

Vehicle Miles Traveled (VMT) Threshold Policy Guidelines

Prepared by the County of Humboldt's
Planning & Building Department

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INTRODUCTION/BACKGROUND

A significant change in California Environmental Quality Act (CEQA) practice has been triggered by the implementation of Senate Bill (SB) 743. SB 743 removes the use of automobile delay or traffic congestion for determining transportation impacts in environmental review. Instead, CEQA Guidelines Section 15064.3 now specifies that Vehicle Miles Traveled (VMT) is the appropriate metric to evaluate transportation impacts. To comply with these new rules, local jurisdictions need to define policies and practices for conducting VMT analysis for land use projects within their jurisdiction.

Under CEQA, lead agencies must determine whether a proposed project has the potential to cause significant environmental impacts. This determination must be based, to the extent possible, on factual data and scientific methods of analysis. The project's effect on transportation is one of the areas that must be analyzed. Jurisdictions have typically used vehicle Level of Service (LOS) as the primary measure of a project's transportation impacts. The County has separate LOS standards in the Circulation Element of the General Plan which may be used to determine operational impacts created by development projects. These operational analyses are not subject to CEQA compliance.

In September 2013, legislature passed, and Governor Jerry Brown signed into law SB 743, initiating a process intended to fundamentally change transportation impact analysis under CEQA. One major change resulting from the statute is the elimination of automobile delay or other similar measures of traffic congestion as a basis for determining significant impacts. According to the legislative intent contained in SB 743, the changes to current practice are intended to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

In December 2018, the California Governor's Office of Planning and Research, now the Office of Land Use and Climate Innovation (LCI), published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (referred to herein as the Technical Advisory), which provides guidelines on the implementation of SB 743. The Technical Advisory's guidelines state that VMT must be the metric used to determine significant transportation impacts. This requirement was applied statewide effective July 1, 2020. Prior to the adoption of this policy, the Humboldt County Planning & Building Department (Department) was reviewing project transportation impacts for VMT on a case-by-case basis.

POLICY CONSIDERATIONS

These policy guidelines were developed through consideration of the Technical Advisory, a Humboldt County VMT Study prepared by Fehr & Peers Traffic Consultants, and consultation with local agencies. The County expects these guidelines to provide a comprehensive set of clear standards for assessing project transportation impacts under CEQA. The policy sets thresholds and screening criteria for projects considered to have a less than significant transportation impact, applies appropriate mitigation strategies for the context of

unincorporated Humboldt County, and provides a consistent and repeatable format to maximize VMT reduction for the County. This information is essential for Department staff, decision makers, local professionals and the public when evaluating individual projects.

POLICY COMPONENTS

There are several components that the County has considered to develop the VMT Threshold Policy. These topics will be discussed in detail further in this document to provide a clear understanding of how to conduct a VMT analysis of land use projects and plans located in unincorporated Humboldt County.

- Metrics – how VMT data is represented
- Baseline – establishing current VMT baseline to assess projects against
- Thresholds – level of VMT that is considered a significant environmental impact
- Screening – guidelines for types of projects that can be presumed to have a less than significant VMT impact and no further analysis is required
- Project VMT Analysis Methodology – techniques used to calculate VMT in a project-specific VMT analysis
- Mitigation Strategies – strategies to reduce VMT for projects above the threshold

VMT METRICS

VMT metrics are used to measure the number of vehicle miles traveled in a specific region over a specific period of time. The County has determined that use of the following metrics is in line with the Technical Advisory and are appropriate for evaluating transportation impacts of land use projects in unincorporated Humboldt County.

Total VMT

This metric is the total miles traveled by vehicles in a region or project area over a specific time period. (It should be noted that this metric is not used by the County to establish thresholds and should not be used in project VMT analysis.)

Average VMT per Resident (HBX)

This metric is the average VMT per capita per day for residents associated to a project or a specific region, and captures home-based to other or other to home-based trips only (“other” would include retail or commercial locations, but not work).

Average VMT per Employee (HBW)

This metric is the average VMT per capita per day for employees associated to a project or a specific region, and captures commute trips only (work directly to home-based or home-based directly to work).

Having these different metrics is useful in reviewing different types of development projects for an apples-to-apples comparison. (i.e. A proposed residential project would be measured against the established unincorporated County HBX, and a proposed office, retail, industrial, or commercial project would be measured against the established unincorporated County HBW.)

BASELINE VMT

To set thresholds of significance and screening criteria for VMT, a baseline for current VMT must first be established. This requires selecting a geographical boundary to define the extent of data to analyze. The baseline VMT for this Policy was established in the Humboldt County VMT Study using StreetLight data from the year 2022 with unincorporated Humboldt County as the geographical boundary.

The 2022 data was used to establish the average VMT per capita HBX and average VMT per employee HBW for unincorporated Humboldt County, as well as for 2020 US Census Block Groups. The HBX for unincorporated Humboldt County was found to be 22.1 miles. The HBW for unincorporated Humboldt County was found to be 14.7 miles. These averages are the set baselines used to establish the thresholds outlined in this document.

Data for unincorporated Humboldt County, the incorporated cities in Humboldt County, and the US Census block groups can be found on the Humboldt County Web GIS at www.Humboldt.gov.org/Web-GIS under the layer named *Demographics, Economics, and Mobility*. This information can also be useful to other agencies within Humboldt County that establish their own thresholds for VMT.

As the most current data available to establish baseline VMT was from the year 2022, it is anticipated that an update to the baseline will be needed at some point in the future. However, the County had a 0% population increase between 2010 and 2022, and it is not anticipated that local trends in travel patterns will significantly change over the next 5 years. In areas with little or no growth, use of the base year as the project analysis year and forecast year up to 2030 is considered acceptable until an update is deemed necessary.

THRESHOLDS OF SIGNIFICANCE

The County has adopted thresholds that are in line with recommendations contained in the Technical Advisory. LCI recommends that VMT thresholds for residential and employment-based land use projects be set at fifteen percent below the baseline VMT/resident (HBX) and baseline VMT/employee (HBW). The VMT thresholds are established at the unincorporated County level based on StreetLight data for 2022, using trip-based methodology.

The following are the established thresholds of significance related to substantial impact on VMT:

- For residential projects, a project would cause a substantial impact to VMT if it is found to have 85 percent or more of the existing unincorporated County average HBX. (18.79 miles or more HBX for residential projects)
- For office projects, a project would cause a substantial impact to VMT if it is found to have 85 percent or more of the existing unincorporated County average HBW. (12.5 miles or more HBW for the project)
- For retail projects, a project would cause substantial impact to VMT if it is found to increase the average VMT for the County, HBX and HBW.

- For redevelopment projects, a project would cause a substantial impact to VMT if it leads to an overall increase in average VMT from the previous uses.

PROJECT SCREENING

The concept of project screening is some projects have characteristics that readily lead to the conclusion that they would not cause a significant VMT impact, and therefore those projects could be screened out from needing to complete a detailed VMT analysis.

CEQA Guidelines section 15064.3(b)(1) states that land use projects within a half-mile of a major transit stop or a stop along a high-quality transit corridor generally should be presumed to have a less than significant impact on VMT. Major transit stops that have been adopted by Humboldt County Association of Governments (HCAOG) in the Regional Transportation Plan VROOM 2022 – 2042 (RTP) have been included in the screening criteria and are identified below. It should be noted that these designated major transit stops are subject to change and while none of these bus stops are located within unincorporated Humboldt County it is anticipated that there will be more designated in the future. Only one stop (Valley West Blvd., Arcata) has limited areas in unincorporated Humboldt County that are within a half mile.

- Cal Poly Library Circle, Arcata
- Bayshore Mall, Eureka
- Arcata, Transit Center
- F St and Harris St, Eureka,
- Eureka Transit Center, H Street, Eureka
- Valley West Blvd. (McDonalds), Arcata

The Technical Advisory presents a method for “map-based” screening, where projects located in low-VMТ areas can be screened out of needing to prepare a detailed VMT analysis. The areas that would qualify as “low-VMТ” areas have been identified using 2022 StreetLight data and are shown in Figures 1 and 2.

Land use projects may also be screened out of further analysis if they are very small (generate 110 vehicles trips per day or less) or can be demonstrated to primarily attract trips that would have otherwise been traveled at a longer distance.

A full list of the established screening criteria available for new land use projects located in unincorporated Humboldt County are identified in Table 1 below.

Table 1. Screening Criteria for Projects Within Unincorporated Humboldt County

Land Use Projects by TYPE	Criteria for less than significant transportation impacts.
Small Projects	Projects consistent with the General Plan and Zoning Code, with 110 or fewer daily vehicle trips.
Residential and Office Projects Map-Based Screening	Residential and office projects consistent with the General Plan and Zoning Code, and located within low-VMT generating areas. Figures 1 and 2 below show the established low-VMT areas for HBX and HBW.
Mixed-Use Projects	Mixed-use projects consistent with the General Plan and Zoning Code, and located within low-VMT generating areas for HBX and HBW. Figures 1 and 2 below show the established low-VMT areas for HBX and HBW.
Near transit station	Projects consistent with the General Plan and Zoning Code, within a half mile of an existing major transit stop identified above; AND Contains no more than the minimum parking spaces required by the Zoning Code.
Affordable Housing	Projects with 100% affordable housing in infill locations as defined as Urban Areas under the US Census Bureau. (This can be found in the Humboldt County Web GIS at www.Humboldt.gov/Web-GIS under the layer named <i>Housing</i> under <i>Urban Areas</i> .)
Local-Serving Retail	Local-serving retail projects or other local serving employment projects less than 50,000 square feet that improve retail destination proximity and thus shorten trips and reduce VMT.
Redevelopment Projects	Where a project replaces existing VMT-generating land uses, and the replacement leads to no increase in VMT.

Figure 2. Low-VMT Areas for Residential Projects HBX

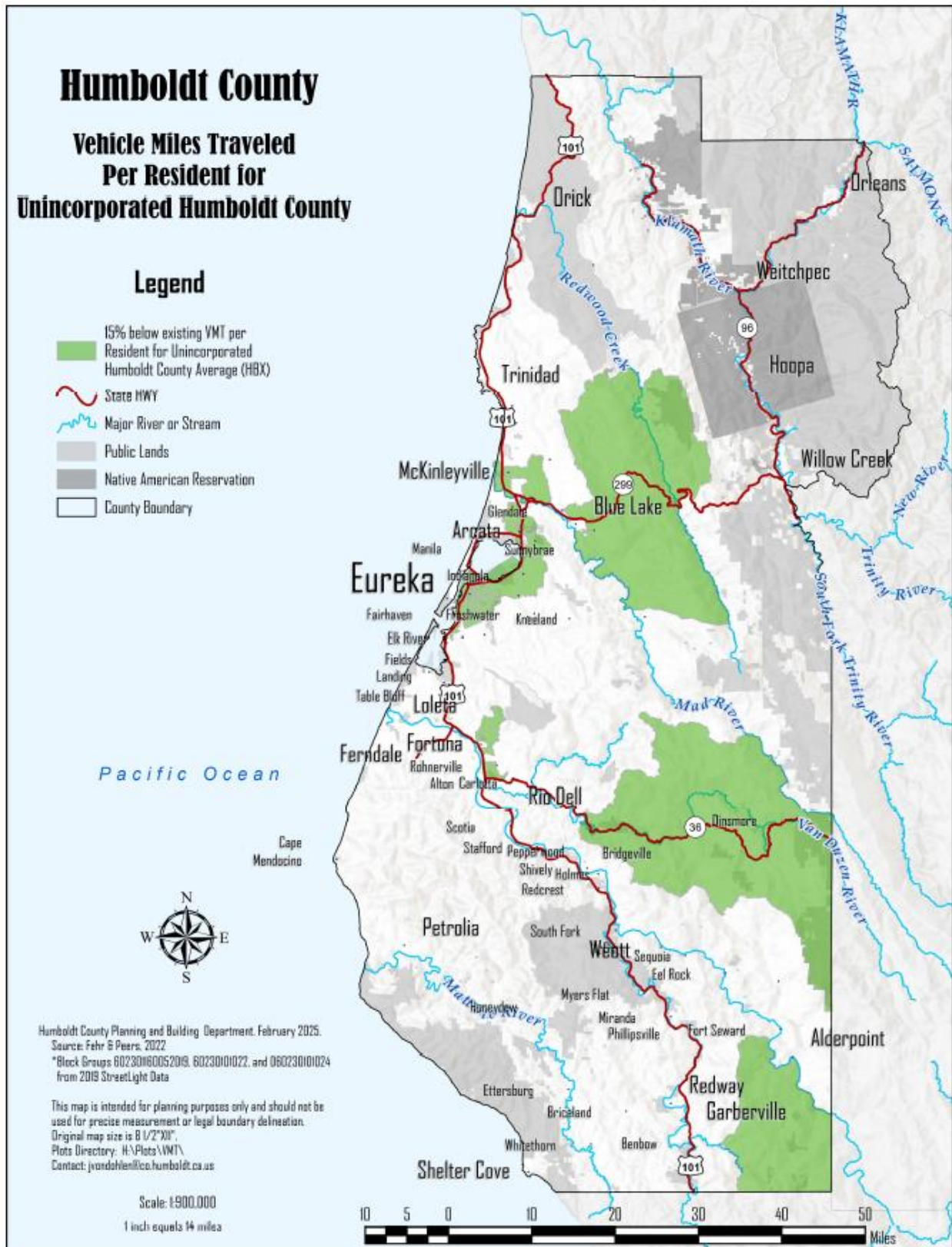
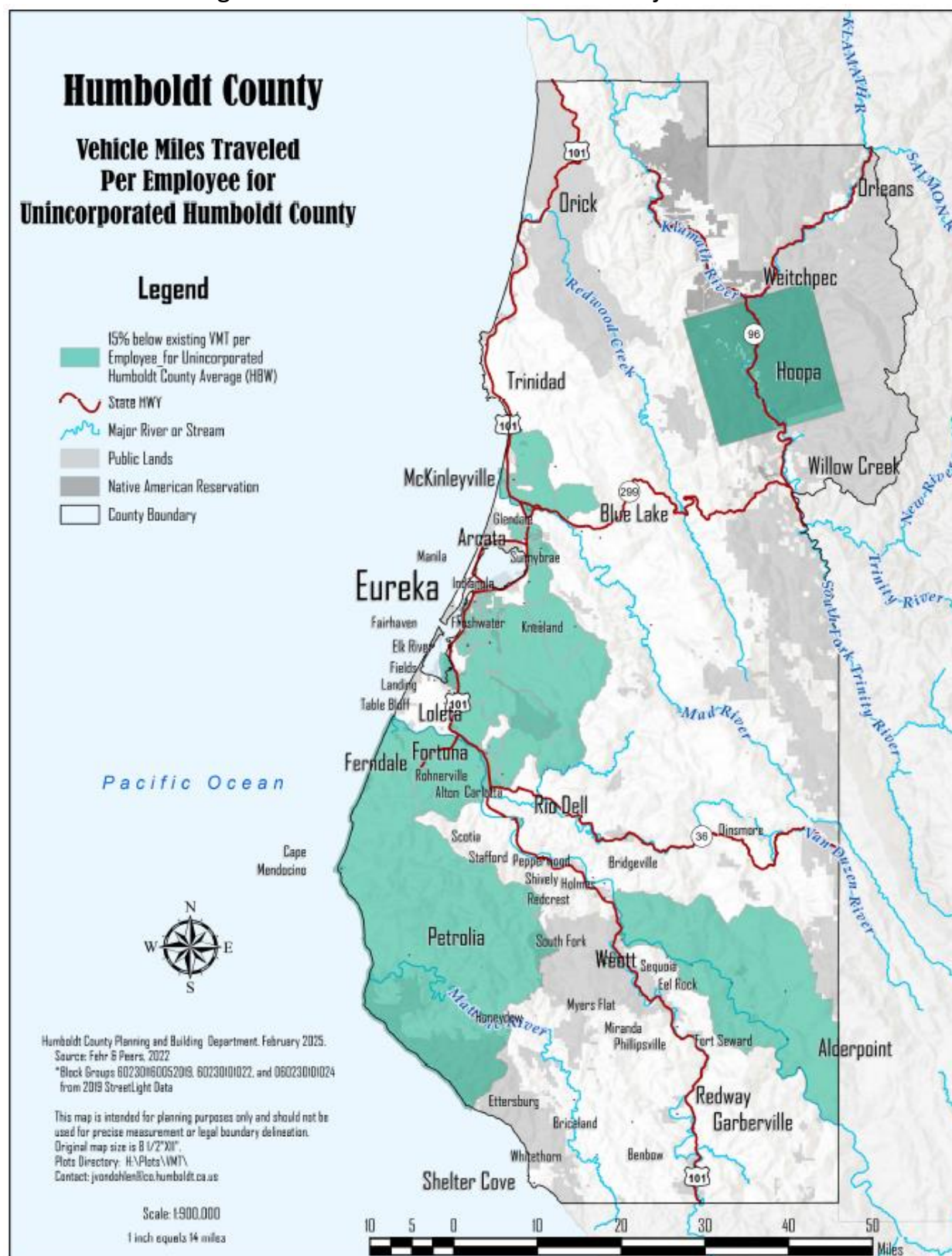


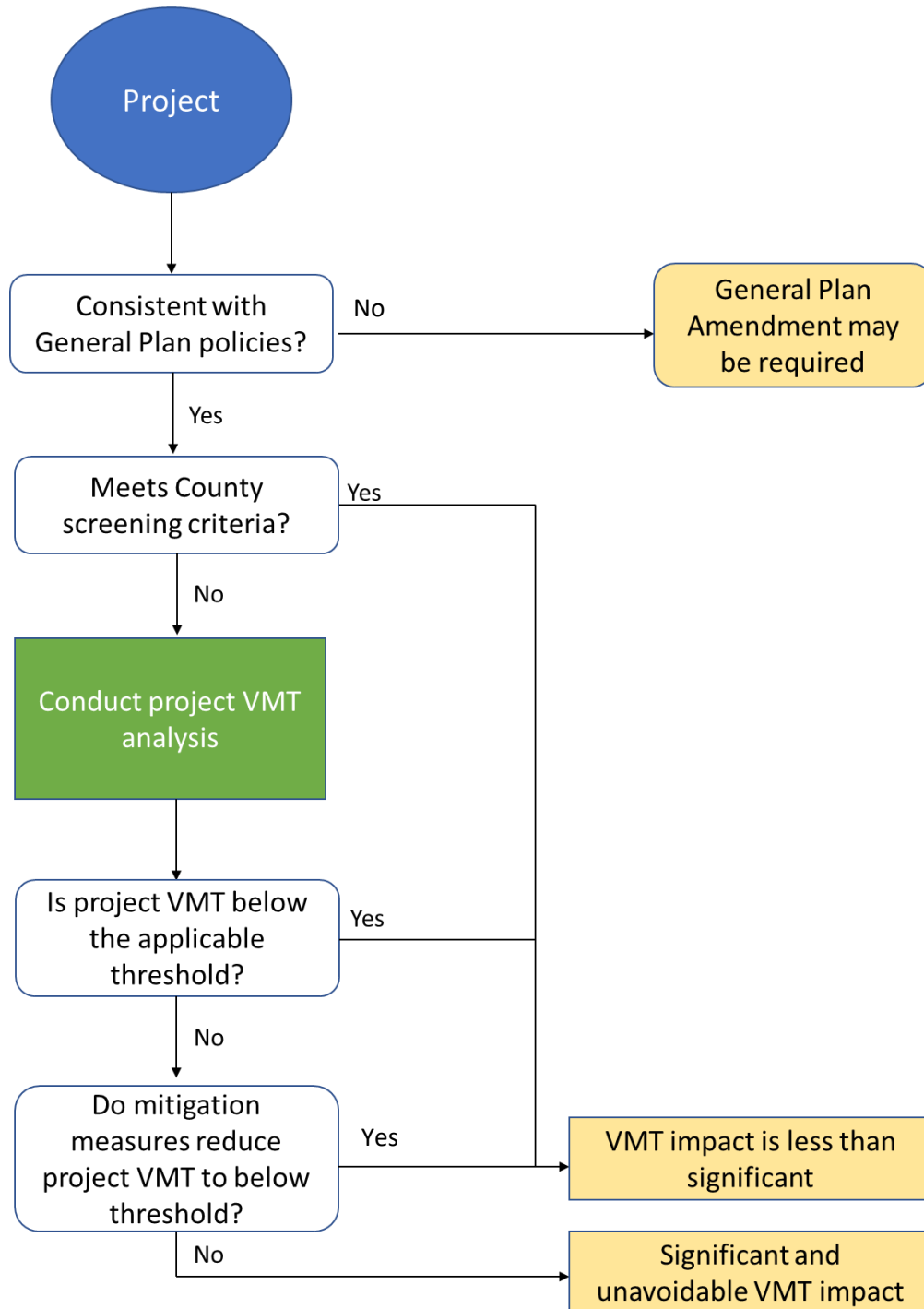
Figure 3. Low-VMT Areas for Office Projects HBW



ANALYSIS OF LAND USE PROJECTS

The Department will conduct an initial assessment of each project based on the project description, project location, and proposed uses. Figure 3 summarizes the process for assessing VMT impacts for land use projects.

Figure 3. Land Use Project VMT Impact Assessment Process



When an application for a new development project is received, the Department will conduct an initial assessment to determine if the proposed project will require further VMT analysis under CEQA. If the project is ministerial, and is consistent with the General Plan and Zoning Code, no VMT analysis is required. If a project is discretionary and cannot be screened out, further detailed VMT analysis is required. Land use projects that are inconsistent with the General Plan and Zoning Code are automatically considered inconsistent with the VMT Policy, shall conduct a detailed VMT analysis, and an amendment to the General Plan may be required for project approval.

For projects located within a half mile of an existing major transit stop, the presumption of less than significant would not apply if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. The presumption of less than significant might not be appropriate if the project meets one of the following below (Technical Advisory):

- Has a floor area ratio of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the Zoning Code
- Replaces affordable housing units with a smaller number of moderate- or high-income residential units
- Adversely affects pedestrian, bike, or transit infrastructure or circulation

If any of these apply, the project will be subject to conduct a detailed VMT analysis under CEQA.

The following types of projects may also require further transportation analysis under CEQA:

- Land use entitlements requiring discretionary approval, which include but are not limited to annexations, general plan amendments, specific plans, zoning changes, conditional use permits, special permits, and tentative maps
- Land use activity advanced by agencies other than the County of Humboldt that is subject to jurisdictional review under State and Federal law
- Land use activity advanced by agencies other than the County of Humboldt that is inconsistent with the County's General Plan

PROJECT VMT ANALYSIS METHODOLOGY

CEQA transportation analysis requires an evaluation of a project's potential impacts related to VMT and other significance criteria. This section provides the methodologies to be used in a detailed VMT analysis when a project cannot be screened out. In general, a transportation analysis is considered valid for three years.

CEQA Guidelines Section 15064.3(b)(4) establishes that the lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT. The Technical Advisory recommends that the method used to define a VMT threshold should be the same method that is used to evaluate a project's VMT against that threshold. It is critical that the agency be consistent in its VMT measurement approach throughout the analysis to maintain an "apples-to-apples" comparison. For example, if the agency uses a home-based VMT for the threshold, it should also use home-based VMT for calculating project VMT and VMT reduction due to mitigation measures. (Technical Advisory)

The following methodologies should be used when calculating project VMT or assessment of mitigation in a detailed analysis and should be used throughout all steps of the analysis to maintain an “apples-to-apples” comparison.

- For residential land uses, the analysis should use Residential VMT per capita for home-based trips.
- For office land uses, the analysis should use Employment VMT per worker for work-related trips only. This should only include trips that are home-based directly to work or work directly to home-based.
- For mixed-use land uses, the analysis should evaluate each component independently and apply the significance threshold for each project type (residential/office). Alternatively, the analysis could consider only the project’s dominant use if it can be determined that the subservient use would not cause additional VMT.
- For retail land uses, the Technical Advisory recommends using the total VMT. However, total VMT is not the methodology that was used to establish the County thresholds. An analysis should use available methodology to estimate to the full extent of vehicle travel, focusing on both short and long-term effects, and consider a project’s potential to induce travel. The analysis should identify if the project will result in a net change in VMT for the region.

The County has developed VMT baselines and thresholds based on 2022 StreetLight data. Therefore, CEQA analyses should use the available data from the Humboldt County VMT Study, also available on the Humboldt County Web GIS.

OTHER SIGNIFICANCE CRITERIA

In accordance with CEQA guidelines Appendix G, a project could have a significant transportation impact on the environment if it does any of the following:

- a) Conflicts with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths;
- b) Conflicts or is inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (the new VMT requirements);
- c) Substantially increases hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment); or
- d) Results in inadequate emergency access.

MITIGATION – VMT REDUCTION STRATEGIES

Projects that have not been screened out and have been found to have VMT impacts above the established thresholds through detailed analysis should be designed to include VMT reduction strategies to the extent feasible. Calculations identifying the VMT reduction achieved through mitigation should be included in the VMT analysis for a project to determine if the project is less than significant with mitigation (below the threshold with mitigation), or significant and unavoidable (above the threshold with mitigation). Below is a list of project-scale mitigation strategies that are found appropriate for Humboldt County and can be utilized to reduce VMT impacts from a project.

PROJECT SCALE STRATEGIES

Project-Scale Strategies:

1. Provide transit-oriented development: In areas adjacent to bus stops with services to major employment centers, compact walkable areas with a mix of uses, including housing, retail offices, and community facilities, can encourage transit ridership and reduce the number of single-occupancy vehicle (SOV) trips.
2. Increase residential and job densities: Increasing residential density and job density can result in shorter and fewer trips by SOV trips.
3. Use cleaner-fuel vehicles: This strategy requires use of cleaner-fuel vehicles in lieu of similar vehicles powered by gasoline or diesel fuel. This strategy should require the provision of fueling infrastructure to ensure that electric vehicles have adequate access to charging infrastructure, making the capital costs high.
4. Implement car-sharing programs and ride-sharing programs: This strategy reduces the need to own a vehicle or reduces the number of vehicles owned by a household by making it convenient to access a shared vehicle for those trips where vehicle use is essential. Implementation of this strategy may require regional or local agency implementation and coordination and may not be applicable for all individual development projects. School-pools (ridesharing programs for school children and college students/employees) and voluntary employer-based trip reduction programs could also be encouraged. This strategy also focuses on encouraging carpooling and vanpooling by project site/building tenants, which depends on the ultimate building tenants; this should be a factor in considering the potential VMT reduction.
5. Provide employer-sponsored vanpool: This strategy provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting. The mode shift from long-distance, single-occupied vehicles to shared vehicles reduces overall commute VMT, thereby reducing GHG emissions.
6. Implement bike-share program and provide subsidies to e-bikes: This strategy provides users with on-demand access to electric pedal assist bikes for short-term rentals. Long bike share trips and trips that start in non-commercial locations are likely to be a substitute for car modes, which reduces VMT. As an example, the Redwood Coast Energy Authority (RCEA) launched an e-bike incentive program in April 2024. This program offers a \$500 e-bike voucher for income-qualified Humboldt County residents.

To be effective, VMT mitigation strategies must have sufficient evidence to quantify the level of VMT reduction that a strategy could achieve for a given project site. In general, these strategies can be quantified using the California Air Pollution Control Officers Association's (CAPCOA) calculation methodologies for transportation demand management (TDM) strategies in the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. However, there are some limitations for project site applications and combining strategies, explained below.

Two major limitations include:

1. **If research findings scale to individual project sites**
Research that measures the effect of TDM strategies on VMT reduction often measures

the effect at a scale that is larger than a single project or building site. Therefore, the transferability of the measured effect to a project site may be uncertain.

2. If land use context should be used to set maximum caps for individual projects

An important consideration is the influence of land use context surrounding a project site. The density and mix of surrounding land uses, plus the quality of available transit service, are examples of land use context factors that influence vehicle trip making. Therefore, the CAPCOA methodology identifies VMT reduction maximums based on community types tied to land use context. The caps are applied at each step of the VMT reduction calculation (at the strategy scale, the combined strategy scale, and the global scale).

Combining VMT Mitigation Strategies

Each of the CAPCOA TDM strategies can be combined with others to increase the effectiveness of VMT mitigation; however, the interaction between the various strategies is complex and sometimes counterintuitive. Generally, with each additional measure implemented, a VMT reduction is achieved, but the incremental benefit of VMT reduction may diminish. To quantify the VMT reduction that results from combining strategies, the formula below can be applied absent additional knowledge or information:

$$\text{Total VMT Reduction} = (1 - Pa) * (1 - Pb) * (1 - Pc) * \dots$$

where

Px = percent reduction of each VMT reduction strategy in the CAPCOA Handbook

This adjustment methodology is a mathematical approach to dampening the potential effectiveness and is not supported by research related to the actual effectiveness of combined strategies. The intent of including this formula is to provide a mechanism for dampening to minimize the potential to overstate the VMT reduction effectiveness. Additional data is needed to support and refine the above approach for quantifying the effects of combining TDM strategies. Analysts should consider the available substantial evidence at the time a study is prepared to determine the most appropriate approach for CEQA review.

The CAPCOA strategies only include the VMT reduction for the affected population. By reducing their VMT, new VMT from other people could increase due to induced vehicle travel effects or what is referred to as a the 'backfill' effect. This effect needs to be accounted for in the final calculation of VMT reduction effectiveness.

Limitations of Project-Scale Strategies

Physical project site TDM strategies often involve increasing land use density, changing the mix of uses, or altering the transportation network. However, a potential limitation of these physical design changes is that they may result in a project that no longer resembles the original applicant submittal. CEQA is intended to disclose the potential impacts of a project and mitigate those impacts but has limitations with regards to using mitigation to fundamentally change the project. Therefore, these strategies may result in an inconsistency with the project description when

applied on an ad hoc basis.

COMMUNITY SCALE STRATEGIES

Community scale strategies have been found to be the most effective in achieving significant reductions in VMT, which derive from regional and County policies related to land use location efficiency and infrastructure investments that support alternative modes of transportation or implement local programs.

Community-Scale Strategies:

1. Provide pedestrian network improvements.
2. Provide low-stress bicycle network improvements.
3. Increase transit service frequency and speed.
4. Implement plans and ordinances aimed at reducing VMT (such as a ride-share ordinance).

PROGRAM-BASED STRATEGIES

Another common strategy is to add program-based mitigation to the project as a condition of approval. While evidence exists that TDM programs can reduce VMT, their success depends on the performance of future building tenants that can change over time. Hence, an effective TDM mitigation program will require ongoing monitoring and adjustment to ensure long-term VMT reduction is achieved. The cost to provide this monitoring may not be feasible for all projects. Without monitoring to ensure effectiveness, significant VMT impacts may remain significant and unavoidable.

Program-Based Mitigation:

1. VMT Impact Fee Program: This is a system where developers of new construction projects are charged a fee based on the projected increase in VMT that their development will generate. The collected funds would be used to fund transportation projects which are specifically designed to reduce VMT, such as improved transit or bicycling and pedestrian infrastructure. This program is identified in policy C-P12 *Countywide Traffic Impact Fee* in the Circulation Element of the General Plan. While this program is not currently established or available for VMT mitigation, it is anticipated that it will be established in the near future.