

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Clearly define the baseline and policy scenarios & attribute benefits and costs of regulation appropriately.	6.1.1	<p>Establish a consistent definition of the baseline and exactly what changes are attributed to each policy scenario.</p> <p>For AQMP, the preferred recommendation is:</p> <ul style="list-style-type: none"> • remove TCM costs. • remove congestion impacts from REMI analyses. <ul style="list-style-type: none"> - remove congestion benefits. - Clarify the exclusion of emissions reduction-related benefits (health, visibility & material) that are results of TCM implementation. <p><u>Alternatively</u>, if SIP-committed TCMs are to be analyzed as part of AQMP:</p> <ul style="list-style-type: none"> • assume non SIP-committed TCMs in baseline. • Include costs and benefits of SIP-committed TCMs . 	<p><i>Agree:</i> The 2012 AQMP socioeconomic assessments included two analyses: with and without SIP committed TCMs. A policy decision was made two decades ago that the AQMP would include the costs of SIP committed TCMs to present the total plan costs and benefits. Since TCMs have significant costs with minimal emission reductions, including the TCM costs without the congestion benefits will skew the results.</p> <p>Arguments can also be made to exclude the costs and benefits for SIP committed TCMs, since they are part of the RTP and such costs and benefits are analyzed by SCAG.</p>	<p>For consistency, the 2016 AQMP will, in consultation with SCAG, contain cost and benefit analysis for both with and without SIP committed TCMs. When analyzed, TCM congestion benefits will be listed separately for tracking purposes. Staff will request SCAG to provide traffic model outputs with and without SIP committed TCMs.</p>	<p>Implementation Schedule: 1st Quarter, 2015 Resource Impacts: SCAQMD and SCAG staff time</p>
Have a strategy for updating literature for benefit analysis.	6.1.2	<p>Institute a systematic process to review recent publications in specific areas and determine which ones are relevant to its socioeconomic assessments. At the minimum, the SCAQMD should examine or review articles/documents periodically (e.g., every 3-5 years) for the important elements of the recent analyses (e.g., Value of Statistical Life studies, epidemiological studies, USEPA job impact studies).</p> <p>Technical Advisory Group should lead effort & suggest relevant literature to staff.</p>	<p><i>Agree</i></p>	<p>Will implement Abt's recommendations for the 2016 AQMP through contract studies for key subject areas. Studies & results will be reviewed with STMPR and AQMP Advisory Groups.</p>	<p>Implementation Schedule: Issue RFP in Winter, 2014/15 Resource Impacts: \$150,000 contract studies</p>

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Improve methodology of health benefits transfer and valuation.	6.1.3	Benefits transfer needs clear discussion about: * CR function that relies on non-local studies * Income elasticity and the use of it to adjust benefits intertemporally for income growth; adjustments across sub-regions not recommended * Choice of real income year/inflation factors * Choice of discount rate; a range of rates is recommended with sensitivity analysis	<i>Agree:</i> 2007 and 2012 AQMP retained consultants to perform the review and provide recommendations which were subsequently presented to STMPR and AQMP Advisory Groups.	For the 2016 AQMP and onwards, staff will review and document more completely the process by STMPR and AQMP Advisory Groups and how recommendations are derived for identified subject areas. Staff will perform sensitivity analysis for key variables for the 2016 AQMP and key rulemakings.	Implementation Schedule: Incorporate into the 2016 AQMP work plan on an appropriate schedule Resource Impacts: SCAQMD staff time
Continue to appropriately consider useful life of pollution control equipment.	6.1.4	Review rules to ensure that compliance deadlines are set such that control equipment is not required to be replaced before end of useful life; if equipment has to be replaced, account for the value of the equipment required to be replaced as a cost of the rule.	<i>Agree:</i> Where applicable staff considers equipment life on a case by case basis and attempts to avoid stranded assets; in cases of stranded assets, equipment replacement costs and salvage values are included in the analyses, e.g Rule 1421.	Continue to review and evaluate data and methodologies for estimating equipment life and also prepare better documentation for policy recommendation.	Implementation Schedule: 4 th Quarter 2014 and ongoing Resource Impacts: Minimal
For cost-effectiveness analysis, if AQMD continues using DCF, also conduct separate analysis using LCF.	6.1.5	AQMD's C-E estimates cannot be compared with most other agencies/org's that use LCF. Choice of DCF vs LCF does not affect ranking. Include LCF analysis in an appendix.	<i>Agree:</i> Concur that DCF vs LCF does not affect ranking of control measures. DCF is used for consistency purposes to be able to compare with previous cost-effectiveness values.	Will present both DCF and LCF methods for AQMP and rulemakings. Will provide more explanation about choice of discount rate. Will prepare a technical appendix to explain the difference between DCF and LCF methods as part of the 2016 AQMP socioeconomic assessment.	Implementation Schedule: 4 th Quarter 2014 and ongoing Resource Impacts: Minimal
Continue using REMI for economic impact analysis, but also evaluate REMI vs. alternative modeling tools.	6.1.6	Recommend to continue using customized REMI model, with an updated review of the parameters and assumptions.	<i>Agree:</i> This is one of the purposes of the current review to ensure the best tool is used. The comments related to REMI assumptions on non-market benefits need to be addressed by REMI. <i>Agree:</i> Periodic review of available	Will perform periodic review of latest socioeconomic assessment tools to enhance staff's capability to assess impacts.	Implementation Schedule: 2015 Resource Impacts: \$50k

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
	6.1.6 (cont.)	<p>Collaborate with USEPA to launch a modeling forum to evaluate REMI versus alternative modeling tools (as part of outreach effort).</p> <p>Initiate research task to evaluate relative weighting (importance) of air quality changes compared to other area specific amenities.</p> <p>Evaluate the proper scaling of estimated air quality benefits to be consistent with REMI and with the literature on the relative contributions of environmental and other amenities to the relative attractiveness of different areas.</p> <p>Over longer term, evaluate REMI's logic for incorporating amenities using the migration equation vs migration linkages to the equilibriums in labor and housing markets.</p>	<p>models and possible improvements to REMI is appropriate</p> <p><i>Agree:</i> Additional research is appropriate to determine if further refinement is possible and if appropriate, work with REMI to analyze further.</p> <p><i>Agree:</i> (Same as above)</p> <p>Requires further discussion with REMI since it represents a fundamental change to the model structure</p>	<p>Work with REMI to review model assumptions, in particular migration linkages related to modeling amenity within REMI. Analysis of available models for SCAQMD's purpose will be conducted every 3 years.</p> <p>Will initiate the review and present findings to STMPRAG.</p> <p>Based on the review above, staff will, in consultation with STMPRAG, potentially conduct sensitivity analysis to assess the variations.</p> <p>Work with REMI and discuss with STMPRAG and report back to Board</p>	<p>Implementation Schedule: Periodically to coincide with future AQMP cycles. Resource Impacts: \$50k</p> <p>Implementation Schedule: 2015 Resource Impacts: \$25k</p> <p>Implementation Schedule: 3rd Quarter 2015 Resource Impacts: \$25k</p> <p>Implementation Schedule: Mid-year 2016 initiate work Resource Impacts: unknown</p>
Expand welfare analysis.	6.2.1	Pay attention to climate change health effects. Include ecological benefits and damages to welfare associated with climate change in the literature review process and also as a future consideration to be included in socioeconomic assessment.	<i>Agree:</i> GHG co-benefits are currently included in the cost analysis as avoided costs based on the CARB auction price. To include ecological and welfare co-benefits from the AQMP on climate change will have to be a long-term goal.	Where practical, continue the existing practice to reflect the concurrent impacts of GHG emissions in the socioeconomic analysis.	Implementation Schedule: TBD Resource Impacts: TBD

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Have a better EJ definition and expand EJ analysis; conduct more screening analyses; explore distributional analysis.	6.2.2	Review & use appropriate EJ screening tools/methods to identify vulnerable populations & locations and examine whether the regulations worsen or improve their current status. Review recent studies on distributional benefits analysis--visual displays, sub-group specific summary statistics, regression techniques, inequality indices.	<p><i>Agree:</i> Abt lists 6 EJ screening tools for identification of vulnerable communities, and a number of methods/tools for distributional analysis for us to evaluate.</p> <p>The recommended screening tools provided by EPA are similar to OEHHA's CalEnviroScreen. However, the latter is a more comprehensive program for the E.J. analysis than tools such as RSEI. Indications are that all existing tools have inherent advantages and limitations.</p> <p>There is a UCLA proposal submitted by Prof. Paul Ong (UCLA) on enhancing our EJ analysis for the AQMP.</p>	Proceed with a contract study on how to improve and use CalEnviroScreen model and other tools to augment current EJ analysis.	Implementation Schedule: Issue RFP in Winter, 2014/2015 Resource Impacts: \$50k-\$75k
Ensure control costs of new regulations include estimate of retrofitting existing controls. Clearly cite and include all sources of control cost estimates.	6.2.3	<p>Include underlying sources used to estimate a range of control costs, or at least refer to the staff report that has more in-depth discussion.</p> <p>Setup mechanism to monitor & evaluate new methods to estimate control costs. Cost estimates should be validated with other cost data, published literature, and expert opinion. Discuss with EPA how cost analyses should be prepared for broad regulations.</p>	<p><i>Agree:</i> As currently formatted, cost estimates are contained in the staff report, which is released much earlier than the socioeconomic report.</p> <p><i>Agree:</i> The staff report provides early review and feedback from stakeholders regarding the cost assumptions.</p> <p>Costs are derived from information gathered from equipment manufacturers, engineering staff, field visits, and other stakeholders.</p>	Will provide more explicit reference in the socio report to the staff report on the cost analysis. Staff report will better document and add clarity on assumptions used for cost estimates. Will consult with US EPA and other information on cost analysis as suggested.	Implementation Schedule: 4 th Quarter, 2014 and ongoing Resource Impacts: Minimal

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Complement REMI analysis with partial equilibrium models for smaller scale sectors than REMI provides; additional small business analysis. Analyze cumulative effect of all rules that affect an industry.	6.2.4	<p>Use partial-equilibrium models of affected industries (e.g., RFF's Haiku) so as to examine regulatory impacts at a small scale for which REMI is not suitable.</p> <p>Additional small business analysis that may be qualitative, such as industry-specific studies, case studies, and surveys.</p> <p>Specify baseline forecast to include rules that are already in place.</p>	<p><i>Agree:</i> Concur with the consultant that small scale socio impact analysis (i.e., less than \$1 million per year) is currently not performed well by REMI. Currently, staff performs only qualitative analysis in these situations.</p> <p><i>Agree:</i> Similarly, small business impact analyses are can be enhanced.</p> <p><i>Partially agree:</i> However, it is not clear from Abt's recommendation how far back to look at cumulative impacts affecting the industry, and if it is possible to include "all rules" since data may not exist.</p>	<p>Conduct a contract study to develop methodology to perform small scale impact studies where REMI is limited and explore other tools for small business or small scale impact analysis.</p> <p>Perform a pilot study based on consultant recommendation for a district proposed regulation that impacts primarily small businesses. Provide a third-party review on the study. Based on lessons learned from the pilot study, staff will formulate a standardized approach to assess small business impacts in the future.</p> <p>Conduct a contract study to develop methodology to better address cumulative cost impacts to an appropriate and practical degree.</p>	<p>Implementation Schedule: 2nd Quarter 2015 Resource Impacts: \$150,000</p> <p>Implementation Schedule: Beginning 2015 Resource Impacts: TBD</p> <p>Implementation Schedule: 2017 Resource Impacts: TBD</p>
Improve uncertainty analysis.	6.3	Provide confidence intervals for the point estimates where possible; conduct sensitivity/scenario analyses to estimate the lower and upper bound of the impact; and provide detailed qualitative discussion for unquantifiable uncertainties. Abt gives examples for BenMAP, VSL, congestion relief, control costs, equipment life, discount rate, unquantifiable costs/measures, jobs.	<i>Partially Agree:</i> Abt cites 2007 AQMP socioeconomic assessment for sensitivity analysis to estimate unquantifiable control costs. However, unquantifiable control costs stem from the "black box" of future unknown technologies.	Qualitatively discuss uncertainty at minimum. Will not be able to model every single variable. Can run sensitivity analysis for control costs and health benefits. Will consider sensitivity analysis using different discount rates or other factors as appropriate.	Implementation Schedule: Incorporate into 2016 AQMP schedule Resource Impacts: Potentially significant depending on the number of scenarios

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Redesign documentation and reporting to consider different audiences and to increase transparency.	6.4	<p>Documentation-- Include three types of documentation: a methodology guidebook, a summary for laymen and a detailed report with an informative executive summary for a technical audience.</p> <p>Reporting-- Clearly list the critical inputs. Explain/justify data sources, methodologies, assumptions, rationales used throughout the report, especially those they are "non-standard" or require the analysts' judgments, avoid false precision of results by rounding or expressing as percentages.</p>	<p><i>Agree:</i> The current report structure, executive summary, main report, technical appendices, is meant to address various needs of the interested parties.</p> <p><i>Agree:</i> Staff is open to redesign the report format, type and level of information presented.</p>	Will attempt to implement the consultant recommendations for the 2016 AQMP to update REMI methodology document, document all input parameters, and restructure the report for clarity. Based on the feedback, the revised report organization will be implemented for rulemaking as well.	Implementation Schedule: 1 st Quarter, 2015 for rulemaking and incorporate into AQMP schedule for 2016 AQMP Resource Impacts: SCAQMD staff time
Improve transparency.	6.5.1	District should continue doing socioeconomic analyses with support from external consultants when necessary. STMPRAG should have more important role: technical experts, formal involvement similar to EPA's Science Advisory Board (SAB), review major rule assessments & key topics. Submit charge questions to group, get public formal responses, make public actions by the group.	<i>Agree:</i> STMPRAG is currently not involved in specific rulemaking; however the methodology or assumptions developed for the AQMP under its advice are continued to be used for rule development.	Will expand external advisory review for the 2016 AQMP and future rulemaking where cost effectiveness exceeds the AQMP threshold for VOC or NOx. Will review EPA's SAB process.	Implementation Schedule: 1 st Quarter, 2015 and ongoing Resource Impacts: \$100k+

Summary of Abt Recommendations & SCAQMD Staff Response

Recommendation	Section	Description	Staff's Response/Comment	Staff's Recommended Action	Implementation Schedule/ Resource Impact
Strengthen public participation through outreach.	6.5.2	Continue and expand current outreach efforts to strengthen public participation--do more educational outreach about socioeconomic assessments and involve stakeholders in multiple stages of socioeconomic assessment via surveys, interviews or roundtables.	<i>Agree:</i> Outreach and stakeholder input are an important part of the AQMP and rule development process.	Will expand the current CEQA scoping meeting to include socio scoping meeting to identify industry key socioeconomic issues and potential alternatives. Commit to at least 45 day review period for the draft socio report for a SIP related rule or 60 days for AQMP and provide response to comments Will enhance narrative of industry affected including facility profile, state of economy, recent regulations, etc.	Implementation Schedule: 1 st Quarter, 2015 Resource Impacts: SCAQMD staff time
Improve transparency through external peer reviews.	6.5.3	Continue AQMP socioeconomic external peer reviews & expand reviews to major rules; reviewers should not be model developer (e.g., not by REMI); mention the reviews in the executive summary.	<i>Partially agree:</i> Expand peer reviewer in the future and will include economists from academia and other experts. Include REMI or other model developers as appropriate.	Perform external peer review for AQMP and major rules when the cost effectiveness exceeds the AQMP thresholds for a two-step hearing.	Implementation Schedule: 1 st Quarter, 2015 Resource Impacts: TBD