11.0 TRANSPORTATION AND CIRCULATION

11.1 Environmental Setting

"Transportation" and "circulation" in a CEQA context collectively may refer to transportation modes that include road systems and traffic, public transit, bicycle facilities, railways and rail service, port activities, and air transportation. Roads and traffic are the primary issue areas that are germane for the Martin Slough Interceptor Project, with public transit and bicycle transportation as secondary concerns. Other modes of transportation, including rail service, ports and water-related transportation, and air service, are not relevant for this project and are not addressed in this EIR.

The information summarized in this section is based on public documents and traffic studies prepared within the past decade; separate quantitative traffic assessments were not prepared for this EIR.

11.1.1 City of Eureka

Eureka's street system and transportation facilities are described in the City's General Plan and in the associated General Plan EIR; those descriptions are incorporated by reference as if set forth in their entirety, and only pertinent material is summarized here. As described in these documents, the City's "roadway system, basically unchanged for decades, is dominated by two major features – a grid system and U.S. 101" (Mintier and others 1994).

Highway 101, a major north-south route in the state, operates through Eureka as Broadway and two one-way streets (Fourth Street and Fifth Street); these streets are a major focus of traffic congestion. Highway 101 in the Martin Slough Interceptor Project area is designated by Caltrans as a "freeway" south of Herrick Road and as an "expressway" from Herrick Road to the vicinity of the traffic signal at the K-Mart entrance. Increasingly, drivers seeking to bypass congestion on Highway 101 are using alternative routes through the greater Eureka area. Several arterial roadways through the project area, with segments within both the City and adjacent areas in the County, are experiencing increased traffic loading as a consequence of the increased traffic in the Highway 101 corridor (D. Moody, City of Eureka, unpublished). These arterials include Walnut Drive, Campton Road/H Street, Herrick Road/Fairway Drive/F Street, and Elk River Road/Ridgewood Drive.

As indicated by the City's circulation plan (Figure 3-1 in the General Plan), the City's transportation environment includes elements that extend beyond city limits to include road system components within the City's sphere of influence. The plan includes functional classifications (i.e., major arterials, minor arterials, major collectors, minor collectors) for many roads within the project service area (General Plan Section 3). The circulation plan identifies a "(n)ew North-South Roadway connecting Fairway Drive to Ridgewood Drive," which would involve establishing a "minor arterial" through lands in the County designated for future development, including those in the future project service area.

The EIR for the City's General Plan assessed traffic levels of service (LOS) [1] under a "Future Baseline Scenario" and a "General Plan Scenario." The "Future Baseline Scenario" assumed no new development and no roadway improvements within city limits, and predicted that traffic volumes would exceed acceptable levels of service on Broadway and several other major arterials, because of future development within the region outside city limits. The "General Plan Scenario" included a variety of potential circulation improvements within the General Plan study area, and levels of service through the Broadway corridor were expected to remain within acceptable levels of service (LOS D or better); however, the EIR also concluded that projected growth in the region would result in worsening traffic conditions and levels of service at other locations within the City, including sections of Fourth Street and Fifth Street, Harrison Avenue, Myrtle Avenue, and the eastern segment of Harris Street. Worsening conditions on these roads would occur because of projected growth in the region, even without new development in Eureka (Mintier and others 1997).

Truck traffic is a consideration for this project, in terms of the general transportation setting as well as in terms of the proposed project's effects. Traffic on Highway 101/Broadway includes substantial truck traffic, even though the area is subject to size restrictions – i.e., to legally access the Eureka area in Humboldt County from any direction (i.e., highways 299 or 101), tractor-trailers must conform to "California Legal" size limits. [2] There are no designated truck routes within the City, and truck traffic is included among the vehicles diverting to other routes through Eureka to avoid congestion on Highway 101.

11.1.2 County of Humboldt

11.1.2.1 Eureka Community Plan Traffic Projections

Circulation and roadway systems outside the City in the greater Eureka area are described in the County's Eureka Community Plan (ECP) and the associated EIR; these documents are incorporated by reference, and pertinent material is summarized here. The ECP and the EIR described the existing conditions within the mixed urban and rural Eureka Planning Area as generally uncongested and operating under free-flowing conditions.

Traffic studies conducted for the ECP and EIR analyzed traffic volume increases associated with future development within the planning area at four levels of "build-out:" 25 percent, 50 percent, 75 percent, and 100 percent. The analyses concluded that increases in traffic volumes could generally be accommodated by the existing roadway network, with exceptions at a few locations. Under all scenarios, traffic improvements would be warranted for several roadways linking the County

1 Level of service (LOS) is a measure for describing operational conditions within a traffic system or at an intersection. The LOS for a particular location is designated by a letter grade between A (the best) and F (the worst), where A represents the least delay or congestion and F represents the most delay or congestion. See the Eureka General Plan Background Report Section VI for more information.

2 "California Legal" vehicles are defined as maximum 65 feet overall combination length and maximum 40 feet kingpin-to-rear-axle length.

development areas and the City; specific locations where the Plan noted that improvements would be warranted included: F Street (the Herrick Road/Fairway Drive arterial); Campton Road (including effects on H Street in the City, and also considering a possible link to F Street); Walnut Drive (including effects in the City at Hemlock Street, Dolbeer Street, Harris Street, and Harrison Avenue); and Herrick Road at Elk River Road (TJKM in Community Plan EIR 1992).

The ECP identified several "areas of concern" related to traffic that would be generated by development under the plan (see Appendix E to this EIR, Community Plan excerpts, Sections 4204 and 4205). Among the "areas of concern" identified in the plan were several within the project area: F Street/Fairway Drive (including the planned connection to Campton Road), the Robinson/Dunn Property, and TPZ Lands East of Walnut Drive (the McKay Tract). The ECP stated that these areas, when developed, could have significant effects on traffic flows, and the plan recommended a number of circulation, roadway, and intersection improvements; these improvements were identified as mitigation measures included in the EIR for the circulation impacts that would have resulted from the future growth.

11.1.2.2 Recent Assessments of ECP-area Traffic

In the 10 years since the ECP was approved, traffic within the area covered by that plan has increased substantially. However, the current traffic counts are not consistent with the levels projected for the current degree of build-out in the ECP. While the developed portion of the planning area is substantially less than what the plan projected, the traffic projections of full build-out of that plan have already been realized. The build-out has occurred in "pockets," increasing traffic in some areas at a faster pace than was predicted (D. Moody, City of Eureka, unpublished):

- Streets such as Walnut Drive south of Hemlock Street have seen a much greater increase than the 15 percent to 20 percent predicted by the ECP at the stage of build-out that has been reached. Walnut Drive PM peak hour traffic has increased substantially, from 750 trips in 1990 to 1351 trips in 2003, which is an 80 percent increase in 13 years. In the Community Plan, this volume of traffic was predicted to be reached at 75-percent full build-out for the entire plan area.
- Fairway Drive has also seen a substantial increase, from 700 PM peak hour trips to 919 PM peak hour trips, an increase of 31 percent.

The City's evaluation of the circulation-related recommendations in the ECP at the time was that the plan did not adequately identify impacts from projected increases in traffic volumes. [3] The City also has concluded that the conditions that have developed in the ECP plan area were not anticipated in the ECP. In part this result has emerged because of traffic that is "re-directed" by the poor levels of service that have developed

3 The City communicated its concerns to the County at the time the ECP was developed, with detailed comments regarding the traffic assessments in the EIR for that plan. The City commented on a number of traffic-related issues, including location-specific improvements, access points, the need for traffic studies, the lack of standards for roadway widths and other items, and the City's position that some proposed improvements were not feasible. The comments were not addressed in the Final EIR, although the County did adopt a Statement of Overriding Considerations when certifying the EIR and approving the plan.

in other parts of Eureka, particularly the Highway 101 corridor near the Bayshore Mall (D. Moody, City of Eureka, unpublished). City traffic data show an increase in annual traffic volume growth (2.9 percent per year) on Harris Street that is double the rate of increase anticipated in the ECP (1.4 percent per year; B. Siemer, pers. comm.).

The Eureka Community Plan identified potential locations and methods for reducing or offsetting circulation impacts, but the City has determined that other mitigation, not included in the ECP, will be necessary. For example, the ECP recommended widening F Street between Harris Street and Ridgecrest Drive to four lanes, in order to accommodate new development-related traffic from the south end of F Street. The City has already determined that it will also be necessary to alter traffic signals at Harris Street and F Street, and at Henderson Street and F Street, to respond to increases in traffic volumes (B. Siemer, pers. comm.). Additional changes will also be required at numerous other locations.

The Findings of Fact and the Statement of Overriding Considerations adopted by the County for the ECP stated that "[s]ignificant impacts to traffic and circulation have been mitigated by well planned and developed road systems." The City's evaluation is that, while this conclusion may be correct within the locations of the new developments that generate the traffic, it is incorrect for that same traffic as it approaches destinations in downtown Eureka, school locations, and medical facilities. Arterial streets such as Harris Street, Henderson Street, Harrison Avenue, and Myrtle Avenue are approaching capacity; the traffic improvements and other measures identified in the Eureka Community Plan (a number of which were never implemented in any event) do not provide adequate mitigation to maintain acceptable levels of service and offset the increased traffic volumes entering the City street system from outside City limits (D. Moody, City of Eureka, unpublished).

11.1.3 Policy Basis for Transportation and Circulation Related to Utility Planning

11.1.3.1 California Transportation Department Policies

With respect to circulation, the formal policies of the California Department of Transportation (Caltrans) regarding encroachment into state highway rights-of-way are an important policy constraint. Caltrans' policy for longitudinal encroachments for these roadways is stated in Chapter 6 (Sections 600 *et seq.*) of the "Manual for Encroachment Permits on California State Highways," particularly in Section 606 "Encroachments on Freeways and Expressways." The basic policy of the Department regarding the location of wastewater pipelines in the Highway 101 corridor is stated in Sections 606.1 and 606.4:

- "Caltrans' general policy is to avoid encroachments on freeways, except for direct crossings that preclude at-surface installation or maintenance of facilities in the right of way. Utility encroachments of this type are permitted only where space is available and when no other reasonable alternative is available. Any utility placement must comply with the Streets and Highways Code. (Manual Section 606.1)
- "*Placement of longitudinal utilities encroachments within freeway and expressway right of way is prohibited under Department policy.* However, should unusual circumstances warrant consideration of such placement, requests shall be reviewed under the exception process by the Program Manager, Design and Local Programs (DLP). DLP

must approve any exceptions to Statewide policies and standards governing encroachments within the State highway right of way.

- "Longitudinal encroachments, and encroachments requiring facility maintenance, within access control lines should be avoided. New public utility facilities may be placed within the right of way of frontage roads or parallel roads outside the access control of the freeway and expressway right of way. Installations within access control lines are extreme cases and are considered only when alternative placement is not reasonably available, and are approved as exceptions by the Program Manager, DLP." (Manual Section 606.4; emphasis added)

11.1.3.2 City of Eureka General Plan

The Transportation and Circulation element of the current Eureka General Plan Policy Document does not include specific policy statements applicable to the relationship between pipeline alignments or placement and circulation, although it does include the following generally relevant policies:

- "The City shall endeavor to manage its street and highway system so as to maintain Level of Service C operation on all roadway segments, except for any portion of U.S. 101, where Level of Service D shall be acceptable. … (Policy 3.A.2)
- "The City shall require all new land development projects to contribute a fair share of the cost of any street and highway improvement that can be assigned to the traffic-generating attributes of the new or intensified uses. Any project that is expected to generate more than 50 trips per day shall be required to submit a traffic analysis prior to approval. Any project that is projected to generate more than 100 trips per day will be required to mitigate traffic impacts. (Policy 3.A.6)
- "The City shall work with the Humboldt County Association of Governments (HCAOG), Caltrans, and Humboldt County to continue reviewing options for long-term solutions to congestion on U.S. 101, including development of some type of higher order facility (e.g., freeway or expressway). … [Policy 3.A.10]
- "The City shall require that all new structures constructed adjacent to expressways, arterial streets, and collector streets in the city be situated so as to conform with the sight distance requirements defined in the California Department of Transportation (Caltrans) Highway Design Manual…." [Policy 3.A.13]

These policies form the basic guidance for the City in reviewing potential circulation effects of the Martin Slough Interceptor Project, including indirect effects. Additional excerpts from the City's General Plan are presented in Appendix E.

11.1.3.3 Humboldt County General Plan and Eureka Community Plan

Section 4200 of the Humboldt County Framework Plan addresses circulation. Several transportation and circulation references are broadly relevant to the proposed project; however, no Framework Plan policies specific regarding roadways and utility placement were located that are directly applicable to the proposed project. The County's Eureka Community Plan contains many policies that affect future land use within the service area (see EIR Chapter 9); no Community Plan policies specifically regarding roadways and utility placement were located that would be directly applicable to the proposed project. Two generally relevant County circulation policies are as follows:

- "Extension of services, such as sewer, water, and roads should avoid traversing agricultural lands. Where such infrastructure must cross agricultural lands, they (sic) should be located in public right-of-way and provide a level of service consistent with the development density reflected in the Land Use Plan." [Humboldt County Framework Plan, Section 4236.2]
- "The County shall continue to coordinate with the California Department of Transportation, the Humboldt County Association of Governments, and the City of Eureka in implementing future transportation and circulation improvements. [Eureka Community Plan, Section 4220, Goal G, Policy 1].

Additional excerpts from the County's Framework General Plan, Humboldt Bay Area Plan, and Community Plan are presented in Appendix E.

11.1.3.4 Coastal Act

The Coastal Act does not include specific policy guidance with respect to circulation elements and public infrastructure project construction. The Act does include policy language regarding: diking, filling, or dredging (including the placement of structures) in wetlands (Section 30233); public access between the first public road and the sea (Sections 30210 – 30212.5); protection of coastal views (Section 30251). See Chapter 9 and Appendix E for additional information.

11.2 Issues to be Addressed

The CEQA Guidelines (Appendix G, Item XV) provide the following thresholds of significance as a guide for determining whether impacts should normally be considered to have a significant effect on the transportation and circulation environment. A project would typically have a significant transportation/circulation impact if it would:

- "Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. [Item XV.a]
- "Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. [Item XV.b] …
- "Result in inadequate emergency access." [Item XV.g]

The Initial Study prepared for the project (see Appendix A) identified concerns with respect to the project's potential for reducing street capacity because of construction activities, which would potentially delay motorists and interfere with the passage of emergency and other service vehicles.

A subsequent concern was identified in preliminary design stages, when it became evident that a substantial traffic volume would be associated with delivering equipment and supplies to the project area and removing material from the construction zone.

In developing the EIR, it also became evident to the City that potential indirect traffic and circulation effects that would result from development facilitated by the Martin Slough Interceptor Project was an environmental concern for the project.

11.3 Project Effects

The potential effects of the proposed project and the alternatives considered in this EIR on traffic and circulation within the project area are considered qualitatively, based on the contents of prior studies. Both direct and indirect effects of the project are addressed.

11.3.1 No Project Alternative

Under the "No Project" Alternative, the Martin Slough Interceptor Project would not be constructed, and there would be no direct, construction-related effects on roads or traffic. Project-related truck traffic would not occur, and there would be no short-term travel restrictions on local roads as a result of project construction activities.

Regional population growth would still be expected under this alternative, leading to increased residential housing demand and new development, including development in the Eureka Community Plan area. Most of this new development would therefore take place in the County. This growth would engender additional traffic. The City considers it likely that the additional traffic would lead to many of the same indirect traffic effects that are identified for the Proposed Project, because the circumstances that lead to the effects on circulation are related to development that will follow from implementing the County's plan, not to the presence of the Martin Slough Interceptor Project *per se*.

11.3.2 Proposed Project

11.3.2.1 Direct Circulation Effects

The proposed project will have direct effects on regional transportation, circulation, and traffic, derived primarily from construction activity, which will affect traffic circulation on City and County roadways in the immediate vicinities of various project elements.

Significant Effect 11-1: Project Construction Will Have Temporary Effects on Local Traffic Flow and on Access to Residential and Commercial Properties

Building wastewater pipelines in City or County street rights-of-way may require short-term travel restrictions for these streets, affecting normal traffic flow; where temporary or long-term closure is necessary, emergency vehicle access could be affected. Among the affected road segments that may be temporarily restricted or closed while construction is occurring are:

- H Street, at the point of directional drilling entry near the existing lift station
- Campton Road, where the H Street collector line emerges, including the street segment from the point of emergence to the interceptor alignment, and also

including the roadway between the Campton Road lift station and the interceptor alignment where a collector line will be buried along the eastern shoulder

- F Street, near the intersection with the private Hartman Lane, where the F Street lift station collector will be placed along the western margin before crossing F Street
- D Street, near the existing D Street lift station
- Artino Street right-of-way, between the lift station and a private lane approximately 800 feet to the east
- Pine Hill Road, where the interceptor will cross to the new lift station site at Meyers Avenue, and between Meyers Avenue and Elk River Road, where the force mains will be placed

The most significant of these affected elements will be Pine Hill Road, from its junction with Meyers Avenue to Elk River Road. Pine Hill Road will be closed to most traffic during the construction of the force mains and the relocation of an existing HCSD water main and the construction of a new collector gravity line from the Pine Hill lift station to the Martin Slough pump station.

Traffic flow restrictions in construction zones would reduce the capacity of affected street segments for short periods of time (anticipated to be on the order of one to four weeks in each segment). This capacity reduction would cross one or more of the identified thresholds of significance, potentially resulting in a substantial but temporary decrease in capacity, or in interference with emergency services; however, the City has concluded that the mitigation measures identified later in this chapter will reduce potential construction-related effects below the thresholds of significance.

Project construction in the Pine Hill Road area will affect several residences that gain access from Pine Hill Road, an additional potentially significant effect. However, the City will direct the contractor to assure that access to the affected residences is assured (see Mitigation Measure T-2).

Project construction will also occur adjacent to Broadway (Highway 101) and access to several commercial uses and businesses along the eastern side of Broadway will be affected by trenching and force main installation, an additional potentially significant effect. The City will direct that the contractor not deny access to these businesses, including requiring nighttime construction (see Mitigation Measure T-1).

Significant Effect 11-2: Project Construction Will Generate Substantial Truck Traffic

Project construction will generate truck traffic to the extent necessary to import equipment and materials and to export other materials, including unsuitable soils encountered in pipeline construction. The extent of truck traffic is substantial, particularly for the exportation of unsuitable soil material from the construction zone. The project design team has estimated that as much as 27,000 cubic yards of unsuitable soil will have to be trucked out of the project area. If it is assumed that a "standard" 10-cubic yard truck is used to haul this material, the necessary truck trip

number is 2,700 trips. [4] The trucks will presumably use existing surface streets for delivering construction equipment and supplies and for moving the excavated "spoil" to a disposal site. While on the surface streets the trucks will occupy space and travel with dynamics different from passenger vehicles, and the City considers it to be highly likely that many motorists will consider the numbers of vehicles involved and the interference with vehicular movement to be a significant reduction in roadway function within the project area.

The effects of these trips cannot be clearly identified, because the disposal site for the spoil material is unknown at the present time. The City is unable to fully specify necessary mitigation for the potential effects of the trips, and while the identified mitigation measures will reduce the effects of truck traffic, this effect is considered to remain an unmitigated significant effect of the project at this time.

11.3.2.2 Indirect Circulation Effects

Significant Effect 11-3: Project Construction Will Facilitate Development Allowed by Adopted Planning Documents, Indirectly Leading to Significant Traffic Effects in the County and the City

The proposed project will facilitate providing wastewater services for currently undeveloped areas of the Martin Slough basin southeast of Eureka, "enabling" or facilitating future residential development that is identified in adopted planning documents. This facilitated development will be associated with a potentially significant increase in traffic within the greater Eureka area. Such increases and potential impacts were not unforeseen by decision-makers over the past decade; these issues were raised at various times when decisions were being made to commit currently undeveloped lands to future residential development – i.e., when the applicable City and County General Plan documents were approved, particularly the County's Eureka Community Plan.

The Martin Slough Interceptor Project can be seen as not inconsistent with the applicable plans (see Chapter 9). In helping to implement the plans, however, it also helps to precipitate the traffic effects that were identified when County decision-makers approved the Plan. These traffic impacts were identified as environmentally significant effects in the Eureka Community Plan EIR, although the mitigation measures that were specified in that EIR were not carried out; therefore these indirect effects of the Proposed Project remain environmentally significant.

The traffic generated by residential development in the County will be felt to a great extent within the City; the additional traffic can be expected to cause increased congestion and reduced levels-of-service on roadways and at intersections throughout the City, particularly where such congestion now occurs and on roads and at intersections on the City-County margin. These levels–of-service are inconsistent with

4 This trip count estimate is for trucks leaving the construction zone. The empty trucks will also need to return to the construction zone, doubling the effective trip count. If a truck/trailer arrangement is used, the exit trip count would be halved to about 1,350 trips.

the City's General Plan in that they fall below the minimum standards there (B. Siemer, pers. comm.).

See Section 11.3.5 for additional discussion.

11.3.2.3 Unselected Project Elements

For the most part the effects of the unselected project elements would be much like those of the selected elements. There is one project element, however, for which an unselected alternative element would have a potential for reducing or avoiding impacts on circulation: the "H Street canyon" alternative would avoid construction of the collector line from the H Street lift station within the section of Campton Road. This element is identified above as a potential source of impacts for area circulation, and the selection of this alternative would help to alleviate the project's overall effect; however, it would not provide enough benefit to allow the effect to be reduced below a threshold of significance. 5

There are two unselected alternative elements that would likely be associated with substantially greater impacts on circulation than will their selected counterpart (see Figure 2-4):

- Force main alignment in Elk River Road
- Force main alignment in Meyers Avenue and Herrick Road

Either of these alignment alternatives to the proposed force main alignment would involve substantially greater interference with vehicular movements on major arterials than will the proposed alignment. Most likely the Elk River Road alignment would require that the west-bound lane of Elk River Road be closed for several weeks in order to build the force main and then reconstruct the road section to meet County standards. During the construction process Elk River Road would be open, subject to one-way traffic controls. A similar result would occur for the Meyers Avenue/Herrick Road alignment; the potential for circulation interference would be particularly noticeable when construction occurred in Herrick Road. The mitigation measure identified below for project-related construction interference would address the effects of these alternatives; however, even with traffic controls the roadway capacity for these major arterials would be reduced substantially, and the effect of either alternative would remain environmentally significant.

11.3.3 Modified Service Area Boundary Without Density Adjustment Alternative

This alternative would provide sewerage services to approximately 576 more dwelling units than would the proposed project (see Chapter 2). Under the peak-hour trip generation formulas commonly used in traffic impact studies, 576 additional units would be associated with approximately additional 58 peak-hour trips. Presumably the trip-distribution would be similar to the trip-distribution assignments in the traffic

5 This "H Street canyon" alternative has potentially significant concerns for geotechnical reasons (see Chapter 3) and biological reasons (see chapters 5 and 7), and is unlikely to be acceptable regardless of its potential for helping to avoid a minor circulation effect.

studies relied upon by the County in the ECP development; under such circumstances the conclusion is reasonable that the additional trips would be added to an impact that has already been identified as environmentally significant.

Traffic generated by this alternative would be unlikely to result in a conclusion that the traffic resulting from the 576 additional units, when compared to the effects of the Proposed Project, would significantly alter the nature or locations of traffic improvements needed to mitigate the effects of development. This conclusion is indicated because the effect expected with the Proposed Project is based on a significant traffic increase when compared to the capacity of the current street infrastructure, whereas the incremental effect of the traffic resulting from this alternative is only a marginal increase in peak-hour trips, likely producing virtually the same effect as the Proposed Project. Because the traffic impacts of the development to be served by the Proposed Project are significant, however, this EIR concludes that the traffic impacts of this alternative, while not substantially greater than those of the Proposed Project, are nonetheless also environmentally significant.

11.3.4 Modified Service Area Boundary at Future Densities Alternative

Removing the density constraints that the adopted Eureka Community Plan placed on a number of large land areas southeast of the City of Eureka (see Chapter 9) would be associated with 3,560 additional dwelling units under this alternative (see Chapter 2). Under the peak-hour trip generation formulas commonly used in traffic impact studies, 3,560 additional units would be associated with approximately 356 additional peak-hour trips.

The City does not know where the additional trips created by this alternative would be routed; answering such a question requires quantitative traffic modeling, which was not conducted for this EIR. It is not a reasonable expectation that the 356 additional peak-hour trips would necessarily be distributed in the same way as the trips identified in the ECP traffic studies; future land use development patterns that might develop in this region are currently unknown. As a consequence, the City cannot state that the effects of the additional traffic are known well enough to reach specific conclusions about the locations of potential future circulation impacts from this alternative.

The City nonetheless concludes that the traffic resulting from the additional units allowed by this alternative would exacerbate the already-significant traffic impacts anticipated from the development that will be served by the Proposed Project. The City considers it likely that additional traffic mitigation measures, in comparison to the measures considered in the ECP traffic studies, would be required to offset the effects of these additional units.

11.3.5 Cumulative Effects

Cumulative effects include the potential effects of the proposed project in association with the effects of recent projects, other current projects, and projects that may reasonably be expected within the future. As described in this section, the effects of traffic that will result from the development authorized by the Eureka Community Plan and facilitated by the Martin Slough Interceptor Project are already a significant

indirect effect of the project. By definition, any other traffic that would contribute to the already significant traffic and circulation concerns in the project area would add to the effect of the authorized development described previously, and would constitute part of a significant cumulative effect.

From a technical traffic-management perspective this cumulative effect includes the effect of any traffic that does not originate within the project area but which passes through the project area and thereby becomes part of the cumulative traffic volume on area roadways. Travelers from outside the project area who enter and/or leave Eureka by way of Highway 101, Herrick Road, Elk River Road, Walnut Drive, Campton Road, and/or Harris Street create a part of the cumulative traffic impact within the project area.

Because of the nature of the cumulative traffic impact, mitigation for the cumulative effect requires action on several levels. Much of the required mitigation is not within the sole jurisdiction of the City of Eureka, and the City cannot solely implement measures that address the cumulative effect. For example, some of the appropriate solutions for the cumulative effect likely involve improvements or alterations for Highway 101, even to the extent of re-developing a viable option for a Eureka Bypass Project; these solutions lie within the purview of Caltrans and the Humboldt County Association of Governments (HCAOG), not the City. A reasonable conclusion could be supported that the cumulative effect is regional in nature, and that the appropriate mitigation for the effect would involve funding from HCAOG to address this regional concern.

The City may act within its own powers to address traffic impacts, including cumulative effects. The City's intent in addressing these effects would be to act in concert with other affected local governments, particularly the County of Humboldt. Policy 1.A.2 of the Eureka General Plan states: "Coordination with Humboldt County and other agencies on development decisions affecting unincorporated areas surrounding Eureka to ensure compatibility between the County's planning efforts and the City's efforts."

The City may, under its own authority, enact a program to collect impact mitigation fees within the City. Under CEQA, impact fees may be used to reduce a project's otherwise significant contribution to cumulative impacts; use of such fees is recognized as legitimate where there is a reasonable expectation that the funds collected will actually be spent for the purpose for which the funds were collected:

> "A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable." [CEQA Guidelines Section 15130(a)(3)].

It is the City's preference that the County also adopt such a traffic impact fee program for areas within the County covered by the Eureka Community Plan. The County's EIR for the Eureka Community Plan proposed traffic impact fees as mitigation for the Plan's anticipated traffic impacts, and the Plan itself includes a policy directing that this measure be implemented. The City considers the appropriate solution to the cumulative traffic and circulation concerns in the area that will be served by the

Martin Slough Interceptor Project to involve fees from projects that will occur in the future in both the City and the County. If appropriate, the City would enter into an intergovernmental agreement (such as a Memorandum of Agreement) to carry out necessary technical tasks (such as to commission an area-wide traffic study, identify specific traffic improvement projects, estimate project costs, and develop a methodology by which appropriate traffic impact fees would be assigned).

In lieu of having a suitable mitigation program in place at the completion of construction of the Martin Slough Interceptor Project, the City will adopt as a mitigation measure a requirement that new development may not be connected to the completed project until a traffic impact assessment program is implemented and impact mitigation funding is secured. The revenues would be explicitly designated for use in carrying out traffic studies, designing improvements within the area affected by development, and/or building circulation improvements to offset the circulation impacts of the new development. The methodology for assessing needed traffic improvements and their costs has not been established, but will be developed as part of the program established by the mitigation measures identified in the following section.

11.4 Mitigation and Monitoring

This EIR chapter has identified significant indirect environmental effects associated with development authorized by adopted County planning documents, as well as significant direct effects arising from the project itself. The following mitigation measures will reduce or avoid most potential circulation effects resulting from building the Proposed Project. The City will conduct additional CEQA reviews, tiered to this EIR, when the spoil disposal location is identified.

Significant Effect 11-1: Project Construction Will Have Temporary Effects on Local Traffic Flow and on Access to Residential and Commercial Properties

The City has concluded that the following mitigation measure will substantially reduce traffic and circulation effects arising from project construction. The City has concluded that this measure, when implemented, will reduce potential direct traffic and circulation impacts resulting from project construction to levels that are less than the thresholds of significance identified above, with the exception of truck traffic associated with spoil removal (this impact is addressed separately; see below).

Mitigation Measure 11-1.1 – Prepare Traffic Management Plans

Measure: *The City's selected contractor shall prepare Traffic Management Plans pursuant to County of Humboldt, City of Eureka, and Caltrans Standards, as appropriate for a given construction location. Traffic control measures consistent with Institute of Transportation Engineers standards shall be implemented during construction. The Traffic Management Plan shall include the following elements:*

A. *Truck routes: travel routes for trucks delivering construction materials or removing material from the construction area shall be specified, and only those routes shall be used.*
B. *Nighttime construction: in critical circulation areas or locations (e.g., the Highway 101 corridor) the hours during which the contractor may operate may be scheduled to*

occur during the night, if daytime construction operations conducted under the Traffic Management Plan are judged by the affected government to be insufficient to avoid significant traffic flow restrictions.

C. *Lane closures: temporary lane closures and other changes in roadway conditions shall be identified in the Traffic Management Plan.*
D. *Warnings: signs, lights, or other traffic control measures required to inform the traveling public of the project shall be posted in the construction area.*
E. *Notification: potentially affected residences and businesses shall be notified of possible access disruptions at least 72 hours (i.e., three working days) prior to construction activities that would affect such access.*
F. *Essential services: emergency service providers and school districts shall be notified of expected construction timing and duration, and of probable travel restrictions within the construction area. Emergency vehicles will be given priority at traffic control stations during construction. Delays for school buses will be minimized to the extent feasible.*

Monitoring: This measure shall be made a condition of approval for the current project application, and shall be incorporated into design documents prepared by the City for the project. The City Engineering Department shall review the Traffic Management Plan(s) prepared by the contractor, and shall conduct field observations during the construction process to assure that the Traffic Control Plan(s) are implemented. The City Engineering Department shall be empowered to direct the contractor to modify implemented traffic control measures that do not conform to the approved Traffic Management Plan(s).

Mitigation Measure 11-1.2 – Assure Access to Pine Hill Road Residences

Measure: *The City Engineering Department shall, to the extent necessary, direct the contractor in the field to assure access through the construction zone to each Pine Hill Road residence for a period no less than 12 hours in length during each 24-hour day.*

Monitoring: This measure shall be made a condition of approval for the project, as well as any future implementation projects, and shall be incorporated into design and contract documents prepared for all projects by the City and the District. The City Engineering Department or the Community Development Department shall be empowered to direct the contractor to temporarily suspend construction activities on any City project if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

Significant Effect 11-2: Project Construction Will Generate Substantial Truck Traffic

The City has concluded that the following mitigation measure will substantially reduce traffic and circulation effects arising from project construction. However, inasmuch as truck haul routes associated with spoil disposal are currently undefined, the City cannot reach the conclusion that all significant effects will be reduced below thresholds of significance for circulation impacts.

Mitigation Measure 11-2.1 – Prepare Traffic Management Plans

This is the same measure as Mitigation Measure 11-1.1 above.

Significant Effect 11-3: Project Construction Will Facilitate Development Allowed by Adopted Planning Documents, Indirectly Leading to Significant Traffic Effects in the County and the City

This indirect effect of the project is environmentally highly significant.[6] Because the effect is essentially programmatic, arising as a consequence of implementing adopted land use plans, the following mitigation measure is also programmatic. The City believes that other local governments (including but not limited to the County of Humboldt and the Humboldt Community Services District) can, and should, adopt similar programmatic approaches in order to address traffic and circulation impacts that will be facilitated by the Martin Slough Interceptor Project.

Mitigation Measure 11-3.1 – Limit Connections to Martin Slough Interceptor Pending the Development of a Memorandum of Agreement to Identify Mitigation for Cumulative Traffic Impacts, and the Implementation of a Circulation Improvement Fund Program

Measure: *The City shall cooperate with local governments in the project area to enter into a Memorandum of Agreement (MOA) to develop and implement a suitable "Cumulative Traffic Impact Assessment and Mitigation Program" (Program). The aim of the MOA, and of the resulting Program, will be to formally identify indirect or cumulative traffic and circulation impacts, and the required improvements necessary to offset indirect or cumulative circulation impacts, within the areas of the City of Eureka and the County of Humboldt that will be served, whether directly or indirectly, by the Martin Slough Interceptor Project.*

The City shall prohibit connections to the Martin Slough Interceptor, or to any part of the City's wastewater collection system that will develop additional conveyance capacity as a result of the Martin Slough Interceptor Project, until the MOA and the Program are in place and appropriate funding has been secured for improvements identified in the Program. The methodology for creating the Circulation Improvement Fund Program shall be identified as part of the MOA and the Program. Payments to the circulation improvement fund shall be secured for each connection to the wastewater collection system prior to the authorization by the City of that connection.

Monitoring: This measure shall be made a condition of approval for the current project. The City of Eureka will identify programmatic elements required in a regional transportation planning approach that includes the City and other parts of the project service area. Upon the implementation of the MOA, and following the delivery of an

6 The City stresses that the details of the traffic mitigation projects needed to address the circulation impacts will be developed as part of the program set in place by the mitigation measure. The full explanation of how this mitigation program was devised, and how it addresses circulation concerns in the City and the County (while preserving existing and future contractual obligations for wastewater services) is laid out in memoranda available for review in City Hall, 531 K Street, Eureka.

appropriate payment to the circulation improvement fund for any affected parcel under the Program, the City shall authorize a connection to the Martin Slough Interceptor.