

7.0 AIR QUALITY

7.1 BACKGROUND AND SETTING

Air quality regulation in the Humboldt Bay region is the responsibility of the North Coast Unified Air Quality Management District (AQMD) pursuant to the federal Clean Air Act (42 USC § 7401 *et seq.*) and the comparable state law (Health and Safety Code § 39000 *et seq.*). In essence, the Humboldt Bay region is part of the “air basin” that includes the entire developed area as well as the undeveloped hinterlands, and air quality is assessed for the entire basin, rather than just for the Eureka-Arcata area.

Compliance with air quality standards for criteria pollutants is judged by “attainment” of the relevant state or federal standards. State air quality standards are more stringent than federal standards, and it is possible to attain federal standards and not attain state standards. If any standard is not met, the AQMD is said to be “non-attainment” for that standard.

The overall status of the AQMD for federal and state air quality standards for criteria pollutants is summarized in EIR Table 7-1.

EIR Table 7-1. Air Quality Status in the Humboldt Bay Region.

Criteria Pollutant	Status with Respect to Federal Standard	Status with Respect to State Standard
Ozone	Attainment	Attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Particulate (PM10)	Attainment	Non-attainment
Sulfates	No Federal Standard	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment

Air quality in the study area generally meets applicable standards; the North Coast air basin is in attainment status for all federal standards for criteria pollutants. The North Coast also is in attainment status for all state standards except that for suspended particulate matter smaller than 10 micrometers (or “microns;” a micrometer is 1/1000 of a millimeter, or about 1/25,000 of an inch). The adopted federal and state standards are:

Averaging Time	Federal Standard	California Standard
Annual Arithmetic Mean	50 µg/m ³	30 µg/m ³
24-Hour Average	150 µg/m ³	30 µg/m ³

PM10 pollutants may be generated by transportation sources (tire wear, tailpipe emissions, etc.); by construction-generated dust or smoke; and by smoke from

appliances like woodstoves, barbecues, or fireplaces. PM10 can be a health hazard, especially for children, the elderly, and people with heart or lung disease.¹

The AQMD's Particulate Matter Attainment Plan adopts a number of "control strategies" for achieving particulate matter reductions, including transportation control measures (intended to reduce vehicular pollutant generation from all modes), land use measures, regulation of open burning, and residential burning controls (including woodstove emission standards).

The AQMD has adopted "Regulation 1,"² which stipulates requirements for air quality management within the air basin. In Regulation 1 particulate generation from different sources is covered by different "Rules." Particulate generation from burning and from non-combustion stationary sources is generally covered by Rule 420. Particulates arising from "fugitive" emissions (such as blowing dust, salt spray, sawdust, and similar anthropogenic sources) are regulated under Rule 430.

7.2 ISSUES TO BE ADDRESSED AND THRESHOLDS OF SIGNIFICANCE

The Environmental Checklist prepared for the Draft Plan's implementation (see Appendix A) identified two potential areas of concern. First, because the Humboldt Bay region is in an identified nonattainment area for small particulate matter pursuant to state regulations, it is likely that any activities that result from implementing the Plan that result in the generation of mobilization of small particulate matter would exacerbate the nonattainment and contribute to a significant cumulative effect (Checklist item III.c). The second concern identified in the Initial Study included the potential that some uses that could be authorized by the Plan (e.g., fish-processing facilities) could be associated with odors that could be objectionable to some residents in the region (Checklist item III.e).

Comments received in response to the Notice of Preparation identified a possible cumulative air quality concern that might result from Draft Plan policies, suggesting that the Draft EIR needed to consider the air emissions of all projects that might result from implementation of the Management Plan. That is, some commenters asserted

1 The AQMD adopted a draft PM10 Attainment Plan in 1995. This plan is incorporated into this EIR by reference and may be reviewed at the AQMD office. The Plan should be available be viewed (and downloadable as a pdf file) from the District's website (<http://www.ncuaqmd.org/>); however the website is currently (December 2005) in revision and the Plan is not available online. The Plan states:

"All three counties that comprise the North Coast Unified Air Quality Management District (Humboldt, Del Norte, and Trinity counties) are currently classified as nonattainment for the California Ambient Air Quality Standards for particulate matter under 10 microns (PM10). These air quality standards are set at levels to protect the public health from the deleterious affects of fine particulate. A nonattainment designation means that particulate concentrations in the three counties that comprise the North Coast Unified Air Quality Management District exceed the levels set by California to protect the public health.

"PM10 itself can be defined as any combination of dust, mist, ash, smoke, and/or fumes in liquid or solid particles under 10 microns in diameter."

2 Regulation 1 should be viewable online or downloadable from the AQMD website once the site is revised.

that the EIR should identify the expected emissions of future projects in order to identify the indirect effects of the Plan's policies on air quality.

7.3 ENVIRONMENTAL EFFECTS OF PROPOSED PLAN AND PLAN ALTERNATIVES

7.3.1 "No Project" (Existing Master Plan)

The 1975 Humboldt Bay Master Plan contains no policy guidance with respect to air quality or odors. The District's ordinance No. 7, the policy guidance that is used by the District to implement the guidance of the Master Plan, contains no specific references to air quality or odors. Ordinance No. 7 does, however, include a policy in Section 9 (b) that "(t)he discharge of physical, biological, or chemical pollutants that are detrimental to the natural environment of Humboldt Bay shall be eliminated and prohibited."

Based upon the lack of guidance with respect to air quality and odors, this EIR finds that a continued reliance on the policy direction provided by the 1975 Master Plan would result in substantially less protection for air quality than will occur under the proposed Humboldt Bay Management Plan.

7.3.2 Proposed Management Plan

The Draft Plan currently does not address air quality or odor concerns. Based on the Initial Study, the following potential concerns should be addressed in the Plan's policies.

7.3.2.1 Non-Attainment Status for Particulate Matter

Particulate matter generated within the Humboldt Bay region is part of the total particulate load in the North Coast Air Basin. Because the Basin is "nonattainment" for PM10 this generation would be, by definition, a contribution to this significant cumulative effect. The Draft Plan includes policies that might encourage a variety of activities that resulted in producing or releasing PM10. The Plan's policies are, therefore, an indirect contributor to the cumulative effect of exceeding the state PM10 standard.

The CEQA Guidelines provide explicit guidance for a circumstance in which a proposed action may result in a contribution to a cumulative effect on a regional basis, in Guidelines Section 15064(i)(3), where there is an ongoing regulatory concern but for which the relevant regulatory body has adopted an appropriate control plan:

"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency."

The 1995 PM10 attainment plan adopted by the AQMD provides specific requirements for addressing the particulate nonattainment in the air basin, and the plan was adopted pursuant to a formal public review process. Therefore, compliance with the AQMD's plan would constitute the necessary mitigation (see below) to allow the District to conclude that actions proposed in order to carry out the Management Plan would result in less-than-significant air quality effects.

7.3.2.2 Odor-Releasing Projects

Some land uses that occur on upland locations near the bay margin (e.g., fish processing plants, or some industrial processes) are associated with odor-causing substances. Because these uses occur in uplands, they are generally not subject to the District's jurisdiction, and the District lacks authority to consider possible odor-related impacts. Such land uses (which are generally located in the central part of the bay) are regulated by the County or the City of Eureka, which may impose enforceable conditions of approval that address odor abatement (unless doing so is precluded under state or federal law).

Some odoriferous substances (generally released as byproducts of industrial processes) are regulated directly by the AQMD (and by the State Air Resources Board, and in most cases by the U. S. Environmental Protection Agency) as air pollutants. Under state and federal law, local agencies are precluded from adopting separate local regulations for these pollutants.

Some projects that occur in uplands near the bay release process water as a discharge (although these discharges are made to the Pacific Ocean rather than to the bay). In addition, there are two publicly owned wastewater treatment facilities located on the bay's margin that discharge treated effluent to the aquatic environment. The City of Arcata discharges highly treated effluent into Arcata Bay at the mouth of Butcher Slough. The City of Eureka discharges high-quality effluent into the depths of Entrance Bay just inside the bay mouth, on outgoing tides only (effectively this is a discharge to the Pacific Ocean). All of these discharges are subject to the regulatory jurisdiction of the North Coast Regional Quality Control Board, which requires that the discharges comply with the Basin Plan's standard that the discharges produce no adverse effects on designated beneficial uses because of odor releases.

In general, the District does not have a role in any of the above odor-related contexts. Nonetheless, it is conceivable that the District may receive an application for a project with a potential for releasing odors. Pursuant to the California Environmental Quality Act the District would be encouraged, in conjunction with adopting a CEQA document and approving the proposed action, to require mitigation measures that reduced the significance of the odor releases. However, the District has no direct authority to regulate odors. A new Plan policy is identified below that establishes an enforceable direction for District-approved projects. (Note: this EIR presumes that this policy would seldom be likely to be invoked, but its existence assures that the District may regulate odor emissions should the need arise.)

7.3.2.3 Future Air Emissions

The Draft Management Plan does not identify any specific projects that would be implemented in carrying out the policies in the Plan. This EIR cannot assess potential

air emissions from future projects that may or may not be proposed; such assessments would essentially be speculation, which is inappropriate for CEQA documents.

Nonetheless, in a general sense it is true that some future uses of the bay, especially those associated with the “harbor” policies, may be associated with possible emissions of regulated pollutants, including particulate matter (soot or smoke) associated with internal-combustion engines. It is also true that these future emissions have a potential for violating existing air quality standards, or air quality standards as they might exist in the future, as well as a potential for adversely affecting sensitive receptors. That is, the effect of future shipping or onshore industrial activity that might result from the Plan could cross a threshold of significance for air quality impacts. The particulate emissions from either or both of these sources could amount to significant volumes of particulate material should the port-related functions described in the Draft Management Plan lead to increased vessel traffic and/or the development of significant terminal facilities.

Considering these potential future emissions is subject to the same caveat identified above: the District has no explicit authority to regulate emissions of criteria pollutants from projects it considers, because this authority has been pre-empted by state and federal air quality regulators. This EIR presumes that any project proposed to the District in the future as a consequence of the Management Plan would be subject to regulation by the AQMD and other delegated state and federal air quality regulatory agencies, and that necessary pollution-control measures for these projects would be identified as part of the necessary CEQA review processes or as an element in the reviews carried out for any approvals required by those agencies. Similarly, the EIR presumes that the AQMD would exercise the primary regulatory authority over particulate emissions from vessels pursuant to regulations promulgated by the California Air Resources Board. The EIR does not identify a need for additional air quality policy elements for the Management Plan.

7.4 POLICY CONSIDERATIONS FOR MITIGATING POTENTIALLY SIGNIFICANT EFFECTS

The Draft Management Plan does not currently include any policy elements that address air quality or odors. The Plan is intended to provide a “self-mitigating” programmatic management program for Humboldt Bay. In order to accomplish this task, the Plan must include policies that address potential impacts. For example, policies CEP-4 through CEP-11 were included in the HBMP in order to assure that no adverse long-term impacts remain as a consequence of Plan implementation. However, in order for the Plan to “self-mitigate” air quality and odor concerns, additional Plan policies are necessary. As noted throughout this EIR, the Plan’s success in avoiding impacts depends entirely on the full implementation of all of the Plan’s policies.

7.4.1 Particulate Matter Nonattainment

In order to assure that actions proposed and/or implemented in order to carry out the policies in the Management Plan do not contribute to the cumulative nonattainment of the state PM10 standard in the North Coast Air Basin, this EIR recommends that the

following policy be added to Section 3.6 of the Plan (new text is indicated by underlining):³

HTM-3: Assure compliance with North Coast Air Quality Management District Rules for Particulates

Policy: The District shall assure that activities subject to District jurisdiction incorporate affirmative actions to assure compliance with AQMD Rule 420 (Particulate Matter) and Rule 430 (Fugitive Dust Emissions), or succeeding AQMD rules that carry out the AQMD's management program for particulate matter.

This measure assures compliance with CEQA Guidelines Section 15064(i)(3); additional policies additions for the Draft Plan are unnecessary.

7.4.2 Odor Releases from District-Approved Projects

The following new policy will establish a District standard with respect to odor releases, allowing the District to require that odor-control measures be incorporated into project the District approves.

HTM-4: Projects shall incorporate appropriate odor-control measures

Policy: The District shall adopt a standard for projects subject to District jurisdiction that approved projects shall not produce nuisance levels of odors. The District shall require that projects that may be associated with odoriferous emissions adopt feasible mitigation measures to avoid or reduce the odors.

The adoption of this measure establishes an enforceable policy that the District may use in order to include odor-reduction mitigation requirements in CEQA documents for projects approved by the District.

3 Plan Section 3.6 covers toxic materials management, and although particulates are generally not considered a “toxic” material, this section is the most appropriate section in the Draft Plan for this policy as it is currently organized.