of Total*	*Per Service Population[1]*
Electricity and Natural Gas[2]	376,200	50%	3.8
Residential	124,400	17%	
Commercial	29,200	4%	
Industrial	179,200	24%	
Agriculture[3]	24,400	3%	
Municipal	17,900	2%	
Transportation (on-road)	263,800	35%	2.7
Solid Waste	108,400	14%	1.1
Total GHG Emissions, Top 3 Sources	**748,400**	**100%**	**7.5**

1 Service population is residents plus jobs. The Study Area's 2008 service population is 99,360.

2 TID provided electricity usage by sector for 2004 for City of Turlock, and total electricity usage in the Study Area for 2008. The relative proportions by sector within the City are extrapolated to 2008 levels for the Planning Area.

3 Agriculture's proportion of total emissions is adjusted to account for farmland outside City limits but within Study Area.

Sources: Dyett & Bhatia, 2012; Omni-Means, 2009; California Department of Finance, 2012; Turlock Irrigation District, 2012; Stanislaus County Department of Environmental Resources, 2010; PG&E, 2010; California Climate Action Registry (CCAR), 2009; EPA, 2005, Intergovernmental Panel on Climate Change (IPCC), 2006, 1996.

[11] ARB (2008).

Energy Use in the Study Area

Building Energy

Energy use in buildings and energy used for transportation are by far the largest sources of heat-trapping gases in the Study Area. The greatest potential greenhouse gas reductions can be made by lowering the carbon content of energy, and by lowering per-capita energy use.

Turlock Irrigation District (TID) is the electricity provider in the Study Area. TID operates eight hydroelectric power plants, as well as three natural gas-fired power plants, including the 250-megawatt Walnut Energy Center completed in 2006 in Turlock's Westside Industrial Specific Plan area. The District sells a portion of the power it generates and buys from other sources a portion of the power it sells to its customers. Table 3.5-2 shows 2004 electricity usage by Turlock customers in each category as compiled by TID. Overall per service population electricity use is estimated at 8,428 kilowatt-hours (kwh) per capita or 6,031 kwh per service population. The California Climate Action Registry (CCAR) model is used to estimate GHG emissions from electricity generation, as described in the Impact Analysis section.

TABLE 3.5-2: TURLOCK ELECTRICITY USAGE BY RATE CLASS, 2004

Rate Class	*Electricity Usage (kwh)*	*Share of Total*	*Customers*
Commercial	46,477,808	8%	2,600
Domestic	198,098,425	33%	21,796
Farm	38,870,779	6%	62
Industrial	285,444,934	48%	279
Municipal	28,515,068	5%	288
Non Metered	1,735,617	0%	2,360
Pumping	61,937	0%	4
Total	***599,204,569***	**100%**	***27,389***

Source: Turlock Irrigation District, 2010, Dyett & Bhatia, 2012.

Note: 2004 electricity usage is provided for farms within City limits. To estimate usage by all farms in the Planning Area, current proportion of farmland inside and outside City limits is applied.

TID is investing in renewable energy production, including a 136-megawatt wind energy facility and a geothermal plant, as well as increasing its purchasing of renewable energy. TID recently partnered with the City of Turlock to build a fuel cell at the Regional Water Quality Control Facility, generating clean energy from methane gas. The utility aims to achieve compliance with the State Renewables Portfolio Standard (RPS) for 33 percent of power deliveries to be from renewable sources by 2020.

PG&E provides natural gas to homes and businesses in the Study Area, and operates gas transmission lines connecting the Study Area to the larger system. PG&E has an obligation to provide the public with a safe and reliable energy supply, and to plan for changes in load growth, as mandated by the California Public Utilities Commission (CPUC). PG&E delivered 25.3 million therms of natural gas to Turlock customers in 2008, translating to 255 therms per service population or 356 therms per capita.

In California as a whole, the average annual residential gas consumption per household has dropped more than 36 percent since 1970, from 845 therms to 538 therms.[12] This is expected to continue with continued improvements to building energy efficiency.

Transportation Energy

Vehicle trips and Vehicle Miles Traveled (VMT) in the Study Area were estimated based on existing land use patterns and the roadway network. As shown in Table 3.5-3, an estimated 1.4 million vehicle miles are traveled per day in the Study Area, or about 511 million VMT per year. Assuming a fleetwide average of 17.5 miles per gallon, an estimated 29.2 million gallons of fuel are currently used for on-road transportation in the Study Area. As with electricity use, fuel consumption is translated to GHG emissions following the California Climate Action Registry (CCAR) model described in the Impact Analysis section.

TABLE 3.5-3: VMT AND FUEL CONSUMPTION IN THE STUDY AREA

Measures of Daily Travel	*Existing*
Total Vehicle Trips	361,000
Total Daily Vehicle Miles Traveled (VMT)	1,400,600
Total Annual VMT	511,219,000
Annual Fuel Consumption (gallons)	29,212,514

Source: Omni Means, 2012.

Gasoline refiners selling in California will be required to achieve the State's Low Carbon Fuel Standard (LCFS), reducing the carbon intensity of transportation fuels by 10 percent by 2020, as well as the federal Renewable Fuels Standard (RFS) requiring 36 billion gallons of biofuels to be sold annually in the U.S. by 2022, a fivefold increase from 2007.

Solid Waste

Solid waste is the third source of GHG emissions analyzed in this EIR. The City of Turlock 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 new program to reduce Turlock's waste stream. The program provides three separate bins to each home: a 90-gallon container reserved exclusively for compostable green waste, a 65-gallon container for all recyclable materials, which are separated by the refuse company after pick-up, and a 32-gallon container for non-recyclable household wastes.

[12] California Energy Commission, Energy Almanac, accessed at http://www.energyalmanac.ca.gov/naturalgas/overview.html, July 26,2012.

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.

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 per person per day (50 percent diversion equivalent). In 2009, the Agency's jurisdiction achieved 3.3 pounds per person per day, or a 72 percent diversion equivalent.

REGULATORY SETTING

The regulation of greenhouse gases is changing constantly as nations, and the U.S. federal, state, and local governments work to determine strategies that will work to systematically reduce GHG emissions and the impacts of climate change. GHG regulation is also intertwined with regulation of energy production and distribution. The regulations listed below reflect a tailored list of relevant actions the federal and state governments have taken to address energy, greenhouse gases, and global climate change.

Federal Regulations

Section 202 GHG Regulation of Cars and Light Duty Trucks

This rule was proposed jointly by EPA and the National Highway Traffic Safety Administration (NHTSA) to create a National Program of GHG emission standards and Corporate Average Fuel Economy (CAFE) standards. The standards apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards are designed to achieve a national vehicle fleet whose emissions and fuel economy performance improves year over year. The goal is to reduce CO_2 emissions by 960 million metric tons and save 1.8 billion barrels of oil over the lifetime of the vehicles sold in model years 2012 through 2016. The final rule was signed on April 1, 2010 and will become effective 60 days after its publication in the Federal Register.

Renewable Fuel Standard Program

Finalized on February 3, 2010, this rule makes changes to the Renewable Fuel Standard (RFS) program, as required by the Energy Independence and Security Act of 2007. The original RFS program was designed to implement the provisions of the Energy Policy Act of 2005 (EPAct, described later). The revised statutory requirements establish new specific volume standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel that must be used in transportation fuel each year. The revised statutory requirements also include new definitions and criteria for both renewable fuels and the feedstocks used to produce them, including new greenhouse gas emission thresholds for renewable fuels.

Greenhouse Gas Findings (2009)

In the U.S. Supreme Court case Massachusetts v EPA (2007), 12 states, three cities, and 13 environmental groups filed suit that the EPA should be required to regulate carbon dioxide and other greenhouse gases as pollutants under the federal Clean Air Act. In April 2007, the U.S. Supreme Court found that the EPA has a statutory authority to formulate standards and regulations to address greenhouse gases, which it historically has not done. On December 7, 2009, the Environmental Protection Agency Administrator finalized two

Impact Analysis

SIGNIFICANCE CRITERIA

A significant impact would occur with implementation of the proposed General Plan if it would:

- Result in the generation greenhouse gas emissions, either directly or indirectly, in an amount greater than 6.6 metric tons of CO_2-equivalent ($MTCO_2e$) GHGs per service population in the year 2020, or 3.8 $MTCO_2e$ per service population in the year 2030. These targets match the level of per service population emissions needed statewide to meet the goal of reducing total greenhouse gas emissions to 1990 levels by 2020 under the California Global Warming Solutions Act of 2006 (AB 32) and to 80 percent below 1990 levels by 2050 under Executive Order S-3-05.
- Result in the generation of greenhouse gas emissions from passenger vehicles in an amount greater than 3.53 metric tons per capita by 2020 or 3.47 metric tons per capita by 2030, not accounting for State-mandated improvements to fuel efficiency. These amounts correspond to a 5 percent reduction per capita from 2005 levels by 2020 and an 8 percent reduction per capita by 2030, matching targets set for StanCOG and other San Joaquin Valley metropolitan planning organizations under the Sustainable Communities and Climate Protection Act of 2008 (SB 375). These reductions must be attributable to local or regional land use, housing and transportation policies.

Under AB 32, the State must reduce GHG emissions to 1990 levels by 2020, an overall reduction of approximately 15 percent. When projected population and job growth are taken into account, this goal translates to a per service population reduction of about 27 percent from "business as usual." Therefore the 2020 threshold for this EIR represents a 27 percent reduction from current per-service-population emissions in California. As Table 3.5-4 shows, since current emissions statewide are estimated at 9.1 MTCO2e per service population, the target for 2020 is set at 6.6 $MTCO_2e$, or 27 percent of that number. Executive Order S-3-05 sets a long-range goal for the State to reduce GHG emissions to 80 percent below 1990 levels by the year 2050, or 85.4 million metric tons per year. Charting an even annual growth rate between existing conditions (2008) and 2050 in terms of service population and GHG emissions, this target requires a per service population reduction to 3.8 $MTCO_2e$ annually at the State level. This threshold is thus set as the target for the Turlock Study Area for 2030.

TABLE 3.5-4: GREENHOUSE GAS EMISSIONS REDUCTION IN CALIFORNIA UNDER AB 32 AND EXECTUIVE ORDER S-3-05

Year	*2008*	*2020*	*2030*	*2008-2020 Change*	*2008-2030 Change*	*2008-2030 Annual Rate*	*2050*
Residents	38,049,462	44,135,923	49,945,376	16%	31%	1.2%	
Jobs	16,883,400	20,194,661	23,445,011	20%	39%	1.5%	
Service Population	54,932,862	64,330,584	73,390,388	17%	34%	1.3%	
GHG Emissions (metric tons/year)	502,352,941	427,000,000	280,027,980	-15%	-44%	-2.6%	85,400,000
Emissions per capita	13.2	9.7	5.6	-27%	-58%	-3.8%	
Emissions per SP	9.1	**6.6**	**3.8**	-27%	-58%	-3.9%	

Sources: California Air Resources Board, 2008; Department of Finance, 2012; Dyett & Bhatia, 2012.

Notes:

Underlined numbers are formal targets established by AB 32 and EO S-3-05. Other numbers

Bolded numbers are extrapolated targets used as significance thresholds for the Turlock General Plan Update.

METHODOLOGY AND ASSUMPTIONS

The climate change analysis is conducted in response to the most recent recommendations and guidance materials from the OPR, ARB, the Attorney General, CAPCOA, and other responsible agencies. The GHG analysis focuses on CO_2, CH_4, and N_2O emissions, which make up the overwhelming majority of GHG emissions. For purposes of comparison, all three gases are described in carbon dioxide equivalents (CO_2e). The California Climate Action Registry General Reporting Protocol (CCAR GRP) Version 3.1 is the primary reference used for conversion factors and methodology for transportation and building energy use. The US EPA's Landfill Gas Emissions Model (LandGEM) Version 3.02 is used to estimate GHG emissions from solid waste. Existing conditions data for electricity and natural gas use and solid waste are from 2008; transportation emissions are based on traffic analysis conducted in October 2009.

Service Population

For the first significance criterion, this analysis employs the concept of "service population" to account for growth in both residential population and jobs. Distributing GHG emissions across a whole service population allows the analysis to more accurately project the climate impacts of future development in the Planning Area, and the relative role that residential and non-residential activities will play. The second criterion is evaluated on a per capita basis, to match the units (per capita GHG emissions reduction) of the targets set for StanCOG under SB 375.

Application of Regulatory Framework

The analysis of GHG emissions takes into consideration emissions reductions that would result from effective implementation of State legislation, including Assembly Bill 1493: Pavley; Senate Bill 1078 Sher and Executive Order S-14-08: Renewables Portfolio Standard; and Executive Order S-01-07: Low Carbon Fuel Standard. These mandates, described above in the Regulatory Setting section, are included in ARB's Climate Change Scoping Plan, which outlines the State's strategy to achieve the 2020 GHG emissions limit established by AB 32.[17] Application of State mandates, detailed below by emission sector and in summarized in Table 3.5-2, result in an overall emissions reduction of 16 percent compared to Business as Usual (BAU) in the Study Area for 2020, and 24 percent for 2030.

The analysis also estimates emissions reductions resulting from changes to the land use pattern under the proposed General Plan. With full buildout of the General Plan, attached single-family and multi-family units will make up larger proportions of the City's housing stock than they do currently, which will result in lower per-unit energy use. The proposed compact development pattern, with higher-density housing types in close proximity to neighborhood services and schools, is expected to result in a per capita reduction in vehicle miles travelled. Methodology for estimating these reductions is further outlined below.

Emissions from Electricity Use

Indirect emissions associated with the use of electricity are estimated based on electricity delivery data for 2008 provided by Turlock Irrigation District (TID). Total kilowatt-hours (kWh) are translated into CO_2e using emission factors developed for the State by the California Climate Action Registry (CCAR), and based on energy characteristics of the subregional electricity grid defined in the CCAR model. Refer to CCAR's General Reporting Protocol version 3.1 for more detail. Forecast emissions for residential electricity use are based on population growth between 2008 and 2030, assuming that per capita electricity use remains constant

[17] ARB (2008).

for each type of housing (detached and attached single-family and multi-family). Relative energy use by housing type is based on a 2010 study by Jonathan Rose Companies with support from US EPA. Forecast emissions for commercial/industrial electricity use are based on job growth between 2008 and 2030, assuming that electricity use per job would remain constant. These are conservative estimates given policies in the proposed General Plan that will reduce energy use in both residential and commercial settings, as described in Impact 3.5-1.

While electricity itself does not create emissions, emissions do result from the process of using other fuels to create electricity. Those fuels may be carbon-based (such as coal), or may be "clean" sources such as wind, solar, or hydro. The fuel mix used by electricity providers determines the climate impact of fuel consumption. Turlock is located in eGRID Subregion CAMX. Based on the typical fuel mix in this subregion, CCAR provides the following "emission factors" for each greenhouse gas:

TABLE 3.5-5: EMISSION FACTORS FOR EGRID SUBREGION CAMX

Greenhouse Gas (GHG)	*Emission factor (lbs/kWh)*
CO2	0.72412
CH4	0.0000302
N2O	0.0000081

Source: CCAR GRP 3.1, Table C.2 (eGRID2007 Version 1.1, Dec 2008)

When weighted by their global warming potential (GWP), CO2 typically represents over 99 percent of the greenhouse gas emissions from the stationary combustion of fossil fuels. The approach required to estimate CO2 emissions differs significantly from that required to estimate CH4 and N2O emissions. While CO2 can be reasonably estimated by applying appropriate emission factors to the fuel quantity consumed, estimating CH4 and N2O depends not only upon fuel characteristics, but also on technology type and combustion characteristics, usage of pollution control equipment, and ambient environmental conditions. Emissions of these gases also vary with the size, efficiency, and vintage of the combustion technology, as well as maintenance and operational practices. Due to this complexity, a much greater effort is required to estimate CH4 and N2O emissions from the consumption of purchased electricity, heat, and/or steam, and a much higher level of uncertainty exists.[18] There would thus be very limited utility in providing any actual estimate of CH4 and N20—rather, the analysis of CO2 alone is deemed sufficient to fairly estimate greenhouse gas emissions from stationary combustion.

To calculate GHG emissions from electricity, the emission factors above are applied to electricity use (in kilowatt-hours, or kwh) by Turlock customers in 2008, using the following formulae:

- Total CO2 Emissions from Indirect Electricity Use = Electricity Use in kWh x Emissions Factor ÷ 1,000 to convert to kWh ÷ 2,204.62 (to convert pounds into metric tons)
- Converting Non-CO2 GHGs to CO2 Equivalent = Metric tons of non-CO2 GHGs x Global Warming Potential multiplier (CCAR GRP V3.1,Appendix C, Table C.1, SAR Column)

[18] World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), Greenhouse Gas Protocol, Consumption of Purchased Electricity, Heat, and/or Steam Guide to Calculation worksheets v. 1.2A, 2007. Accessed at http://www.ghgprotocol.org/

Electricity Mandates

Based on Governor Schwarzenegger's call for a Renewables Portfolio Standard (RPS) in Executive Order S-14-08, the AB 32 Scoping Plan anticipated that California will have 33 percent of its electricity provided by renewable resources by 2020, up from 10 percent in 2008. The Climate Change Proposed Scoping Plan estimates that the RPS will result in a reduction of 21.3 million metric tons of CO_2e ($MMTCO_2e$) statewide by 2020. This analysis assumes a 4.8 percent reduction in emissions compared to BAU in the Study Area in 2020 and 3.8 percent reduction compared to BAU in 2030, applying the Statewide reduction-to-BAU proportion for the energy sector, and sensitizing it to Turlock's faster rate of growth. The declining relative reduction rate in 2030 compared to 2020 is due to the fact that the regulation should be in full effect by 2020, and no additional gains are projected between 2020 and 2030 while emissions are projected to continue to grow.

The Scoping Plan estimates emissions reductions resulting from statewide energy efficiency measures to result in emissions reductions of 15.2 and 4.3 $MMTCO_2e$ for electricity and natural gas, respectively, by 2020. As with the RPS, this analysis assumes that emissions reductions will apply proportionately in the Study Area, taking Turlock's faster population growth into account, resulting in a combined 4.4 percent emission reduction compared to BAU in 2020, falling to 3.5 percent reduction compared to BAU in 2030. Also included in the model is a small (0.5 percent in 2020 and 0.4 percent in 2030) reduction to account for the State program supporting solar roof installation. These reductions, summarized in Table 3.5-~~2~~8, account for statewide energy efficiency measures identified in the AB 32 Scoping Plan.

Transportation Emissions

The transportation model developed by Omni-Means was used to estimate VMT for existing conditions (2009), the proposed project, and the No Project and alternative scenarios. VMT projections were then used to calculate fuel use and resultant CO_2e emissions from transportation, based on factors defined by CCAR. The transportation model aims to realistically account for changes in transportation behavior resulting from changes in the land use pattern under the proposed General Plan and the alternatives.

Emission factors based on the California Climate Action Registry General Reporting Protocol (GRP) version 3.1, and summarized in Table 3.5-6. Both N20 and CH4 emissions factors are averages of the emissions factors per mile of all tiers of light duty gas vehicles (LDGV), light duty gas trucks (LDGT) and heavy duty gas vehicles (HDGV), from EPA's Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles 2004. The GRP may be consulted for further detail.

TABLE 3.5-6: TRANSPORTATION EMISSION FACTORS

Factor	
CO2 for Motor Gasoline (kg/gallon)	8.81
CO2 for Diesel (kg/gallon)	10.15
N20 Emissions Factor (g/mile)	0.034
CH4 Emissions Factor (g/mile)	0.094

Sources: CCAR GRP 3.1, Table C.3 (US EPA Inventory of GHG Emissions and Sinks: 1999-2005 (2007), Annex 2.1).

Only the emission factor for gasoline (California reformulated gasoline, with 5.7% ethanol) was used, for all vehicles. This is because the impact of diesel use by trucks results in only about 3 percent higher emissions (when allocated 20 percent of vehicle miles travelled (VMT), and because the proportion of diesel is not

predicted to differ across scenarios in 2030, meaning the relative impact of this assumption on each alternative will be in the same direction.

The emission factors are applied to estimated and projected VMT and gasoline using the following formula:

- Total CO2 Emissions from On-road Transportation = Annual VMT x Average Fuel Economy x Emissions Factor x 0.001 (to convert kg to tons)
- Converting Non-CO2 GHGs to CO2 Equivalent = Metric tons of non-CO2 GHGs x Global Warming Potential multiplier (CCAR GRP V3.1,Appendix C, Table C.1, SAR Column)
- Average fuel efficiency for 2008 and for 2030 was estimated based on the MTC T2035 Plan EIR for the Bay Area.

Transportation Mandates

US EPA granted California a waiver in June 2009 that allows the state to implement stricter fuel efficiency standards than federal regulations. ARB has indicated that it will be able to enforce AB 1493 (Pavley), the state legislation that mandates greater fuel efficiency. Therefore, this EIR incorporates Pavley Phases 1 and 2 in the GHG analysis. The Scoping Plan estimates that implementation of the Pavley standards will result in a reduction of 31. 7 $MMTCO_2e$ statewide by 2020; translated to the Study Area, a 4.1 percent reduction compared to BAU is assumed for 2020. Since fuel efficiency gains may be expected to continue beyond 2020 as older vehicles are replaced, the 2030 projections account for Pavley using estimated fleetwide fuel efficiency as estimated by the Metropolitan Transportation Commission (MTC) model (2008). This model projects that adjusted fuel economy will rise from 17.5 miles per gallon (mpg) in 2006 to 27.3 mpg by 2035. Total emissions are projected to be reduced by 14.5 percent compared to BAU in 2030 as a result of Pavley.

In addition, the Scoping Plan estimates that Executive Order S-01-07 Low Carbon Fuel Standard (LCFS) would result in a reduction of 15 million metric tons of CO_2e in 2020, which would represent a reduction of approximately 1.9 percent in GHG emissions compared to BAU in the Planning Area in 2020, and 1.6 percent of BAU in 2030. See Table 3.5-~~2~~7.

Waste

Solid waste is generated from households, offices, shops, markets, restaurants, public institutions, industrial installations, water works and sewage facilities, construction and demolition sites, and agricultural activities. The starting point for the estimation of greenhouse gas emissions from solid waste disposal is the compilation of activity data on waste generation, composition, and management.

This analysis follows the LandGem model for calculating GHG emissions from solid waste, taking into account only Turlock's current share of waste accepted annually at the Fink Landfill. It is assumed that the per-service-population waste generation rate remains constant over the planning period. This is likely to be a conservative estimate, since waste reduction measures are included in proposed General Plan policies but are not accounted for in the modeling. Contributions and emissions for each year are calculated using the estimated service population growth rate of 2.7%. Contributions for landfill open years before 1990 were conservatively assumed to be the same as the 1990 contribution—a conservative assumption.

TABLE 3.5-~~27~~: ESTIMATED EMISSIONS REDUCTIONS BASED ON STATE MANDATES

Scoping Plan Measure	*Affected Emissions Sector*[1]	*Projected Reduction as % of Total Sector Emissions Under Scoping Plan, 2020*	*Sector as Proportion of Estimated Study Area Emissions*	*Projected Reduction as % of Total Sector Emissions in the Study Area, 2020*[2]	*Reduction as % of Overall Business-as-Usual Emissions in the Study Area, 2020*	*Reduction as % of Total Sector Emissions in the Study Area, 2030*[3]	*Reduction as % of Overall Business-as-Usual Emissions in the Study Area, 2030*
Pavley Standards	Transportation	14.1%	35%	11.7%	4.1%	53.9%	14.5%
Low Carbon Fuel Standard	Transportation	6.7%	35%	5.5%	1.9%	5.5%	1.6%
Energy Efficiency - Natural Gas	Building Energy	2.3%	50%	1.9%	1.0%	1.9%	0.8%
Energy Efficiency - Electricity	Building Energy	8.2%	50%	6.8%	3.4%	6.7%	2.7%
Renewable Portfolio Standard (Electricity)	Building Energy	11.5%	50%	9.5%	4.8%	9.4%	3.8%
Solar Roofs (Electricity)	Building Energy	1.1%	50%	0.9%	0.5%	0.9%	0.4%
Total				**~~36.4%~~**	**15.7%**	**~~78.2%~~**	**23.7%**

Notes:

1. The Scoping Plan identifies four sectors: Transportation; Electricity; Commercial and Residential; and Industry, which combine for a total of 512 MMTCO2e in 2020. For this analysis, the Electricity and Commercial and Residential sectors are combined.

2. Emissions are calculated by sector. For the Study Area, the statewide reductions per sector are modified to account for Turlock's faster projected growth rate compared to the State as a whole.

3. For 2030, Pavley standards are calculated based on additional estimated fleetwide fuel economy. Other State mandates produce fewer reductions compared to Business-as-Usual in 2030 compared to 2020 because total emissions are estimated to grow while mandates remain constant.

Sources: Dyett & Bhatia, 2012; Omni Means, 2012; CARB, 2008.

Cumulative Impact Analysis

A cumulative impact analysis considers the possible effects of the proposed General Plan together with projected regional growth and anticipated increases in regional travel that are not a result of the proposed General Plan. Greenhouse gas and global climate change impacts are the result of many interrelated regional changes, and thus the significance of the proposed Plan's impact must be considered in conjunction with these wider development patterns.

SUMMARY OF IMPACTS

Under the proposed General Plan, future emissions from the primary three sources (electricity and natural gas; transportation; and solid waste) are estimated to increase to 948,200 metric tons CO_2e in 2020 and 1,174,800 metric tons CO_2e in 2030 with State mandates, an overall increase of approximately 57 percent over existing conditions. *Per service population* emissions are projected to decline by 17 percent over the planning period under the proposed General Plan when compared to existing conditions, as emissions decline relative to population and employment growth.

The proposed General Plan would not meet the significance threshold for overall GHG emissions reduction to meet State goals under AB 32 and EO-S-05. In 2020, emissions from the three top sources are projected to drop from 7.5 to 6.8 $MTCO_2e$ per SP, not quite meeting the target 6.6 $MTCO_2e$ per SP rate. However, it~~I~~t should be noted that the General Plan features a great number of policies that together seek to reduce per capita energy consumption, establish a balanced and mixed-use land use pattern, promote sustainable development practices, reduce sprawl, promote walkability, and reduce vehicle miles travelled (VMT). Many of these policies are representative of measures included in the Scoping Plan as well as the Attorney General's and CAPCOA's recommended measures and policies to offset or reduce global warming impacts. The effects of these policies, listed in Table 3.5-~~5~~10, are not fully quantified. The proposed Plan would not meet the significance threshold for 2030, which is set in line with the State's goal of reducing GHG emissions by 80 percent from current levels by 2050. Under the proposed Plan, GHG emissions would occur at a rate of 6.3 $MTCO_2e$ per service population in 2030, compared to the target rate of 3.8 $MTCO_2e$ per SP. See Table 3.5-3.

The EIR also establishes a significance criterion based on achieving regional GHG reduction targets as a result of land use and transportation patterns, as established under SB 375. When other State-mandated fuel efficiency and low-carbon fuel measures are not counted, transportation emissions in the Study Area are projected to rise from approximately 264,000 MTCO2e today to 382,000 in 2020 and 526,500 in 2030, as shown in Table 3.5-6. This translates to a gradual increase in transportation-related emissions of 6 percent per capita by 2020 and 12 percent per capita by 2030, in line with projected increased vehicle-miles travelled (VMT). Following SB 375, ARB set targets for GHG emissions reductions from vehicles for StanCOG of 5 percent by 2020 and 8 percent by 2030. While the proposed General Plan would not meet these targets, it contains numerous policies whose positive impacts on travel behavior are not quantified. It is expected that these policies will help support a regional Sustainable Communities Strategy (SCS) that is fully quantified and meets the regional target under SB 375.

Because greenhouse gas emissions contribute to a problem that is global in scale, the proposed Plan's impacts are cumulatively considerable. At the same time, the proposed Plan is found to result in lower emissions on a per capita and per service population basis than would result under baseline growth conditions as represented by the No Project scenario.

In short, the proposed General Plan would result in a significant and unavoidable impact with regard to greenhouse gas emissions. However, the Plan contains a great number of policies, consistent with guidance from regional and State agencies, which seek to reduce the impact but are not readily quantified.

Phasing

Climate change impacts summarized here were determined based on an analysis of the full development potential of the General Plan, consistent with CEQA requirements. As described in Chapter 2: Project Description, it is anticipated that new development in Turlock would follow a phased approach. If the full development potential of the proposed General Plan is not realized, then it would be expected that GHG emissions would be lower than projected in the impact analysis below. For example, development through Phase 1 of the proposed General Plan—involving the buildout of the Southeast 1, 2, and 3 Master Plan areas as well as infill development—is projected to result in a total of approximately 104,000 residents and 54,000 jobs. Therefore, Phase 1 would result in lower VMT, less energy demand, and lower GHG emissions. However, it would still not reach the per-service-population and per-capita emissions efficiency thresholds for the year 2030, or the vehicle emissions thresholds for 2020 or 2030, and would thus still result in a considerable contribution to the significant cumulative impact of emissions. Full development of Phase 1 is identified as Alternative 1, and is further discussed in Chapter 4, Alternatives.

IMPACTS AND MITIGATION MEASURES

Cumulative Impact

3.5-1 Implementation of the proposed General Plan, combined with regional growth, would result in annual greenhouse gas emissions in the Study Area in an amount greater than 6.6 metric tons of carbon dioxide equivalent ($MTCO_2e$) gases per service population in 2020, or greater than 3.8 $MTCO_2e$ in 2030. **(*Significant Cumulative Impact, Project Contribution Cumulatively Considerable*)**

Implementation of the proposed General Plan would result in development of new housing and non-residential land uses supporting a larger population and more jobs. This development is projected to result in increased GHG emissions, thereby contributing to global climate change, including regional climate impacts. These regional impacts could include a shrinking Sierra snowpack that would threaten the state's water supply; public health threats caused by higher temperatures and more smog; damage to agriculture and forests due to reduced water storage capacity, rising temperatures, increasing salt water intrusion, flooding, and pest infestations; critical habitat modification and destruction; eroding coastlines; increased wildfire risk; and increased electricity demand. The scientific community has acknowledged the detrimental effects of global climate change on ecosystems and human communities, and that it is caused by the cumulative GHG emissions from human activities across the globe and over many decades. For the purposes of the EIR, this analysis needs to make a determination about whether the proposed General Plan would increase GHG emissions compared to the present, or cause emissions greater than thresholds that would allow the State to meet its targets.

The California Attorney General has determined that GHG impact analysis for General Plan updates must include making a significance determination, which may reasonably be based on targets based on statewide

goals set forth in Executive Order S-3-05 and AB 32.[19] Following this approach, the EIR establishes targets for the Turlock Study Area that would meet State targets on a per-service-population basis. Under AB 32, the State must reduce GHG emissions to 1990 levels by 2020, an overall reduction of approximately 15 percent. When projected population and job growth are taken into account, this goal translates to a per service population reduction of about 27 percent from "business as usual." Therefore the 2020 threshold for this EIR represents a 27 percent reduction from current per-service-population emissions in California, or 6.6 $MTCO_2e$ for the three major GHG emissions sources. Executive Order S-3-05 sets a long-range goal for the State to reduce GHG emissions to 80 percent below 1990 levels by the year 2050. Charting an even annual growth rate between existing conditions (2008) and 2050 in terms of service population and GHG emissions, this target requires a per service population reduction to 3.8 $MTCO_2e$ annually at the State level. This threshold is thus set as the target for the Turlock Study Area for 2030.

TABLE 3.5-~~3~~8: PROJECTED GHG EMISSIONS FROM 3 TOP SOURCES, AND TARGET EMISSIONS THRESHOLDS

Year	*2008*	*2020*	*2030*	*2008-2020 Change*	*2008-2030 Change*
Significance Thresholds for GHG Emissions					
Emissions per Service Population[1]	7.5	6.6	3.8	-12%	-49%
Actual and Projected GHG Emissions from 3 Top Sources					
Proposed Project					
Service Population	99,360	140,180	187,030	41%	88%
GHG Emissions (metric tons/year)	748,400	948,200	1,174,700	27%	57%
Emissions per Service Population	7.5	6.8	6.3	-10%	-17%
Meets Targets?		No	No		
No Project					
Service Population	99,360	124,610	150,760	25%	52%
GHG Emissions (metric tons/year)	748,370	867,300	992,300	16%	33%
Emissions per Service Population	7.5	7.0	6.6	-8%	-13%
Meets Targets?		No	No		

1. Thresholds are established that would match the statewide GHG emissions reduction goals under SB 32 and EO S-3-05 on a per service population basis. For example, when population and job growth are taken into account, State goals for a 15% overall emissions reduction by 2020 translate to 27% per service population.

Sources: California DOF, 2008; California EDD, 2008; CARB, 2008; Dyett & Bhatia, 2012; Omni Means, 2012.

As shown in Table 3.5-~~3~~8, the Study Area currently produces an estimated 748,000 $MTCO_2e$ annually from the three major sources, translating to approximately 7.5 metric tons per resident and worker. The 88 percent growth in service population projected under the proposed General Plan is projected to result in a 57 percent increase in total GHG emissions. Per service population, this amounts to 6.8 and 6.3 $MTCO_2e$ per service

[15] California Attorney General's Office, "Climate Change, the California Environmental Quality Act, and General Plan Updates: Straightforward Answers to Some Frequently Asked Questions," January 2010. Accessed at http://ag.ca.gov/globalwarming/pdf/CEQA_GP_FAQs.pdf, December 2011.

population in 2020 and 2030, respectively, from transportation, building energy, and waste, a 10 and 17 percent decline from current levels. This decline is not sufficient to put the Study Area in line with statewide emissions reduction goal for 2020 under AB 32, or on a trajectory to meet the statewide reduction goal for 2050, and thus implementation of the proposed Plan would have a significant impact with regard to both the 2020 and 2030 thresholds. As described more fully in the sections that follow, the General Plan includes a wide array of policies intended to foster walking and biking, enable shorter vehicle trips, and result in building energy improvements. These policies are not fully quantified in this analysis.

This analysis also determines that the proposed General Plan makes a cumulatively considerable contribution to the overall cumulative impact, due to the manner in which greenhouse gas emissions act interact cumulatively to produce global climate change. The analysis also finds that the proposed Project would have a less negative impact, on a per capita or per service population basis, than would the No Project scenario which represents development under existing land use regulations. Nevertheless, the proposed project's contribution to the cumulative impact of development is cumulatively considerable.

GHG Emissions by Sector

Electricity and Natural Gas

Electricity and natural gas use today account for half of all emissions from the major three sources, and are projected to account for a slightly higher proportion (53 percent) in 2030 under the proposed General Plan. As shown in Table 3.5-49, GHG emissions related to this sector—primarily related to energy used in buildings—are projected to grow by 64 percent under the proposed Plan. This growth is slower than the growth of population and jobs under the proposed Plan (88 percent), largely due to the impact of State energy efficiency and renewable energy mandates. The greater proportion of attached and multi-family housing under the proposed Plan compared to existing conditions also helps to reduce projected emissions in this sector. Projected emissions under the General Plan are likely to be conservative in that they do not account for the range of proposed Plan policies that support increased energy efficiency and clean energy sources.

Transportation

As shown in Table 3.5-49, transportation-related GHG emissions are projected to grow from approximately 264,000 $MTCO_2e$ in 2008 to 324,000 MTCO2e in 2030, an increase of 23 percent. This increase in emissions is the result of increased demand on the transportation system from population and job growth. The transportation sector's share of total projected emissions would decline from 35 to 28 percent. The slower growth of transportation-related emissions compared to overall growth may be attributed primarily to increased fuel efficiency (Pavley I and II) and the Low Carbon Fuel Standard mandated by the State. The more compact and higher-density land use pattern and the connective street network that characterize the proposed General Plan also help to reduce projected GHG emissions in this sector. Again, projected emissions under the proposed Plan are likely to be overstated in that they do not account for policies that ensure pedestrian-oriented development and support alternative modes of transportation.

Solid Waste

In estimating solid waste-related GHG emissions, it is assumed that current per-service-population waste generation rates for Turlock remain the same through the planning period as population and jobs grow. Waste-related emissions are projected to outpace growth in the service population, as shown in Table 3.5-49, based on EPA's LandGem model, causing this sector's share of the top three sources to grow from 14 to 20 percent over the planning period. This is likely a conservative accounting, as Turlock has reduced per capita solid waste in recent years.

TABLE 3.5-~~4~~9: SUMMARY OF 3 TOP GREENHOUSE GAS EMISSIONS SOURCES UNDER THE PROPOSED GENERAL PLAN

	2008	*2020*	*2030*	*Change (%)*
Population				
Residents	71,100	97,470	126,770	78%
Jobs	28,260	42,710	60,260	113%
Service Population (Residents + Jobs)	**99,360**	**140,180**	**187,030**	**88%**
Actual and Projected Greenhouse Gas Emissions (metric tons/year)				
Sources	*Total CO_2-Equivalent Emissions (metric tons/year)*			
Electricity and Natural Gas	376,200	464,500	618,600	64%
Transportation	263,800	316,300	323,500	23%
Solid Waste	108,400	167,400	232,700	115%
Estimated Emissions from Three Top Sources	**748,400**	**948,200**	**1,174,800**	**57%**
Per Service Population Emissions	7.5	6.8	6.3	-17%

Sources: Dyett & Bhatia, 2012; Omni Means, 2012; Stanislaus County Department of Environmental Resources, 2010; PG&E, 2010; Turlock Irrigation District, 2010 California Climate Action Registry (CCAR), 2007; Intergovernmental Panel on Climate Change (IPCC), 2006, 1996; EPA, 2004.

Proposed General Plan Policies that Reduce the Impact

The analysis of projected GHG emissions provided above seeks to account for the role of State mandates in reducing future emissions. The analytical model for the building energy sector was "post-processed" to account for proposed changes in the housing mix under the General Plan (and each alternative), and the transportation model seeks to realistically build in changes resulting from a more compact land use pattern with a more connective and "complete" (e.g., supportive of all modes of travel) transportation network. Even so, the estimated emission levels above are likely to be higher than actual future emissions because they do not account for a great number of policies in the proposed General Plan that would contribute to lowering emissions but that are difficult to quantify. For example, transit-oriented and walkable development has been found to shift transit mode share—which would result in reduced VMT—in a wide range from 5 to nearly 50 percent (Arrington and Cervero, 2008). Plan policies seeks to reduce per capita energy consumption, establish a balanced and mixed use land use pattern, restrict sprawl, promote sustainable development practices, promote walkability, and reduce VMT. If these policies are effectively implemented, emission levels in 2030 would be lower than those reflected above.

Several documents have been prepared by regional and State agencies that provide guidance on developing policies to reduce GHG emissions. In June 2009, the California Air Pollution Control Officers Association (CAPCOA) published its "Model Policies for Greenhouse Gases in General Plans," which includes over 350 policy suggestions, and provides a list of ten over-arching strategies that are recommended to be the core focus for local government action on climate change. This list is also referred to in the Attorney General's most recent guidance documents regarding sustainability and general plans (Attorney General, 2010). Tables 3.5-~~5~~10 ~~, 3.5-6, and 3.5-7 identify~~ identifies the top ten strategies identified by CAPCOA and corresponding proposed General Plan policies.

TABLE 3.5-~~5~~10: CAPCOA TOP TEN ACTIONS BY LOCAL GOVERNMENTS AND COMMUNITIES AND CORRESPONDING PROPOSED GENERAL PLAN POLICIES

1. Promotion of smart growth, jobs/housing balance, transit oriented development, and infill development through land use designations, zoning, and public private partnerships
Chapter 2: Land Use Policies
Downtown
2.4-a **Preserve and enhance Downtown Turlock.** Continue efforts to preserve and enhance Downtown. Encourage development of Downtown as a mixed-use, day and evening activity center. Encourage office and residential development near Downtown. Continuing viability of the Downtown is of economic as well as symbolic value to the City. Downtown has scale and character that is hard to replicate in shopping centers elsewhere. Downtown should be the preferred location for accountants, attorneys, dentists, realtors, engineers, and other local-serving office tenants, unless they provide medical services and need to be near the Emanuel Medical Center. Downtown provides a good location for the concentration of non-medical offices.
2.4-b **Update the Downtown Zoning Overlay District and Design Guidelines.** Undertake a comprehensive update to the 2003 Downtown Zoning and Design guidelines to update uses and standards to respond to current economic needs and trends. Evaluate potential locations for intermodal hub, public parking needs, design standards, and maximum densities.
2.4-h **Facilitate mixed use.** Facilitate and encourage development of mixed-use projects in Downtown through the development review, permitting, and fee process.
2.4-i **Preserve residential adjacency.** Preserve residential areas north and east of Downtown. These areas are well established and contribute to the diversity of scale and use near Downtown. Permitting non-residential uses will create pressure on surrounding residences to convert to other uses as well.
Residential Areas
2.5-a **Housing type diversity.** Increase the diversity in the citywide mix of housing types by encouraging development of housing at a broad range of densities and prices, including small-lot single-family, townhouses, apartments, and condominiums. Aim to achieve an overall housing type mix of 65 percent traditional single family, 35 percent medium and higher density housing types. The current mix is 70 percent single family and 30 percent medium and high density.
2.5-b **New neighborhood character.** Foster the development of new residential areas that are compact, mixed use, and walkable, with a distinct identity, an identifiable center, and a "neighborhood" orientation. See also Chapter 3: New Growth Areas and Chapter 6: City Design.
2.5-c **Infill and existing neighborhoods.** Preserve the scale and character of existing neighborhoods while allowing and encouraging appropriate infill development.
2.5-d **Zoning ordinance revision to match General Plan.** Revise the zoning ordinance and residential design guidelines to be consistent with the objectives and classifications in the General Plan, including the General Plan Land Use Diagram. These would include, but are not limited to: • Establishing minimum and maximum densities consistent with the Plan • Establishing graduated density standards (see Policy 2.5-l) • Establishing overlay districts for traditional neighborhoods (see Policy 2.5-m) • Accommodating potential future regional retail uses, such as discount superstores (see Policy 2.6-e).
2.5-e **"No net loss" of housing.** Do not allow development at less than the minimum density prescribed by each residential land use category, without rebalancing the overall plan to comply with the "no net loss" provisions of State housing law.
2.5-f **Master planning required.** Require comprehensive master planning of new residential neighborhoods

Cumulative Impact

3.5-2 Buildout of the proposed General Plan, combined with regional growth, could result in the generation of GHG emissions from passenger vehicles in an amount greater than 3.53 metric tons per capita by 2020 or 3.47 metric tons per capita by 2030, not accounting for State mandates. ***(Significant Cumulative Impact, Contribution Cumulatively Considerable)***

As described under Impact 3.5-1, implementation of the proposed General Plan and forecast development of residential and employment land uses in the region could contribute to global climate change, including regional climate impacts. This analysis needs to make a determination about whether implementation of the proposed General Plan would cause a significant impact according to thresholds based on achieving State goals. In addition, because of the nature of global climate change, a significant impact at the project level is determined to result in a cumulative impact.

The California Attorney General has determined that GHG impact analysis for General Plan updates must include making a significance determination, which may reasonably be based on targets based on statewide goals. This impact consideration concerns the targets set forth in SB 375, the Sustainable Communities and Climate Protection Act of 2008. Under SB 375, ARB established GHG emissions reduction targets that each transportation planning agency must demonstrate may be achieved under a Sustainable Communities Strategy developed as part of a regional transportation plan. Stanislaus Council of Governments (StanCOG), which does transportation planning for Turlock and the rest of Stanislaus County, is charged with achieving a 5 percent reduction of GHG emissions per capita from passenger vehicles by 2020 and an 8 percent reduction per capita by 2035, from 2005 levels. These reductions must be attributable to local or regional land use, housing and transportation policies. Thus the significance thresholds set for this EIR represent the target reductions from current estimated per capita GHG emissions attributable to vehicles. Since the planning period for the proposed General Plan is through 2030, the regional emissions reduction target for 2035 is adjusted from 8 percent to 6.6 percent.

As shown in Table 3.5-6, vehicles in the Study Area currently generate an estimated 264,000 $MTCO_2e$ annually, translating to approximately 3.71 metric tons per capita. The 78 percent growth in population projected under the proposed General Plan is estimated to result in a 100 percent increase in VMT over existing conditions, the faster growth rate for VMT being attributable to slightly faster projected job growth under the proposed Plan as well as an expanded urbanized area. As shown in Table 3.5-~~6~~ 11 shows, when expected emissions reductions due to implementation of the Pavley regulations and the Low Carbon Fuel Standard are accounted for, GHG emissions from vehicles are projected to grow much more slowly than VMT over the planning period, and vehicle emissions per capita will decrease substantially. However, when the effects of these other State measures are screened out, GHG emissions from vehicles are projected to grow in parallel with VMT over the planning period. Similarly, VMT and GHG emissions growth are projected to mirror service population growth in the Study Area, , resulting in a 6 percent increase in per capita GHG emissions from passenger vehicles by 2020 and 12 percent by 2030. By these estimates, the proposed Plan would not achieve the thresholds set for StanCOG under SB 375, resulting in a significant impact. As discussed below, the General Plan contains numerous policies whose beneficial effects are not fully accounted for in this analysis.

TABLE 3.5-611: VEHICLE EMISSION REDUCTION GOALS THAT MEET SB375 TARGETS FOR THE SAN JOAQUIN VALLEY

Year	*2008*	*2020*	*2030*
Emissions Targets			
Vehicle emissions per capita[1]	3.71	3.53	3.47
Actual and Projected GHG Emissions from Vehicles			
Proposed General Plan			
Residents	71,100	97,470	126,770
Annual Vehicle Miles Travelled (VMT) (1000s)	511,219	740,298	1,020,285
GHG Emissions from Vehicles (metric tons CO_2e/year)	263,830	316,320	323,500
Vehicle Emissions per Capita	3.71	3.25	2.55
Meets Targets?		Yes	Yes
GHG Emissions if Other State Mandates Were Not in Effect (metric tons CO2e/year)[2]	263,830	382,050	526,540
Vehicle Emissions per Capita	3.71	3.92	4.15
Meets Targets?		No	No
No Project			
Residents	71,100	86,400	101,630
Annual Vehicle Miles Travelled (VMT)	511,219	707,678	947,796
GHG Emissions from Vehicles (metric tons CO_2e/year)[2]	263,830	302,380	300,520
Vehicle Emissions per Capita	3.71	3.10	2.37
Meets Targets?		Yes	Yes
GHG Emissions if Other State Mandates Were Not in Effect (metric tons CO2e/year)[2]	263,830	365,220	489,130
Vehicle Emissions per Capita	3.71	4.23	4.81
Meets Targets?		No	No

Notes:

1. Emissions reduction targets set per SB 375 for Stanislaus County are 5% from 2005 levels by 2020 and 8% by 2030.
2. For this purpose, State-mandated reductions are not counted. SB 375 targets are meant to be achieved through land use and transportation actions.

Sources: California Department of Finance, 2008; California EDD, 2008; CARB, 2008; Dyett & Bhatia, 2012; Omni Means, 2012.

Because greenhouse gases emitted throughout the area and beyond interact in the atmosphere to produce the effects of climate change, a significant impact in this area is considered to be a cumulative impact. Again, this analysis also compares the projected impact under the proposed Plan to that under the No Project condition, which represents development under existing land use regulations. The No Project scenario would result in a 43 percent increase in population compared to today, considerably less than the proposed General Plan's 78 percent increase. This means that there would be fewer total vehicle miles travelled under the No Project scenario compared to the proposed General Plan. However, using the "efficiency metric" that is used for significance thresholds in this analysis, growth under existing regulations (the No Project case) would result in higher per capita increases in GHG emissions from passenger vehicles, rising 14 percent by 2020 and 30 percent by 2030. Thus buildout under the proposed General Plan would have a less negative impact on GHG

emissions from vehicles than development under existing regulations on a per capita basis. Still, the proposed project's contribution to the cumulative impact on global climate change cumulatively considerable.

Proposed General Plan Policies that Reduce the Impact

The transportation model underlying this analysis seeks to realistically account for characteristics in the land use pattern and transportation system that influence travel behavior. Specifically, the more compact (higher-density) development provided for under the proposed Plan favors shorter trips and a greater share of trips by transit, by bike, and on foot. This is reflected in the lower per capita VMT projections under the proposed Plan compared to the existing General Plan (No Project).

In addition, the Plan contains a variety of policies that are not readily quantified but that may be expected to reduce the impact. For example, the connective street pattern, the requirements for streets to be built to accommodate all modes, and the specific commitments to invest in a bicycle network and pedestrian improvements should also favor a reduction in per capita VMT as the proposed Plan is implemented. These policies are enumerated under Impact 3.5-1.

Mitigation Measures

A wide range of policies recommended by State agencies are included in the proposed General Plan. In addition, new measures identified as part of the City's strategic plan process under policy 8.2-f would be adopted within three years, building on the above measures. Policies included in the proposed General Plan are expected to substantially reduce GHG emissions. These General Plan policies will help to support a Sustainable Communities Strategy (SCS) that demonstrates achievement of SB 375 thresholds at the regional level. This will be completed with the next update of the Regional Transportation Plan for Stanislaus County, including the Study Area.

SB 375 requires each MPO to develop a Sustainable Communities Strategy (SCS) outlining how the region will meet its GHG reduction target by integrating land use planning, transportation planning and funding, and housing needs. The SCS will be incorporated into the Regional Transportation Plan, typically prepared by each MPO every four to five years. CARB is required to review each SCS to determine whether it would achieve the necessary GHG emission reduction for each region.

Appendix A: Revisions to the Draft General Plan

This appendix includes revisions to the Draft General Plan (October 2011) drafted in response to the comments received on the Draft EIR. These revisions are also incorporated into the General Plan Errata document, which was originally released in conjunction with the Draft EIR in June 2012 and included revisions to the Plan made since its release to the public. All changes in the General Plan Errata document will be incorporated into the General Plan at adoption.

7.2: AGRICULTURE AND SOIL RESOURCES

Policy regarding participation in county agricultural mitigation program:

7.2-f* **Participation in county-wide agricultural mitigation program**. Continue to work collaboratively with Stanislaus County and jurisdictions within the county on the development of a countywide agricultural mitigation program, which would mitigate the loss of Important Farmland to urban development through the required purchase of agricultural easements or other similar measures.

7.4: BIOLOGICAL RESOURCES

7.4-d* **Identify and protect nesting habitat.** Projects on greenfield sites proposing to commence construction or other ground-disturbing activities during the typical nesting season (February through mid-September) shall be required to conduct a survey by a qualified biologist no more than 10 days prior to the start of disturbance activities. If nests are found, no-disturbance buffers around active nests shall be established as follows until the breeding season has ended or until a qualified biologist determines that the birds have fledged and are no longer dependent on the nest for survival:

- 250 feet for non-listed bird species;
- 500 feet for migratory bird species; and
- One-half mile for listed species and fully protected species.

7.4-d** **Swainson's Hawk protection.** If Swainson's Hawks are found foraging in an agricultural area prior to or during construction, project proponents shall consult a qualified biologist for recommended proper action, and incorporate appropriate mitigation measures. If specific project activities on sites where suitable nesting habitat may exist are to take place during the normal breeding season (February through mid-September), project proponents shall be required to conduct a survey by a qualified biologist for nesting raptors in all potentially suitable trees no more than 10 days prior to the start of disturbance activities. If an active Swainson's Hawk nest is found, appropriate mitigation measures may include, but are not limited to:

- Establishing a one-half mile buffer around the nest until the breeding season has ended or until a qualified biologist determines that the birds have fledged and are no longer dependent on the nest for survival

- Mitigating habitat loss within a 10 mile radius of known nest sites as follows:
  - Providing a minimum of one acre of habitat management land for each acre of development for projects within one mile of an active nest tree
  - Providing a minimum of 0.75 acres of habitat management land for each acre of development for projects within between one and five miles of an active nest tree
  - Providing a minimum of 0.5 acres of habitat management land for each acre of development for projects within between five and 10 miles of an active nest tree

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