

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Air Quality Planning Committee
9:30 a.m., Wednesday, June 14, 2006

- 1. Call to Order – Roll Call.** Chairperson Hayes called the meeting to order at 9:40 a.m. Present: Stan R. Hayes, Chairperson, Ken Blonski, Irvin Dawid, Emily Drennen, Fred Glueck, John Holtzclaw, Ph.D., Kraig Kurucz, Ed Proctor. Absent: Harold Brazil.
- 2. Public Comment Period.** There were no public comments.
- 3. Approval of April 12, 2006 Minutes.** Ms. Drennen moved approval of the minutes; seconded by Dr. Holtzclaw; carried unanimously.
- 4. Marin County General Plan Update:** Dawn Weisz, Sustainability Planner, County of Marin, stated that she would review the County’s update of its General Plan and Environmental Impact Review process that are addressing climate change concerns. She added that every municipality in the country should have a general plan that is updated every decade.

The first Marin Countywide Plan (CWP) was adopted in 1973 and was seen as a visionary document. It established environmental corridors—coast, inland rural, and the city-centered—which allows concentrations on jobs, housing and transit within the County, and assists in identifying and defining air quality issues. Another corridor (“Baylands”) will be set aside primarily as wetlands and open space, with some flexibility for sparse development.

Marin County has a population of 250,000 people, with 84% of its land being open space and parks, 11% developed and 5% is potentially developable—although much of the latter is hill-side or marsh. The theme of the CWP is planning sustainable communities, with guiding principles that emphasize alignment of the built environment and socioeconomic activities with the natural systems that support life; adaptation of human activities to the constraints and opportunities of nature; and meeting the needs of the present and the future.

In 2000, the County conducted an analysis of its “ecological footprint”—that is, of how much land is used to provide resources per person—and calculated an average of 24.7 acres per person. The national average is 24 acres per person. Italy’s ecological footprint is 9.5 acres per person. The average ecological footprint on the planet is four acres per person.

The composition of the County’s greenhouse gas emissions (GHGs) inventory, as analyzed in 2003, indicates that transportation contributes 50%, the residential sector 24%, the commercial sector 16%, agriculture 6% and waste 3%. The integration of environment, economy and social-equity will be used throughout the CWP in its policies, programs and goals.

The CWP contains three primary elements: natural systems and agriculture, the built environment, and the socioeconomic context. The natural systems element includes such topics as biological resources, water resources, environmental hazards, atmosphere and climate, open space, trails and agriculture/food. The Bayfront Conservation Zone is proposed in the east side of the county, with greenbelts and community separators included for the extended protection of prominent ridgelines. Agricultural zones will be expanded and there is an increase in organic food production in the county.

For the built environment, the CWP addresses community development, design, energy and green building, mineral resources, housing, transportation, noise and related issues. Key elements include promoting affordable employee housing units, focusing on mixed use commercial areas, placing housing and jobs near transit. The improvement of the Marinwood and Strawberry Shopping Centers toward a mixed-use scenario with improved pedestrian access is intended.

The socioeconomic element includes interactions of people in economy, childcare and the broader social field. Economic programs that are promoted include targeted businesses, especially those considered green and clean, and that give back to the community and implement socially responsible business practices. Diversity is assessed in terms of ethnic diversity, participation by minorities, public health analyses that link land use planning and public health and promotion of healthy lifestyles, and emergency services.

Programs under development include *Cities for Climate Protection Campaign*—which is now in the phase that develops an implementation plan to reduce carbon emissions; a *Million Solar Roofs Program*, and a *Green Business Program*. The County's Residential Energy Ordinance and Green Building Checklist require that any building larger than 3,500 square feet be limited to energy use for that amount of space, and beyond that the building must address the energy burden. Renewable energy on site must also be installed. In the Oakview Project, a rating of "certified" or better must be met under the Marin new Home Green Building Residential Design Guidelines. A solar site analysis can be conducted to assess potential energy generation capacity, and free technical assistance will be provided to anyone in the County seeking to install solar power in their home. The Oakview project will use solar power and integrate other green building elements. The Fireside building will be redeveloped into a mixed-use affordable housing unit integrating solar energy.

Participants in the Green Business & Sustainable Partners Programs must demonstrate how they will reduce energy and waste, and water consumption as well. Sustainable partner standards will direct manufacturing operations toward a closed loop system which takes the waste and returns it to the manufacturing stream. The success of these programs will be measured by indicators, targets and benchmarks. There are 70 proposed indicators that will be tracked at two year intervals. For example, the "energy mix" will be tracked with regard to both renewables and fossil fuels. In 1999, renewables constituted 15% of energy generation in the County, and the target is 20% for 2010 and 40% for 2017. If the County pursues a community choice aggregation and becomes a power purchaser for its constituents, it would acquire greater control over purchasing power from clean sources of energy. The County is presently looking into this course of action.

Another target is to reduce GHG emissions. In 1990, County government emissions were 16,000 tons of GHGs. County-wide 2.6 million tons were emitted. The goal is to reduce this by 15-20% by 2015 for internal government and by 15% for the entire County by 2015. The County has worked with a team of graduate school interns from UC Berkeley on these targets, and the study indicates that the County has met the target, due to compliance with regulations chiefly at the state and national level. The County hopes to be a leader in reducing GHGs, and to establish a paradigm which other counties can adopt.

The analysis by the UC Berkeley interns lead to the development of a list of six measures, based on initial cost, high payback, and transferability from County to city. These include hybridizing fleet vehicles, electric vehicles for parking enforcement, efficient lighting retrofits, energy star equipment purchasing, landfill methane electric generation, and photovoltaic installation in municipal buildings. The generation of electricity from methane at the Redwood Landfill has 75 times the impact of the other measures. The landfill is presently in the process of obtaining a new operating permit, and discussions with the Air District on the permit are underway as there are several technological issues associated with methane capture and particulate matter that require evaluation.

The CWP's Environmental Impact Report (EIR) includes a review of a letter from the Attorney General to Orange County in March, 2006 criticizing the County for not including GHGs in an EIR for a transportation plan. Municipalities in California are beginning to take note of this letter. The EIR for Marin County is due soon. The modeling that will be conducted to evaluate these measures is based on population and vehicle miles traveled. The prospect of adding population density as a criterion is under discussion.

The CWP is estimated to reduce Marin County's ecological footprint to 400,000 global acres of footprint annually, if a 20% County wide decrease in electricity usage can be achieved by 2015. If a shift to renewable sources of energy of 40% can be achieved by 2015, then an additional 470,000 global acres of footprint will be reduced.

In discussion, Ms. Weisz noted that Sonoma County has a landfill that generates electrical power from methane capture, and Marin County would like to follow their lead. There was a great deal of community support in Sonoma County for this project, and that landfill supported the community direction. Mr. Hess noted that 15 years ago the Air District adopted a regulation that all gases generated at landfills must be collected, burned or abated. The US Environmental Protection Agency (EPA) following that action adopted a similar rule for landfills. The issue of converting landfills from the process of burning methane emissions to generating electricity is under discussion at this time. There are about 20 landfills in the Bay Area that could be candidates for generating electricity from methane gas burned in internal combustion engines. The total amount of electricity that could be generated is estimated at 20MW. This could power 20,000 homes, reduce GHGs and displace some power plant emissions. However, flaring methane emissions at landfills is less polluting than combusting such emissions in internal combustion engines. Staff is examining the potential impact of a 20% increase in NOx emissions from internal combustion engines (ICEs) under a methane capture scenario. The relationship between limiting NOx- or VOC- has an influence on this question, as NOx has a more important relationship to ozone generation in the Bay Area.

On another level, some of the constituents of methane gas—ranging from sulfur to extant compounds from silica—can be a problem for internal combustion engine contamination as well. District staff are working with the Ox Mountain Landfill for a demonstration program for methane gas clean-up and combustion in clean burning engines, as well as after-treatment processes. Cost benefit questions raised by the Redwood City Landfill regarding engine wear are also under discussion. Marin County could partner with the landfill staff at Ox Mountain to use their technology that extends the life of diesel engines. The cost-benefit issue concerns the break-even point in this waste management/air quality relationship.

Mr. Hess indicated that staff is preparing a White Paper on this entire matter, which addresses the various trade-offs that are perceived at the present time. This could be reviewed by the Committee at a future date. He added that a number of key agencies throughout the state met yesterday with District staff on this issue and that the discussion is pending in other regulatory contexts as well.

Ms. Weisz noted that more recently the CWP has emphasized GHGs, and its air and climate section has expanded its pollutant coverage beyond the more standard categories related to criteria pollutants and ambient air quality. The CWP looks at impacts on GHG emissions and cross-references other areas in the CWP in terms of public transit, bicycle usage, mixed-use housing, renewable energy sources, and fossil fuel use reduction. Other components examine climate change impact mitigation on the community in a broader sense, such as projected rise in sea level and where to plan for development near wetland areas. In that section of the CWP, storm surges and flood potential are specifically addressed.

In reply to a question on how the District might be helpful to other jurisdictions in this capacity, Ms. Weisz stated that the District could provide assistance in the air quality elements of other County general plans that may be revised in a similar manner. If the District is taking up climate change as an issue, this will spread the word to other entities. The air and climate section of the CWP might itself become a reference resource, and the District might consider the concepts in that section and make it broadly available to other jurisdictions. Marin County is a high consumer of resources but the impacts from the use of those resources do not have a major impact on the County. The County imports many products and exports considerable garbage, except for what goes to the Redwood Landfill. The County has no refineries, enjoys an ocean breeze, and has few air quality issues that stem from transportation. Mr. Hess added that many Marin County residents use Golden Gate Transit, clean vehicles, hybrid buses, and ferry boats. The County has also adopted a wood smoke ordinance. Dave Vintze, Air Quality Planning Manager, indicated that District staff is preparing draft air quality element guidelines for local jurisdictions to use, and will review what Marin County has done in terms of GHGs.

Chairperson Hayes directed the Committee to review the air and climate element in the plan, and he asked Mr. Vintze to share the draft, when it is ready for comment, with the Committee. Chairperson Hayes added that in terms of the Attorney General letter that was sent to Orange County, the Committee should consider where the GHG issue can be included in California Environmental Quality Act (CEQA) guidance as well. Mr. Vintze replied that staff is drafting new CEQA guidelines, although the identification of a significance criterion for these is unclear as well. This is important because recent court decisions require the agency to justify significant thresholds based on substantial evidence.

5. Discussion of Committee Carbon Footprint. Chairperson Hayes presented a draft document entitled “Carbon Footprint Analysis: BAAQMD Advisory Council Air Quality Planning Committee.” It sets forth a framework, based on the World Resources Institute calculator, for evaluating the carbon footprint of the Committee, based on vehicle miles traveled to and from meetings, electricity needs in attending Committee and Council meetings, and air travel to the A&WMA conference. It is unclear how to identify the energy demand for the Board Room for this meeting, and staff can assist the Committee in determining this. In calculating the cost of offsetting carbon emissions, the current rate is \$5.50 dollars per ton of CO2 equivalent. An initial estimate for the Committee members is \$12.20 a year. Different websites provide calculators for this estimate. Mr. Kurucz noted he had performed this calculation on two different websites, and found that one had many default settings, while another was considerably more complex with specific fields to fill in. The Committee reached consensus that it wanted to perform this calculation for the Committee, and would contribute data on round trip mileage to and from Committee and Regular Council meetings. Mr. Hess indicated he would provide information on the energy usage for the Board and adjacent conference room.

6. Committee Member Comments/Other Business. Mr. Glueck stated that he spoke with a consulting firm that has developed an alternate approach to energy generation that uses hydraulic cylinders underneath road plates at bridges and elsewhere to produce electricity. The Committee agreed to consider this technology at a future meeting.

Chairperson Hayes directed that at the next meeting the Committee would receive an update on the staff’s development of guidance for local plans and CEQA, and also on the White Paper on methane capture at landfills.

Dr. Holtzclaw stated he would present a paper at the A&WMA conference with recommendations on how to evaluate pedestrian and bicycle projects for eligibility and credit under the Carl Moyer program. Ms. Drennen expressed her interest in receiving a copy of the paper and to hear this presentation at a meeting of this Committee as well.

7. Time and Place of Next Meeting. 9:30 a.m., Wednesday, August 9, 2006, 939 Ellis Street, San Francisco, CA 94109.

8. Adjournment. 11:42 a.m.

James N. Corazza

James N. Corazza
Deputy Clerk of the Boards