

MEMORANDUM

DATE: March 17, 2021

To: Middle Green Valley Landowners

FROM: Amy Fischer, Principal
Cara Carlucci, Senior Planner

SUBJECT: Air Quality, Greenhouse Gas, and Noise Analysis for the Middle Green Valley Specific Plan Amendment Project

This memorandum, prepared pursuant to the California Environmental Quality Act (CEQA), describes the revisions to the approved Middle Green Valley Specific Plan (MGVSP) Project (project) evaluated in the December 2009 Middle Green Valley Specific Plan Draft Environmental Impact and April 2010 Middle Green Valley Specific Plan Final Environmental Impact Report (MGVSP EIR, SCH No. 2009062048). This memorandum is based on the Application Narrative dated December 11, 2020 and project plans dated December 2, 2020 and provides a determination that the MGVSP amendment is within the scope of the MGVSP EIR and no new impacts would occur.

PROPOSED SPECIFIC PLAN AMENDMENT

Upon adoption of the MGVSP in August 2017, Middle Green Valley (MGV) landowners worked on development plans within the neighborhoods established by the MGVSP. Efforts to establish development plans commenced in 2018 with civil engineers conducting various field surveys. In 2019, the development team was expanded to include biologists and geologists with expertise in evaluating and surveying earthquake faults as well as biological resource issues. This team of civil engineers, geologists and biologists spent several months in the field preparing site-specific technical studies and surveys to help inform a Constraints Analysis of the Plan Area.

Based on the findings of the Constraints Analysis, the MGV landowners are proposing a Specific Plan amendment that would shift the location of certain land use designations in order to minimize impacts to physical features, including shifting the Green Valley Road Corridor neighborhood southern access roadway. The proposed amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area.

IMPACT ANALYSIS

The following sections summarize potential air quality, greenhouse gas, and noise impacts associated with the proposed amendment.

Air Quality

The Plan Area is located in Solano County, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Solano County, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀, PM_{2.5}), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM_{2.5} 24-hour standard.

The sections below describe consistency with applicable air quality plans, estimated potential emissions, and the significance of impacts with respect to the identified thresholds of significance.

Consistency with Applicable Air Quality Plans

An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of an air quality plan is to bring an area into compliance with the requirements of federal and State air quality standards. The BAAQMD's clean air plan was referenced to determine if the MGVSF would conflict with or obstruct implementation of an applicable air quality plan, which for the MGVSF EIR was the Bay Area 2005 Ozone Strategy.

The MGVSF EIR found that the MGVSF-facilitated development that was not reflected in the 2005 Ozone Strategy, thus resulting in a significant project and cumulative impact. As discussed in the MGVSF EIR, the updated Solano County General Plan was adopted in 2008 and the MGVSF was prepared to implement General Plan provisions for Middle Green Valley. The 2005 Ozone Strategy, therefore does not reflect the adopted 2008 General Plan land use projections nor the MGVSF land use provisions. The MGVSF EIR indicated that BAAQMD is currently preparing the 2009 Clean Air Plan, which can be expected to reflect the latest General Plan projections, including the proposed MGVSF land use assumptions. The MGVSF EIR identified Mitigation 5-3; however, impacts were determined to be significant and unavoidable.

The BAAQMD's current clean air plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),¹ which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air

¹ Bay Area Air Quality Management District, 2017. *Clean Air Plan*. April 19.

pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate.

The proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the Green Valley Road Corridor neighborhood southern access roadway. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would have a negligible effect on the analysis outcome for air quality emissions. In addition, the BAAQMD 2017 Clean Air Plan is based on the latest Solano County General Plan land use provisions. Therefore, it is assumed that the MGVSP and proposed amendment would be consistent with the 2017 Clean Air Plan. In addition, MGVSP-facilitated development would be required to implement Mitigation 5-3. As such, the proposed amendment would not result in any new or more severe impacts related to consistency with applicable clean air plans compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Criteria Pollutant Analysis

As identified above, the BAAQMD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The following analysis assesses the potential construction- and operation-related air quality impacts and CO impacts.

Short-Term Construction Emissions. As discussed in the MGVSP EIR, construction activities associated with the MGVSP may include demolition, building renovation or modification, grading, new building construction, and paving. Such construction would generate pollutants intermittently. As identified in the MGVSP EIR, the most substantial air pollutant emissions would be dust generated from building demolition or site grading. Construction activities can also generate exhaust emissions from vehicles/equipment and fugitive particulate matter emissions that would affect local air quality. Exhaust from construction equipment and associated heavy-duty truck traffic emits diesel particulate matter, which is an identified toxic air contaminant. Off-road construction equipment is also a source of NO_x emissions, which can contribute to ground-level ozone in the

region. The MGVSP EIR also found that construction activities are also a source of organic gas emissions.

Existing land uses in and around the Plan Area, including residential areas, could be adversely affected by construction emissions. If uncontrolled, such emissions could lead to both health and nuisance impacts. Although temporary, such effects would represent a potentially significant adverse impact on local air quality. As such, the MGVSP EIR identified Mitigation 5-1 to reduce impacts to a less than significant level.

The proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the southern access roadway for the Green Valley Road Corridor neighborhood. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would have a negligible effect on the analysis outcome for construction air quality emissions. The reduced unit count would result in fewer construction emissions than previously assumed. In addition, the proposed amendment would be required to implement Mitigation 5-1. As such, the proposed amendment would not result in any new or more severe impacts related to short-term construction emissions compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Long-Term Operational Emissions. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed amendment. The MGVSP EIR found that future traffic increases associated with MGVSP-facilitated development would generate regional emissions increases that would exceed the BAAQMD emission-based threshold of significance for reactive organic gases (ROG). The effect of long-term regional emissions associated with MGVSP-facilitated development was therefore considered to be a significant project and cumulative impact. As such, the MGVSP EIR identified Mitigation 5-3; however, impacts were determined to be significant and unavoidable.

As discussed above, the proposed amendment would be substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the southern access roadway for the Green Valley Road Corridor neighborhood. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase air pollutant emissions. As such, the proposed amendment would have a negligible effect on the analysis outcome for operational air quality emissions. In addition, the proposed amendment would be required to implement Mitigation 5-3. As such, the proposed amendment would not result in any new or more severe impacts related to long-term operational

emissions compared to those previously identified in the MGVSF EIR, and no new mitigation would be required.

Localized CO Impacts. As discussed in the MGVSF EIR, MGVSF-facilitated development would generate new vehicle trips. Along local streets, these new trips would affect concentrations of CO. Within the regional air basin, these new trips would add to the pollution burden. Nevertheless, future local CO levels near worst-case intersections in the vicinity of the Plan Area under the "with project" year 2030 growth scenario would be within State and federal air quality standards. This impact was therefore considered less-than-significant.

As described above, the proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase air pollutant emissions. As such, the proposed amendment would have a negligible effect on the analysis outcome for localized CO hotspots. As such, the proposed amendment would not result in any new or more severe impacts related to localized CO compared to those previously identified in the MGVSF EIR, and no new mitigation would be required.

Toxic Air Contaminants and Odor Impacts to Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

The MGVSF would encourage development that could place odor-sensitive land uses near odor-generating land uses. According to the BAAQMD CEQA Guidelines, for a plan to have a less-than-significant impact with respect to odors and/or toxic air contaminants, buffer zones must be established around existing and proposed land uses that would emit these air pollutants. Buffer zones to avoid odors and toxics impacts must be reflected in local plan policies, land use maps, or implementing ordinances. As identified in the MGVSF EIR, the Solano County General Plan includes Implementation Program HS.I-63, which provides for establishment of such buffers. As such, the MGVSF EIR identified Mitigation 5-2 to ensure that MGVSF-facilitated development complies with the General Plan. With implementation of Mitigation 5-2, impacts were considered to be less than significant.

As discussed above, the proposed amendment is substantially similar to the MGVSF as evaluated in the MGVSF EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the southern access roadway. The proposed amendment would be required to implement Mitigation 5-2 and would not result in any new or more severe impacts related to the exposure of sensitive receptors to substantial pollutant concentrations or exposure to odors compared to those previously identified in the MGVSF EIR. No new mitigation would be required.

Applicable Mitigation

Mitigation 5-1 The County shall require construction contractors to comply with Solano County General Plan Implementation Program HS.I-59 (best management practices) and Implementation Program RS.I-49 (requirements for diesel vehicles). In addition, for all discretionary grading, demolition, or construction activity in the Specific Plan Area, the County shall require implementation of the following measures by construction contractors, where applicable:

Dust (PM₁₀) control measures that apply to all construction activities:

- Water all active construction areas that have ground disturbances at least twice daily and more often during windy periods.
- Cover all hauling trucks or maintain at least two feet of freeboard.
- Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas, and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.

Enhanced dust (PM₁₀) control measures (for construction sites that are greater than four acres, are located adjacent to sensitive receptors, or otherwise warrant additional control measures):

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (i.e., previously graded areas that are inactive for 10 days or more).
- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.
- Limit traffic speeds on any unpaved roads to 15 miles per hour.
- Replant vegetation in disturbed areas as quickly as possible.
- Suspend construction activities that cause visible dust plumes to extend beyond the construction site.

Measures to reduce diesel particulate matter and PM_{2.5}:

- Post clear signage at all construction sites indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite or adjacent to the construction site.

- Prevent the use of construction equipment with high particulate emissions. Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel-powered equipment used on the project site do not exceed 40-percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40-percent opacity (or Ringelmann 2.0) shall be repaired or replaced immediately.
- Ensure that contractors install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors).
- Properly tune and maintain equipment for low emissions.

Mitigation 5-2 In reviewing projects proposed in accordance with the Specific Plan, the County shall implement Solano County General Plan policies and implementation programs to reduce the potential for odor impacts on sensitive receptors, including Implementation Program HS.I-58 (encouraging agricultural best management practices) and Implementation Program HS.I-63 (establishing buffers).

Mitigation 5-3 In addition to the energy-efficiency and other emissions-reducing measures already included in the Specific Plan (e.g., provisions of sidewalks, bicycle lanes, etc.), the County shall require that the Specific Plan include the following requirements:

- Wire each housing unit to allow use of emerging electronic metering communication technology.
- Restrict the number of fireplaces in residences to one per household and/or require residential use of EPA-certified wood stoves, pellet stoves, or fireplace inserts. EPA-certified fireplaces and fireplace inserts are 70- to 90-percent effective in reducing emissions from this source. Also encourage the use of natural gas-fired fireplaces.
- Require outdoor outlets at residences to allow use of electrical lawn and landscape maintenance equipment.
- Make natural gas available in residential backyards to allow use of natural gas-fired barbecues.
- Require that any community services operation in the Plan Area use electrical or alternatively fueled equipment for maintenance of the areas under its jurisdiction.

Conclusion

No substantial changes in environmental circumstances have occurred for this topic, nor revisions to the project, nor new information that could not have been known at the time the MGVSP EIR was

certified leading to new or more severe significant impacts, and no new mitigation measures are required.

Greenhouse Gas Impacts

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF₆).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO₂, methane, and N₂O, some gases, like HFCs, PFCs, and SF₆ are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

Generation of Greenhouse Gas Emissions

This section describes construction- and operational-related GHG emissions and contribution to global climate change.

Short-Term Construction GHG Emissions. As discussed in the MGVSP EIR, construction of MGVSP-facilitated development would involve emissions associated with equipment and vehicles used for demolition, grading, and construction of projects facilitated by the MGVSP as well as emissions associated with manufacturing materials used to construct projects. Construction phases may include mass site grading, fine site grading, trenching, paving, building construction, and architectural coatings. The MGVSP EIR found that construction activities would result in the emission of 66 to 1,443 metric tons of CO₂e per year. Although the BAAQMD has not established thresholds of significance for construction-related GHG emissions, the MGVSP EIR found impacts to be potentially significant. Thus, the MGVSP EIR identified Mitigation 7-1; however, impacts were determined to be significant and unavoidable.

The proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the Green Valley Road Corridor neighborhood southern access roadway. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would have a negligible effect on the analysis outcome for construction GHG emissions. In addition, the proposed amendment would be required to implement Mitigation 7-1. As such, the proposed amendment would not result in any new or more severe impacts related to construction GHG emissions compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Long-Term Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution).

As discussed in the MGVSP EIR, MGVSP-facilitated development would increase GHG emissions associated with residential, commercial, agricultural, and public services in the Plan Area and associated increases in the number of residents, employees, and visitors in the area, thereby increasing the daily vehicle miles traveled associated with the movement of people and goods to and from the Plan Area. The MGVSP EIR found that implementation of the MGVSP would generate approximately 10,779 metric tons of CO₂e per year and 6.65 metric tons per year of CO₂e per service population (residents plus employees). As identified in the MGVSP EIR, operational emissions associated with the MGVSP would exceed the BAAQMD's thresholds of 1,100 metric tons of CO₂e per year threshold and 4.6 metric tons of CO₂e per year per service population. Therefore, impacts were determined to be potentially significant. Thus, the MGVSP EIR identified Mitigation 7-1; however, impacts were determined to be significant and unavoidable.

As discussed above, the proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the Green Valley

Road Corridor neighborhood southern access roadway. Overall, the proposed amendment would reduce the total number of units from 400 to 390, which result in a decrease in project related emissions. The proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase GHG emissions. As such, the proposed amendment would have a negligible effect on the analysis outcome for operational GHG emissions. In addition, the proposed amendment would be required to implement Mitigation 7-1. As such, the proposed amendment would not result in any new or more severe impacts related to operational GHG emissions compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Conflict with GHG Plans or Regulations

The MGVSP EIR evaluated the MGVSP's consistency with GHG reduction measures identified in the June 2008 Office of Planning and Research (OPR) Technical Advisory, CEQA and Climate Change, Attachment 3: Examples of GHG Reduction Measures. As discussed in the MGVSP EIR, with implementation of Mitigation 7-1, the MGVSP would be generally consistent with the State's GHG reduction measures.

Since adoption of the MGVSP EIR, the OPR GHG reduction measures are now superseded by State policies (i.e., the 2019 California Green Building Code) and the 2030 GHG targets, established in Senate Bill (SB) 32. As such, the proposed amendment was analyzed for consistency with the goals of Assembly Bill (AB) 32 and the AB 32 Scoping Plan. The following discussion evaluates the proposed amendment according to the goals of AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197.

AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 requires the California Air Resources Board (CARB) to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

Executive Order Executive Order B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,¹ to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Executive Order B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

¹ California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. November.

As identified above, the AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by AB 32, Executive Order B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed amendment include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. MGVSF-facilitated development would be required to comply with the latest Title 24 standards of the California Code of Regulations, established by the California Energy Commission (CEC), regarding energy conservation and green building standards. In addition, electricity provided to MGVSF-facilitated development would comply with the State's Renewable Portfolio Standard, which require the renewable energy portion of the retail electricity portfolio to be 60 percent in 2030 and 100 percent by 2045. Therefore, the proposed amendment would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, MGVSF-facilitated development would be required to comply with the latest Title 24 standards of the California Code of Regulations, which includes a variety of different measures, including reduction of wastewater and water use, and would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed amendment would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed amendment. However, vehicles associated with MGVSF-facilitated development would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Therefore, the proposed amendment would not conflict with the identified transportation and motor vehicle measures.

The proposed amendment would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197 and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed amendment would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The proposed amendment would not result in any new or more severe impacts related to consistency with applicable GHG reduction plans compared to those previously identified in the MGVSF EIR, and no new mitigation would be required.

Applicable Mitigation

Mitigation 7-1 The proposed Specific Plan contains measures to encourage energy efficiency in new Specific Plan-facilitated development. To further ensure that the proposed Specific Plan facilitates growth in a manner that reduces the rate of associated greenhouse gas emissions increase, discretionary approvals for Specific Plan-related individual residential, commercial, agricultural, and public services projects in the Specific Plan Area shall be required to comply with the Climate Action Plan to be developed and adopted by the County. In the interim, Specific Plan-related discretionary approvals shall incorporate an appropriate combination of the following greenhouse gas emissions reduction measures (from Table 7.3 [of the MGVSF EIR]):

- features in the project design that would accommodate convenient public transit and promote direct access for pedestrians and bicyclists to major destinations;
- adoption of a project design objective for public buildings to achieve Leadership in Energy and Environmental Design (LEED) New Construction "Silver" Certification or better, in addition to compliance with California Code of Regulations Title 24 Energy Efficient Standards;
- planting of trees and vegetation near structures to shade buildings and reduce energy requirements for heating and cooling;
- preservation or replacement of existing onsite trees;
- construction and demolition waste recycling (see Mitigation 16-12 of the MGVSF EIR); and
- preference for replacement of project exterior lighting, street lights and other electrical uses with energy efficient bulbs and appliances.

Conclusion

No substantial changes in environmental circumstances have occurred for this topic, nor revisions to the project, nor new information that could not have been known at the time the MGVSF EIR was certified leading to new or more severe significant impacts, and no new mitigation measures are required.

Noise Impacts

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more

intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

Generation of Substantial Increase in Ambient Noise Levels

The following section describes potential short-term construction and long-term operational noise impacts.

Traffic Noise Impacts. As discussed in the MGVSP EIR, MGVSP-facilitated development would expose residents and other occupants of the Plan Area to various existing and projected noise sources, including traffic noise from Green Valley Road. The MGVSP EIR evaluated the compatibility of land uses with the existing and projected noise environment based on the guidelines identified in the County's General Plan, which stipulates that residential development is considered normally acceptable in noise environments of 60 dBA L_{dn} or less.

The MGVSP EIR estimated future traffic noise along Green Valley Road and determined that the future 60 dBA L_{dn} noise contour would be located about 100 feet from the near-lane center line of Green Valley Road, and the 65 dBA L_{dn} noise contour would be located about 50 feet from the near-lane center line of the road. The MGVSP EIR found that residential development in the Rural Farm and Agricultural-Residential designations along portions of Green Valley Road may be exposed to traffic noise that exceeds "normally acceptable" levels defined by the Solano County General Plan. As such, impacts were found potentially significant. The MGVSP EIR identified Mitigation 13-1, which reduced impacts to a less-than-significant level.

The proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the southern access roadway to the Green Valley Road Corridor neighborhood. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase traffic noise levels. In addition, MGVSP-facilitated residential development would still be required to implement Mitigation 13-1 to ensure noise levels would be within the normally acceptable noise environments of 60 dBA L_{dn} or less for residential development.

As identified above, the proposed amendment would shift the Green Valley Road Corridor neighborhood southern access roadway closer to the existing residences south of Reservoir Lane

along Dynasty Drive and Pavilion Drive. The southern access roadway would be located approximately 100 feet from these existing residences. This analysis conservatively estimates that the southern access roadway would generate noise levels similar to the Green Valley Road noise levels of 60 dBA L_{dn} at 100 feet and 65 dBA L_{dn} at 50 feet, as identified in the MGVSP EIR. Therefore, as the existing residences would be located approximately 100 feet from the southern access roadway, traffic noise levels would be approximately 60 dBA L_{dn} at the nearest residences. These residences have a concrete masonry unit (CMU) wall separating the backyards from Reservoir Lane, which would reduce noise levels associated with the southern access roadway by at least 5 dBA. Therefore, the closest sensitive receptors would be exposed to a traffic noise level of approximately 55 dBA L_{dn} , which would be within the County's normally acceptable noise standard of 60 dBA L_{dn} or less for residential development. As such, the proposed amendment would not result in any new or more severe impacts related to traffic noise compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Noise-Generating Land Uses on Noise-Sensitive Land Uses. The MGVSP EIR found that noise-generating land uses facilitated by the MGVSP, such as agricultural activities, commercial uses, and the fire station and wastewater treatment plant, may expose noise-sensitive uses such as housing, recreational areas, and the possible future onsite school to noise and/or vibration. Possible noise exposure exceeding State and Solano County standards represents a potentially significant impact. The MGVSP EIR identified Mitigation 13-2 to ensure new noise-sensitive uses developed adjacent to noise-generating uses would be designed to control noise to meet the noise compatibility guidelines, standards, policies, and implementation programs established by the Solano County General Plan.

The proposed amendment is substantially similar to the MGVSP evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. In addition, the proposed amendment would shift the location of land use designations to minimize impacts to physical features, including shifting the southern access roadway. Overall, the proposed amendment would reduce the total number of units from 400 to 390. The proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase traffic noise levels. In addition, MGVSP-facilitated development would still be required to implement Mitigation 13-2 to ensure noise levels would be meet the County's standards. As such, the proposed amendment would not result in any new or more severe impacts related to noise-generating land uses on noise-sensitive land uses compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Construction Noise Impacts. As discussed in the MGVSP EIR, construction activities facilitated by the MGVSP could include site grading and preparation, building demolition, building modification and rehabilitation, construction of new buildings, and installation of utilities. Construction activities generate noise, especially during the demolition phase and the construction of project infrastructure when heavy equipment is used. The effects of noise resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors. Although construction noise would be localized to the individual site

location, rural residences and other land uses throughout the Plan Area would be intermittently exposed to high levels of noise throughout construction. The MGVSP EIR determined that such effects would represent a potentially significant adverse impact on nearby noise-sensitive land uses. As such, the MGVSP EIR identified Mitigation 13-3 to reduce impacts to a less than significant level.

The proposed amendment is substantially similar to the MGVSP as evaluated in the MGVSP EIR. The amendment would result in a reduced development footprint; increase the amount of Open Lands designation; and result in an overall decrease of the total number of primary residential units within the Plan Area. Construction activities associated with MGVSP-facilitated development would be located the same distance from existing receptors as previously identified in the MGVSP EIR; therefore, the proposed amendment would have a negligible effect on construction noise levels. In addition, MGVSP-facilitated development would be required to implement Mitigation 13-3. As such, the proposed amendment would not result in any new or more severe impacts related to construction noise compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Cumulative Traffic Noise Impacts. The MGVSP EIR found that traffic from MGVSP-facilitated development would increase traffic noise levels on Green Valley Road by 3 to 4 dB above existing levels. While the MGVSP-related traffic noise increase alone would not represent a significant impact, its contribution to the cumulative traffic noise increase on Green Valley Road south of Eastridge Drive would represent a significant cumulative impact. As such, the MGVSP EIR identified Mitigation 13-4 to reduce traffic noise impacts. However, impacts were determined to be significant and unavoidable.

As described above, the proposed amendment would not result in an increase in the generation of vehicle trips or vehicle miles traveled that would increase traffic noise levels. As such, the proposed amendment would have a negligible effect on cumulative traffic impacts. As such, the proposed amendment would not result in any new or more severe impacts related to cumulative traffic noise compared to those previously identified in the MGVSP EIR, and no new mitigation would be required.

Applicable Mitigation

Mitigation 13-1 For project-specific residential development proposals on sites adjoining Green Valley Road, the County shall require applicants to conduct site-specific noise studies that identify, to County satisfaction, noise reduction measures that would be included in final design to meet State and County noise standards. These measures may include the following:

- Minimizing noise in residential outdoor activity areas (i.e., ensuring that noise levels would be below 65 dBA L_{dn}) by locating the areas at least 50 feet from the center line of Green Valley Road and/or behind proposed buildings.
- Providing air conditioning in all houses located within 100 feet of Green Valley Road so that windows can remain closed to maintain interior noise levels below 45 dBA L_{dn} .

Mitigation 13-2 New noise-generating uses facilitated by the Specific Plan shall be subject to the noise compatibility guidelines, standards, policies, and implementation programs established by the Solano County General Plan. In accordance with General Plan Implementation Program HS.I-67, noise analysis and acoustical studies shall be conducted for proposed noise-generating uses, as determined necessary by the County, and noise abatement measures shall be included to County satisfaction to ensure compliance with applicable guidelines and standards.

In addition, new noise-sensitive uses developed adjacent to noise-generating uses shall be designed to control noise to meet the noise compatibility guidelines, standards, policies, and implementation programs established by the Solano County General Plan. In accordance with General Plan Implementation Program HS.I-67, noise analysis and acoustical studies shall be conducted for proposed noise-sensitive uses, as determined necessary by the County, and noise attenuation features shall be included to ensure compliance with applicable guidelines and standards.

Mitigation 13-3 To reduce noise impacts from Specific Plan-related construction activities, the County shall require future project-specific discretionary developments to implement the following measures, as appropriate:

- *Construction Scheduling.* Ensure that noise-generating construction activity is limited to between the hours of 7:00 AM to 8:00 PM, Monday through Friday, and that construction noise is prohibited on Saturdays, Sundays, and holidays.
- *Construction Equipment Mufflers and Maintenance.* Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- *Equipment Locations.* Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project site.
- *Construction Traffic.* Route all construction traffic to and from the construction sites via designated truck routes where possible. Prohibit construction-related heavy truck traffic in residential areas where feasible.
- *Quiet Equipment Selection.* Use quiet construction equipment, particularly air compressors, wherever possible.
- *Noise Disturbance Coordinator.* For larger construction projects, designate a "Noise Disturbance Coordinator" who would be responsible for responding to any local complaints about construction noise. The Disturbance Coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the

construction schedule. (The County should be responsible for designating a Noise Disturbance Coordinator and the individual project sponsor should be responsible for posting the phone number and providing construction schedule notices.)

Mitigation 13-4 To reduce the traffic noise increase along Green Valley Road, the County should consider the use of noise-reducing pavement, along with traffic calming measures (which could achieve noise reductions of approximately 1 dBA for each 5 mile-per-hour reduction in traffic speed). These measures may not be feasible, however, and may not be directly applicable to the Specific Plan, particularly since the segment of Green Valley Road where the highest traffic noise increase is expected (the northbound segment south of Eastridge Drive) is not within the Specific Plan Area.

Conclusion

No substantial changes in environmental circumstances have occurred for this topic, nor revisions to the project, nor new information that could not have been known at the time the MGVSF EIR was certified leading to new or more severe significant impacts, and no new mitigation measures are required.