

SECTION 2: SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN GOALS

The Clean Air Action Plan establishes the path by which the targeted control measures will be implemented in the short-term and provides for budget planning over a five year period. In addition, these measures implemented in the near-term will establish the pathway for achieving emissions reductions over the long-term. The Clean Air Action Plan will be reviewed on a regular basis in light of progress that has been made and implementation strategies will be adjusted to ensure that the goals for the Clean Air Action Plan are achieved. Additional measures may be specified in future Clean Air Action Plan updates to maintain progress towards a complete and timely achievement of the goals. Goals will be reviewed as part of the update cycle and new goals may be added as needed.

2.1 Foundations

The following foundations support the San Pedro Bay Ports Clean Air Action Plan.

- The San Pedro Bay ports are committed to expeditiously and constantly reduce the public health risk associated with port-related mobile sources, and implement programs in the near-term that will achieve this goal.
- The San Pedro Bay ports are committed to facilitate growth in trade while reducing air emissions.
- The San Pedro Bay ports will focus on lease amendments/renewals and California Environmental Quality Act (CEQA) evaluations as mechanisms to establish provisions and requirements in leases consistent with meeting the Clean Air Action Plan goals.
- The San Pedro Bay ports will implement tariff changes as needed to affect activity changes that will result in emissions reductions.
- The San Pedro Bay ports will work with the international, national, state and regional regulatory agencies to influence changes in regulations that will implement uniform requirements to reduce emissions from port operations.
- The San Pedro Bay ports are committed to monitor, document, and report on performance of their efforts under the Clean Air Action Plan and will update the plan on a regular basis.

2.2 Standards

The San Pedro Bay ports established Standards to act as a guide for decision making. These Standards have been established at three levels (e.g. San Pedro Bay-wide for the two port complex, Project Specific for individual projects, and Source Specific for individual pieces of equipment), in order to provide direction for achieving overall long-term goals, but also to provide specificity on the emission reduction needs.

2.2.1 San Pedro Bay Standards

Since finalization of the 2006 CAAP, the ports of Long Beach and Los Angeles, along with the agency Technical Working Group (TWG), comprised of USEPA, CARB and SCAQMD staff, have been working to establish appropriate San Pedro Bay Standards. There are two components to the San Pedro Bay Standards: 1) reduction in health risk from port-related DPM emissions in residential areas surrounding the ports, and 2) “fair share” reduction of port-related mass emissions of pollutants. These components address the ports’ primary air quality goals of reducing health risks to local communities from port operations and reducing emissions to assist the region in reaching attainment with health-based ambient air quality standards.

The San Pedro Bay Standards represent the health risk and emissions reduction goals for the ports through the year 2023. The Standards apply to the emissions and health risk associated with the operation of both ports and the transport of goods that flow to or from the ports. The Standards are tools for long-term air quality planning, which will help the ports and the agencies better understand and evaluate the long-term cumulative effects of future port projects in conjunction with implementation of CAAP measures and existing regulations. It is anticipated that compliance of port operations with the Standards would, over time, effectuate substantial reductions in emissions and health risk from port-related sources, relative to 2005 levels.

Similar to a statement made in CARB’s 2006 Emission Reduction Plan for Ports and Goods Movement in California, achievement of these San Pedro Bay Standards will require concerted and cooperative effort – “Successful implementation of the CARB emission reduction plan will depend upon actions at all levels of government and partnership with the private sector. No single entity can solve this problem in isolation.”¹¹ The ports and partner air agencies are dedicated to aggressively pursue multiple mechanisms to achieve the Standards, including regulations, tariffs, leases, fees, incentives, and other means. The ports will use their mitigation authority, funds, and influence to support achievement of the Standards.

The ports’ implementation of existing CAAP measures, and CARB’s implementation of existing statewide regulations, will significantly reduce emissions and health risk from port operations. But existing measures alone are not sufficient to achieve reductions consistent with state and local air quality goals. Therefore, the ports, in adopting the Standards, commit to cooperatively work toward achieving even greater emissions reduction in the future, beyond currently known CAAP measures, by requiring implementation of additional forms of CAAP mitigation and stricter requirements when they become feasible and available, and to work with the agencies to implement aggressive emission reductions strategies within their regulatory authority.

¹¹ *Emission Reduction Plan for Ports and Goods Movement in California*, Executive Summary, ES-1, CARB, 2006.

San Pedro Bay Standards

The San Pedro Bay Standards are a statement of the ports' commitments to significantly reduce the air quality impacts from port operations. Achievement of the Standards listed below will require diligent implementation of all of the known CAAP measures and aggressive action to seek out further emissions and health risk reductions from port-related sources from strategies that will emerge over time.

Health Risk Reduction Standard. To compliment the CARB's Goods Movement Emission Reduction Plan, the ports of Long Beach and Los Angeles have developed the following standard for reducing overall port-related health risk impacts, relative to 2005 conditions:

- By 2020, reduce the population-weighted residential cancer risk of port-related DPM emissions by 85%, in highly-impacted communities located proximate to port sources and throughout the residential areas in the port region.

Similar to CARB's Emission Reduction Plan, the Health Risk Reduction Standard does not contain an interim year target. However, diesel particulate matter (DPM) reductions are highly correlated with health risk reductions and, as presented in the Emission Reduction Standard below, a significant reduction in DPM emissions, and therefore health risk, is targeted for 2014

Emissions Reduction Standard. Consistent with the ports' commitment to meet their fair share of mass emissions reductions, the ports of Long Beach and Los Angeles developed the following standards, for reducing air pollutant emissions of port-related activities, relative to 2005 levels:

- By 2014, reduce emissions by 72% for DPM, 22% for NO_x, and 93% for SO_x, and to support attainment of the federal fine particulate matter (PM_{2.5}) standards.
- By 2023, reduce emissions by 59% for NO_x to support attainment of the federal 8-hour ozone standard. The corresponding DPM and SO_x reductions in 2023 are 77% and 92%, respectively.

The ports will strive to exceed the 2014 NO_x standard of 22% reduction, potentially exceeding 40% reduction, given the forecasted cargo volumes and efforts to implement new technologies.

Development of the San Pedro Bay Standards

The forecast years of 2014 and 2023 were selected for the ports' Emission Reduction Standards in order to coordinate with the federal ambient air quality standards attainment years for the SoCAB, which are achievement of the federal PM_{2.5} standard by 2014 and attainment of the federal 8-hour ozone standard by 2023. PM_{2.5} air quality is related to DPM emissions as well as NO_x and SO_x emissions. While the ports' Health Risk and Emission Reduction Standards are focused on reducing DPM emissions, progress in reducing DPM emissions will also provide reductions in PM_{2.5} emissions, thus assisting with attainment of the federal PM_{2.5} standard.

In addition, the forecast year of 2020 for health risk reduction generally aligns with CARB's statewide goal of reducing DPM health risk from the goods movement industry by 85% below 2000 levels by 2020. The ports closely evaluated the methodology used to establish this statewide goal, and reviewed the specific emissions and health risk reductions estimated by CARB. The ports have thoroughly discussed the establishment of the Health Risk Reduction Standard with the agency TWG. Establishment of an appropriate Health Risk Reduction Standard has been especially challenging, as such a standard has never before been promulgated for a goods movement complex as extensive and with as many facilities and mobile sources as the San Pedro Bay ports. Further, none of the agencies have identified a "safe" or "acceptable" level of exposure to DPM. The ports are committed to do their fair share to support achievement of the statewide risk reduction goal, in addition to the reductions that will be achieved for communities in the vicinity of the ports.

Further, the ports recognize that the communities located closest (i.e., within two kilometers) to the port boundaries and the major transportation corridors utilized by port-related trucks and locomotives are more highly impacted by port-related emissions. Therefore, the commitment of the Health Risk Reduction Standard is to reduce the health risk in these residential communities, in addition to reducing the health risk in the residential areas throughout the entire modeled ports region¹², by 85% by 2020.

Finally, similar to CARB's Emission Reduction Plan, the Health Risk Reduction Standard does not contain an interim year target. However, diesel particulate matter (DPM) reductions are highly correlated with health risk reductions and, as presented in the Emission Reduction Standard below, a significant reduction in DPM emissions, and therefore health risk, is targeted for 2014.

¹² A 20 mile by 20 mile area, as defined by the BWHRA Tool modeling domain, consistent with the CARB's exposure assessment of the Ports (CARB, 2006a).

Assessment of Current Progress Toward Achieving the Standards

To understand the ports current progress toward meeting the Emission Reduction Standards, the ports developed emissions forecasting that assumed implementation of the CAAP and all existing regulations as of the end of July 2008, and compared existing conditions in the CAAP baseline year (2005) with forecasted conditions in 2014 and 2023, assuming a conservative estimate of projected growth in the ports' operations (i.e. 2007 Cargo Forecast). Based on this analysis, it was estimated that the ports will achieve emissions reductions of 72% DPM, 19% NO_x and 93% SO_x by 2014, compared to 2005, and a reduction of 75% DPM, 18% NO_x and 92% SO_x by 2023, compared to 2005¹³. A comparison of the Emissions Reductions Standards with the Emission Forecast is shown in Table 2.1.

Table 2.1. Comparison of Emissions Reductions Standards with Emissions Forecast

| | Emissions Reduction Standards | | Emissions Reduction Forecast | |
|-----------------|-------------------------------|------|------------------------------|------|
| | 2014 | 2023 | 2014 | 2023 |
| DPM | 72% | 77% | DPM | 75% |
| NO _x | 22% | 59% | NO _x | 18% |
| SO _x | 93% | 92% | SO _x | 92% |

In order to better understand the ports' current progress toward meeting the Health Risk Reduction Standard, the ports developed the Bay Wide Health Risk Assessment (BWHRA) Tool, a health risk assessment modeling tool. An estimate of health risk reductions in 2020 was developed by comparing health risk assessment modeling results based upon the 2005 baseline year port-related DPM emissions with health risk assessment modeling results based on an estimate of port-related DPM emissions using forecasted conditions in 2020, assuming implementation of all CAAP measures and existing regulations and a conservative estimate of projected growth in port operations.

Figure 2.1 shows the significant reduction in residential population-weighted cancer risk in the larger ports region of 74% by 2020 with implementation of presently feasible and available CAAP measures and existing emissions control regulations. Figure 2.2 shows the reduction in residential population-weighted cancer risk of 72% by 2020 in the areas within two kilometers of the port and transportation corridors serving the port with implementation of presently feasible and available CAAP measures and existing emissions control regulations¹⁴.

Both the emissions forecast and the BWHRA Tool were extensively reviewed by the agency TWG.

¹³ *San Pedro Bay Ports Emissions Forecasting Methodology and Results*, Starcrest, 2008; provided as Appendix A

¹⁴ *Bay Wide Health Risk Assessment*, 2008, Environ; provided as Appendix B

Figure 2.1: Percent Reduction in DPM-Related Health Risk Between 2005 and 2020 for Ports Region

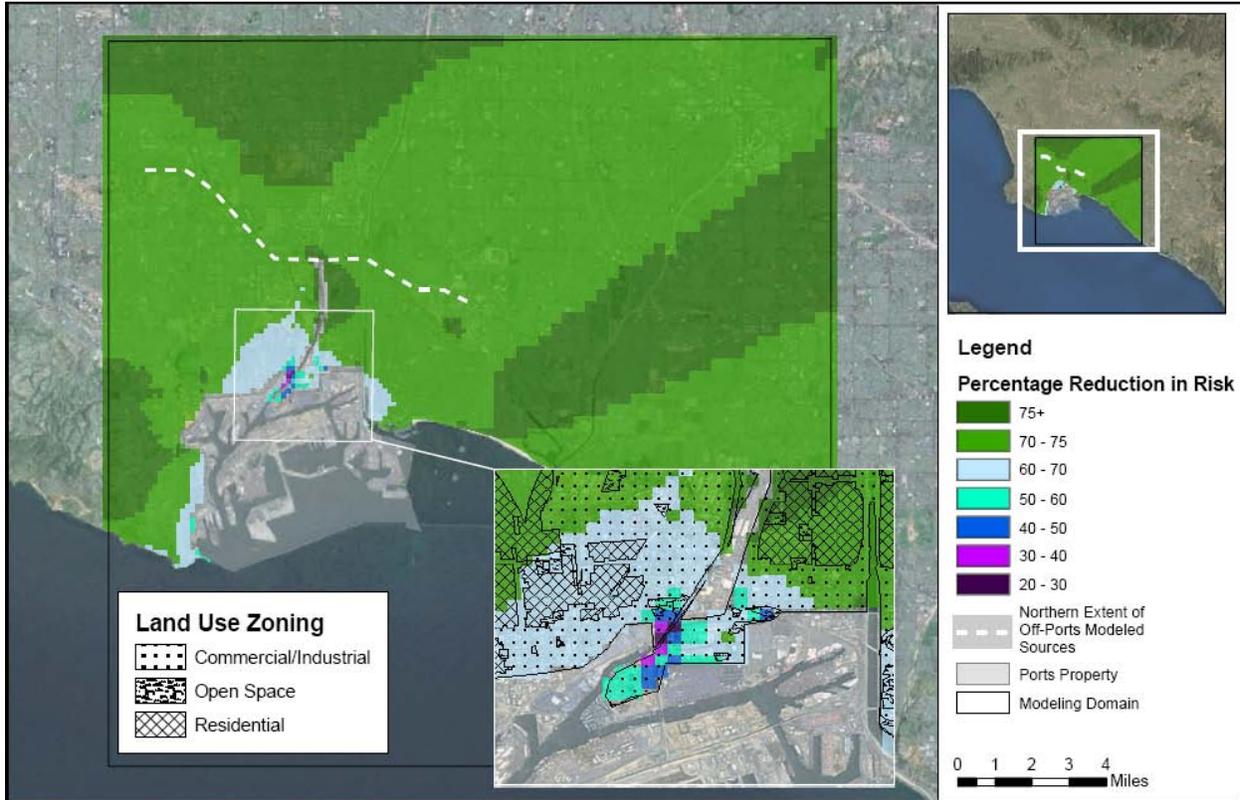
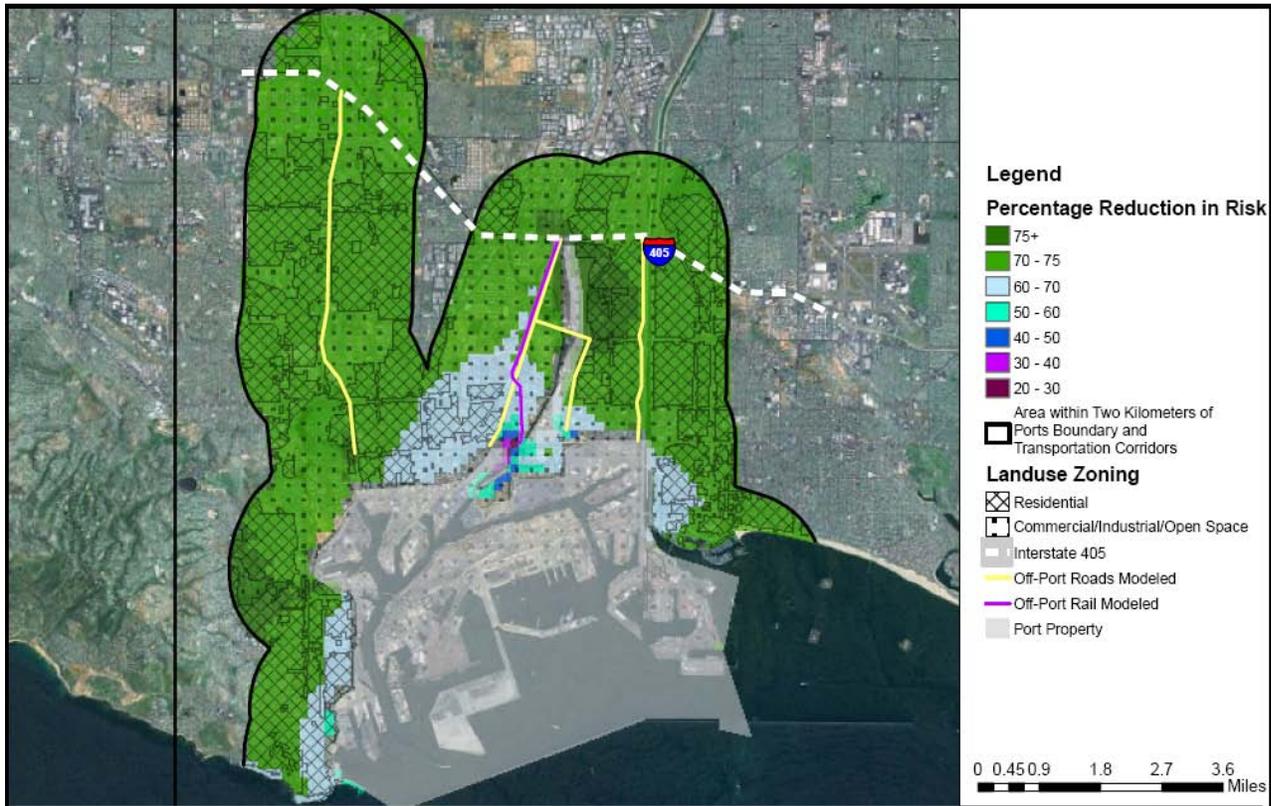


Figure 2.2: Percent Reduction in DPM-Related Health Risk Between 2005 and 2020 for Areas Located Closest to the Ports



Implementation of presently feasible and available measures and regulations would not be sufficient to achieve the Health Risk Reduction Standard of an 85% reduction in that risk or the Emission Reduction Standards for NO_x and DPM. Nevertheless, it is expected that technological improvements and regulatory actions will make feasible and available, within the timeframes of the Health Risk Reduction and Emission Reduction Standards, additional CAAP measures whose implementation along with emission control regulations would achieve the Standards' goals. Such additional CAAP measures can only emerge if there are concerted efforts by the ports, regulatory agencies, and industry stakeholders to develop them. It must be emphasized that federal, state, and local air quality agencies will also play an essential role by identifying and pursuing future regulatory measures that will reduce emissions above and beyond currently allowable levels. As these technological improvements and regulatory measures emerge, future editions of the CAAP will be revised to incorporate the new measures, and these new measures will be required in the ports' future leases and project approvals.

Although sufficient means for full achievement of the Health Risk Reduction Standard and all of the Emission Reduction Standards have not been identified at this time, the ports must move forward with port improvement projects in the near-term. These projects will significantly reduce emissions by incorporating all feasible and available technologies, as identified in the current version of the CAAP, and will ensure that the ports can at least achieve the currently forecasted emissions reductions and health risk reductions. At this time, a project will be determined consistent with the Health Risk Reduction Standard if it meets the Source Specific Performance Standards and Project Specific Standards contained in the then current version of the CAAP, which are defined in more detail later in this section. In addition, an evaluation must be conducted to identify new, available and feasible measures that can be added to the project to achieve emissions reductions beyond the existing Source Specific Performance Measures, and if so, the new measures will be included in the project. As the CAAP is revised in the future to include additional feasible and available emissions control technologies and regulatory measures, future projects will be determined consistent with the Health Risk Reduction Standard if they meet the revised CAAP requirements. The additional emission reductions from yet-to-be-developed CAAP measures on future ports' projects are expected to be sufficient to ensure that the ports ultimately achieve the Health Risk Reduction Standard's cumulative 85% DPM population-weighted average risk reduction goal by 2020 and the Emission Reduction Standards by the 2014 and 2023 timelines. A more complete discussion on the process through which discretionary actions, such as facility leases or CEQA actions, will be evaluated to determine project consistency with the Health Risk Reduction Standard, is presented later in this section.

Relationship of the Emissions Reduction Standards and the 2007 SIP

With regard to criteria pollutants, the 2007 SIP establishes emission reductions from all source categories which are necessary to attain the Federal PM_{2.5} and 8-hour ozone standards in the SoCAB. The SIP proposes different and generally greater reductions from port-related sources, specifically for NO_x, because port-related sources are generally less well-controlled than other sources. It is important to note that the SIP targets were developed prior to development of the San Pedro Bay Standard, and therefore were not informed by the extensive analysis conducted for the ports emissions forecast, the BWHRA Tool, the ports' most recent emissions inventories, and new developments following the adoption of the 2007 SIP. In the adopting resolution for the 2007 AQMP, the SCAQMD committed to continue working with the ports on port-related AQMP emissions targets.

The Emission Reduction Standards reflect the ports commitment to their fair share of reductions from port-related sources to support regional attainment. Again, it is critically important to note that achievement of these reductions -- particularly with regard to emissions from marine vessels and locomotives -- will require significant technological improvements and pursuit of regulatory strategies to control DPM and NO_x emissions.

The Emission Reduction Standards reflect adjusted reduction targets from those originally contained in the 2007 SIP for port-related sources. The adjustments were made by the ports to reflect new information not available at the time the 2007 SIP was prepared, and have been extensively discussed with the agencies. It is important to note that, with the exception of 2014 NO_x, the targets in the Emission Reduction Standards substantially meet the ports reductions for the SoCAB identified in the 2007 State Implementation Plan (SIP). However, 2014 NO_x reductions from port-related sources called for in the 2007 SIP are approximately twice the target shown in the Emission Reduction Standards. There are though two significant factors that are anticipated to occur through which the ports may move towards meeting the expectations under the SIP and potentially exceed the target identified in the 2014 Emissions Reduction Standard listed above.

1. In-Use Vessel Retrofits. As discussed below, the 2014 targets were largely established based on presently feasible and available CAAP measures and existing emissions control regulations. OGV main engines contribute 24% of uncontrolled NO_x emissions in 2014 and proven control strategies for existing vessels (beyond speed reduction and low sulfur fuel) are currently very limited or in development only. Control Measure OGV6 in Section 4 is intended, in cooperation with our regulatory agency partners, to start systematically addressing this challenging issue. For the next CAAP Update, the effectiveness and feasibility of promising OGV main engine control technologies are expected to be evaluated and demonstrated, requirements for in-use vessel retrofits using these technologies progressively incorporated into new and re-negotiated leases, and an estimate of additional 2014 NO_x reductions should be more well known.
2. Emissions Growth. Also discussed below, the emissions that ports estimated would need to be controlled in 2014 were projected from the 2005 baseline using the pre-economic crisis 2007 growth forecast. The reduction targets (which are percent reductions compared to 2005) contained in the Standards therefore assume a significantly higher level of cargo throughput and associated emissions than is now considered probable. For example, throughput in 2015 is now estimated to be 38.5% lower than forecasted in 2007¹⁵. However, to be conservative in developing long-term air quality goals, the ports have retained the higher emissions growth assumptions for this CAAP Update. As it relates to meeting SIP expectations, based on current lower growth forecasts, uncontrolled NO_x emissions in 2014 are expected to decline by approximately 20% compared to 2005 as opposed to the over 30% growth that was previously assumed. Consequently, with implementation of the strategies identified to achieve the 22% reduction for the NO_x Emission Reduction Standard, coupled with the emissions decline due to currently anticipated lower growth, NO_x emissions reductions could be 40% by 2014 which is in line with SIP expectations. Lower growth will have a similar positive effect on achievement of emission reduction targets

¹⁵ *San Pedro Bay Container Forecast Update*, The Tioga Group, Inc., p. 20, July 2009.

for other pollutants, potentially resulting in the ports achieving the targeted emissions reductions earlier than anticipated.

It should be emphasized that CARB and USEPA, having direct regulatory authority over mobile sources, are identified as the main entities in the 2007 SIP responsible for achieving mobile source reductions, including port-related reductions, through regulations, programs, or incentive funding. The USEPA's approval of the 2007 SIP is contingent upon such enforceable strategies and reduction commitments. Therefore, for port-related sources, CARB has committed to an aggressive schedule of rule making and strategy development in the 2007 SIP including measures for ocean-going vessels, harbor craft, rail locomotives, and on-road diesel vehicles, including port trucks, some of which have recently been adopted by CARB. The reductions associated with regulations adopted as of July 2008 have already been incorporated in this CAAP Update and included in the emissions forecasting. In addition to the actions that have been undertaken already, CARB has also committed to pursue a strategy with Class 1 railroads to achieve further reductions from locomotives, a strategy to reduce emissions from vessel main engines, as well as identifying additional incentive funding for port-related sources. The 2007 SIP also includes reductions attributed to the USEPA for reducing emissions from locomotives through federal funding.

Therefore, achieving the 2007 SIP reductions identified for port-related sources is predicated on a number of key assumptions, the fulfillment of which is outside the ports control or jurisdiction. These important assumptions are briefly specified below:

1. CARB's adoption of regulations and enforceable agreements
 - Since 2007, CARB adopted four regulations affecting port-related sources. These include regulations for: a) auxiliary diesel engines on three classes of ocean-going vessels while at berth (container vessels, reefers, and cruise ships); b) low sulfur fuel for ocean-going vessels' main and auxiliary engines and auxiliary boilers; c) new and in-use harbor craft; and d) on-road diesel vehicles, including port drayage trucks.
 - In addition to these adopted strategies, CARB also proposed in the 2007 SIP four additional strategies or programs for port-related sources in the 2008-2009 timeframe including: a) OGV auxiliary engines for non-regulated classes of ocean-going vessels while at berth, b) OGV main engine controls, c) a statewide OGV vessel speed reduction program, and d) a commitment by CARB to pursue re-negotiation of the existing MOU with Class 1 railroads in order to accelerate the introduction of cleaner locomotives in the SoCAB, pending USEPA's adoption of Tier 4 locomotive standards (Tier 4 standards are about 70% cleaner than existing Tier 2 standards). It should be noted that in December 2009, CARB withdrew from its regulatory development calendar a measure to control OGV auxiliary engines for non-regulated classes of OGVs while at-berth. It should also be noted that the reductions assigned to the cleaner locomotive strategy were based on the assumption that the new federal regulation for locomotives (under development at the time of SIP process) would establish Tier 4 locomotive standards which would

become effective beginning in 2012. However, the final federal regulation adopted in March 2008 by the USEPA established a 2015 date for introduction of Tier 4 locomotives in order to allow for adequate time for development and integration of advanced after-treatment technologies into these new locomotives. Therefore, with the deferral of a regulatory strategy to further control at-berth emissions and with no regulatory mechanism in place that would mandate the introduction of Tier 4 locomotives prior to 2015, reductions assigned under these SIP strategies will need to be re-examined and alternative strategies identified.

2. CARB's incentive funding programs

- The 2007 SIP includes a strategy based on additional incentive funds to achieve an additional two tons per day of NO_x reductions from harbor craft in 2014, above and beyond the anticipated reductions from the CARB's recently adopted regulation. These reductions are based on the assumption that joint funding from CARB and SCAQMD would be available and committed to the San Pedro Bay ports, with CARB being primarily responsible for achieving the targeted emission reductions.

3. USEPA's federal funding to mitigate locomotive emissions

- The 2007 SIP also calls on the federal government to do its fair share of emission reductions by further mitigating locomotive emissions since locomotives are under the USEPA's direct authority and responsibility. Specifically, the 2007 SIP relies on federal funding to achieve 10 tons per day of NO_x reductions from locomotives operating in SoCAB by 2014. This strategy in combination with CARB's proposed renegotiated MOU with Class 1 railroads, or other equivalent strategy, would achieve reductions that would be equivalent to converting all locomotives operating in SoCAB to Tier 4 by 2014. However, the USEPA has not accepted this reduction responsibility and has indicated that inclusion of this strategy in the 2007 SIP could result in disapproval of the 2014 PM_{2.5} attainment demonstration in the SIP.

It is clear that meeting the 2007 SIP targets for port-related sources depends heavily on CARB and USEPA's rulemaking activities, availability of state and federal incentive funding and development of enforceable strategies with the Class 1 railroads. It is also clear that some of the assumptions made in the 2007 SIP which were the basis for port-related emission reduction targets may have changed. To that end, the ports will work with our agency partners to help ensure their success on the regulatory front because as stated previously, "no single entity can solve this problem in isolation."

Thus, the ports have developed an aggressive Emission Reduction Standard in this CAAP Update derived from a combined understanding of the strategies that can be pursued in the near-term, and that development of state and federal regulations or programs is essential in order for these goals to be achievable. The ports are fully committed to do their fair share to help support these state and federal efforts and strive to achieve even greater reductions through existing and future CAAP strategies, limited only by the availability and feasibility of new technologies as well as ports' level of jurisdiction over its tenants and operators. Through the Technology Advancement Program, the ports are also fully committed to current and future evaluation, demonstration and integration of advanced control technologies which are anticipated to provide further reductions from port-related sources beyond existing regulations.

Given developments following the adoption of the 2007 SIP (e.g. final USEPA locomotive regulation, USEPA's rejection of funding/reduction assignment for locomotives, deferral of regulations to further control at-berth emissions), as well as uncertainty about CARB's specific control strategies for potential regulation of OGV main engines, the Emission Reduction Standard in the CAAP Update reflects the level of reductions from the 2007 SIP strategies which the ports currently anticipate will occur within the 2014 and 2023 timeframes.

For 2014, the Emission Reduction Standard reflects existing regulations (as of July 2008), CAAP strategies and assumed reductions from CARB's proposed strategy for OGV auxiliary engines at-berth for non-regulated vessel classes (i.e., 50% reduction in at-berth emissions by 2014). In the absence of CARB regulations to further control at-berth emissions, other reduction opportunities will be sought, but the ports cannot be held responsible for addressing this shortfall in the 2014 Emission Reduction Standard. As a partial offset, the 2014 Emission Reduction Standard does incorporate anticipated reductions associated with implementation of the most recent IMO standards which were not included in the 2007 SIP.

The ports have not incorporated the 2007 SIP reduction targets for locomotives, OGV main engines, or reductions associated with funding for harbor craft, in the 2014 Emission Reduction Standard. The reductions for locomotives associated with port operations weren't included since there is no regulatory mechanism which would mandate the development of Tier 4 locomotives by 2014 (i.e., earlier than required under USEPA final locomotive regulation) or accelerate the introduction of these locomotives such that an approximate 95% of locomotives operating at the ports will be Tier 4 by 2014, as discussed above. Therefore, the SIP reductions associated with Tier 4 locomotives used in port-operations do not appear achievable from this source as defined within the 2014 timeframe and are not included in the 2014 Emission Reduction Standard. However, because of the availability of Tier 3 locomotives within this timeframe (based on USEPA's final locomotive regulation), it is assumed that all off-port switchers will be emitting at the Tier 3 level. In addition, SIP reductions associated with CARB's strategy for OGV main engine controls have not been included since CARB has not committed to pursuing such a strategy, especially in view of the

recent IMO standards. Finally, for harbor craft, the additional SIP reductions associated with incentive funding are also not considered because of uncertainties regarding CARB or AQMD funding commitments and any potential additional feasible reductions beyond CARB's existing in-use harbor craft regulation which might be achievable by 2014. The ports' are supportive of CARB's overall statewide efforts to achieve the SIP targets. While technologies and strategies have not materialized for the port-sector as was expected during the development of the 2007 SIP, CARB does have flexibility in making up for any shortfall by taking advantage of cost-effective opportunities that have developed in other sectors.

As identified previously, implementation of presently feasible and available CAAP measures and existing emission control regulations thus far would achieve a 19% reduction in NO_x emissions, 93% reduction in SO_x emissions, and 72% reduction in DPM emissions by 2014 compared to 2005 emissions. When comparing this forecast with the 2014 Emissions Reduction Targets, the forecasted DPM and SO_x reductions will achieve the goals, while the NO_x reductions fall short of the Standard by a small margin of 3% in 2014. This reduction shortfall is expected to be addressed with use of Tier 3 off-port switcher locomotives, CARB's adoption of alternative control measures to make up for the reductions initially anticipated for OGV at-berth auxiliary engines for non-regulated vessel classes, and implementation of the IMO NO_x standards for vessels.

For 2023, the Emission Reduction Standard is based on the assumption that 2007 SIP reduction targets for port-related sources in 2023 are achievable within that timeframe. For instance, the introduction of Tier 4 locomotives in 2015 could allow for fleet turnover prior to 2023, and therefore achievement of the SIP reductions, predicated on the assumption that regulatory mechanisms by CARB or USEPA will be developed and implemented to achieve these reductions. It is also conceivable that CARB or USEPA may pursue additional control measures for OGVs, strengthening and/or accelerating IMO regulations that would achieve the SIP targets by 2023. In addition, the reductions in 2023 also assume a strengthening of auxiliary engine controls at berth for all vessel classes to achieve an 80% control, and implementation of the statewide on-road diesel vehicles rule adopted by CARB in December 2008. The ports are fully committed to work with USEPA, CARB and AQMD to accelerate the implementation of all feasible strategies in the 2007 SIP and strive to exceed SIP reductions where possible through cooperative efforts with the port industry and aggressive development and commercialization of new technologies.

In 2023, implementation of presently feasible and available CAAP measures and existing emissions control regulations would achieve 18% reduction in NO_x emissions, 92% reduction in SO_x emissions, and 75% reduction in DPM emissions compared to 2005 conditions. Although the currently achievable SO_x reductions are consistent with the 2023 Emission Reduction Standard, the NO_x and DPM reductions fall short of the Standard primarily because the anticipated reductions associated with future CARB and USEPA control strategies and programs have not yet been achieved. However, the ports are fully committed to work closely with agencies to identify and pursue new CAAP strategies and state and federal measures to meet the Emission Reduction Standard and close the reduction gap.

It should also be noted that over the last several years, the ports have fully participated and supported the development and implementation of port-related CARB and USEPA regulations, and actions by the IMO, as they provide a “level playing field” throughout California, the nation, and internationally. Several of these regulations were based on initiatives that the ports were already implementing as part of the 2006 CAAP (e.g., Clean Trucks Program, shore power for ships, low sulfur fuel for ships, and cargo handling equipment requirements). The ports will continue to support future regulatory efforts and strive to accelerate or exceed the reductions associated with these regulations through lease requirements or other mechanisms specified in the CAAP.

Inconsistencies in Emissions Estimations between the Ports and 2007 SIP

It should be noted that a number of fundamental differences remain in emissions baseline and forecasting methodologies between the 2007 SIP and the ports’ emissions estimates. Whereas these differences have not been addressed in establishing the Emission Reduction Standard, the ports have worked very closely with agency staff to understand the differences and are confident that these enhancements will be incorporated into the 2010 SIP, resulting in better alignment of the SIP reduction targets with the Emission Reduction Standard. Specifically, these enhancements include:

1. **2005 Emissions Baseline** - Over the last several years, the ports have spent a significant amount of resources to develop a comprehensive and detailed annual inventory of the port-wide emissions in consultation with the agency TWG consisting of USEPA, CARB, and SCAQMD. The ports’ 2005 emissions inventory represents the actual operating data for all five port-related mobile source categories (ocean-going vessels, harbor craft, cargo handling equipment, heavy-duty trucks, and rail locomotives) and emission calculation methodologies that have been agreed upon with TWG. In contrast, the 2005 port-specific inventory in the 2007 SIP is generally derived from the statewide inventory, and assumptions made to the SoCAB regional inventory (where a portion of the regional inventory is assigned to the ports), or interpolation of inventory data is conducted between various years.

2. Emissions Forecasting Methodologies – Different emissions forecasting methodologies were used in the 2007 SIP and the ports’ emission forecast. While the ports’ emissions forecast reflects the conservative 2007 cargo growth projections and methodologies approved by the TWG, the 2007 SIP relies on regional growth factors and differing methodologies to estimate future emissions.

As stated above, in order to accurately compare the Emission Reduction Standard to the SIP reduction targets, it is imperative that the inconsistencies in the emissions baseline and forecasting methodologies be reconciled. Work is already underway to resolve these discrepancies to properly identify the ports’ contribution to regional attainment goals and to use the more detailed port-wide inventory in the next SIP update.

Implementation of Existing Mechanisms to Achieve the Goals of the San Pedro Bay Standards

The ports commit to design and implement emission control strategies under the CAAP, and future amendments to this plan that will help to achieve the goals set in the Standards. Such strategies include:

- Port-wide tariffs to reduce emissions by accelerating stringent emissions standards;
- Infrastructure modifications to be implemented by the ports;
- Enforceable conditions in ports’ leases or agreements concerning terminal or other operations;
- Incentive programs, as appropriate, to produce quantifiable emission reductions;
- Other strategies to be implemented by the ports to achieve quantifiable emission reductions; and
- Redevelopment of existing ports facilities and new port projects anticipated in the CAAP, which will incorporate existing and later-revised CAAP emission reduction strategies.

Achieving the Standards will also require adopted enforceable regulations, funded incentive programs, and funded infrastructure modifications be implemented by government agencies other than the ports.

Future Implementation of Newly Feasible and Available Mechanisms to Achieve the Goals of the San Pedro Bay Standards

It is expected that ultimate achievement of the Standards will require some of the future emissions and health risk reductions to be achieved through new measures and identification of new technologies that would be required in future port tariffs or leases. However, as has been emphasized, federal, state, and local air quality agencies will also play an important role in identifying and implementing future regulatory measures that will further reduce emissions. The ports commit to work with air agencies to pursue significant additional emission reductions from port-related sources by facilitating or implementing new strategies. The ports and agencies will evaluate and support programs to:

- Implement an increasingly more efficient and cleaner transportation system to move cargo both within the ports and to/from the ports to reduce diesel emissions and exposure and reduce criteria pollutants.
- Further reduce emissions from new and existing ships through the use of cost-effective techniques.
- Further reduce emissions from port-related locomotives and rail operations, including at on-port facilities, and at the near-dock rail yard (e.g., ICTF).
- Further reduce emissions from future port projects incorporating yet-to-be-developed CAAP measures or regulations.

Methods to Evaluate Project-Specific Consistency with the Standards

As noted earlier, the ports need to move forward with near-term projects that address demand for modern marine terminals, subject to the existing requirements of the CAAP.

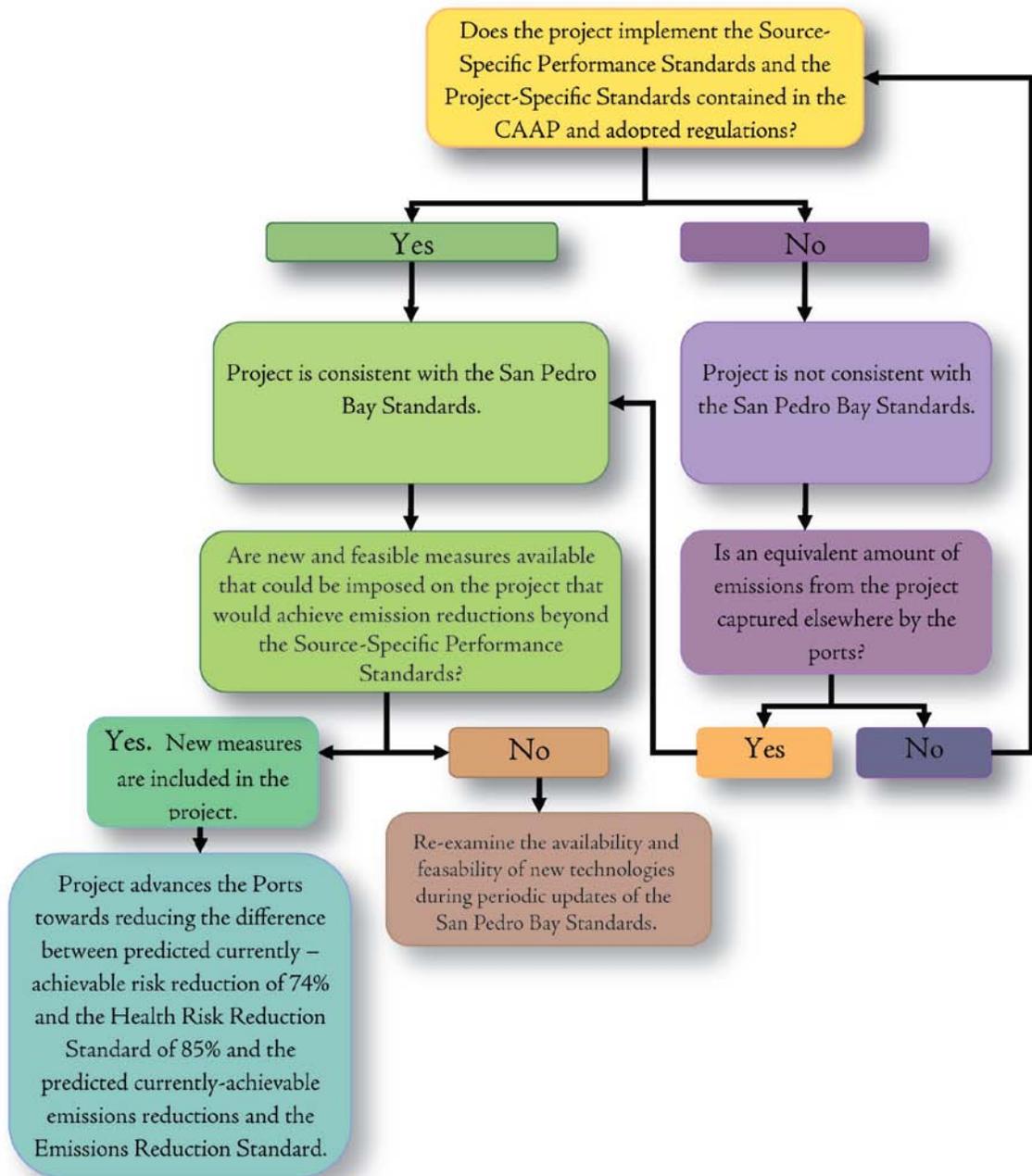
Implementation of existing CAAP measures will dramatically reduce emissions in the near-term based upon the current suite of available emissions reduction strategies. As discussed above, the emissions forecast indicates that the ports will at a minimum achieve emissions reductions of 19% NO_x, 93% SO_x, 72% DPM by 2014, at least a 74% reduction in overall DPM-related health risk by 2020, and emissions reductions of 18% NO_x, 92% SO_x and 75% DPM by 2023, based upon implementation of CAAP measures, anticipated regulatory programs and strategies that are known today. Additionally, by adopting the Standards, the ports commit to revise the CAAP to require implementation of additional emissions control measures as soon as they are determined feasible and available, with the intention of achieving the 85% risk reduction goal of the Health Risk Reduction Standard by 2020 and the 2014 and 2023 emission reduction goals of the Emission Reduction Standards. Environmental analysis of each proposed port project will include a review of newly feasible and available project-related emission control technologies, if any, that if imposed on the proposed project, would contribute to achievement of the 85% risk reduction goal of the Health Risk Reduction Standard and the various emission reduction goals of the Emission Reduction Standards.

As discretionary actions such as CEQA project approvals, leases, or infrastructure programs come before the ports' respective Boards of Harbor Commissioners, each of these discretionary actions will need to be evaluated for consistency with the San Pedro Bay Standards. The evaluation process is represented in Figure 2.3. As shown, a proposed project will be deemed to be consistent with the risk and emission reductions required by the Standards if:

- The project complies with all then-applicable air quality-related laws and regulations,
- The project will implement all applicable Project-Specific and Source Specific Standards in the then-existing version of the CAAP, and

- The supporting environmental analysis assesses any relevant potentially practicable new emission reduction technologies beyond those required under the then-existing version of the CAAP, and imposes a requirement that the project use any such technologies found to be feasible, available, and effective at reducing emissions as needed to achieve the Standards.

Figure 2.3: Evaluation of Project Consistency with the San Pedro Bay Standards



In addition, the 2008 BWHRA Tool, which was developed to help establish and to monitor progress toward compliance with the Standards, provides vital information to enable more detailed characterization of the health-risk impacts of the ports' operations in environmental review documents. The BWHRA Tool includes an exposure assessment for the baseline year 2005, and compares estimated cancer risks from that year with those estimated in 2020, assuming the ports' growth projections, implementation of adopted regulations, and implementation of additional control measures identified in the original CAAP. The BWHRA Tool assesses the cancer-risk impacts of DPM emissions from existing and anticipated mobile sources within the ports' boundaries, as well as nearby port-related truck, locomotive and vessel emissions outside those boundaries. It focuses solely on cancer risk impacts from port-related DPM emissions, as past studies indicate that those sources may be the most significant single contributors of toxic air contaminant (TACs) to regional cancer risk. To facilitate comparisons with CARB's exposure assessment of the ports¹⁶, the BWHRA Tool assesses sub-regional, rather than local, impacts of DPM on a population-weighted risk basis, and uses the same geographic area (domain) of air dispersion modeling for estimation of DPM exposure point concentrations as that used by CARB (discussed further below).

However, the 2008 BWHRA Tool was not intended to, and cannot fully, describe cumulative health-risk impacts for purposes of CEQA or National Environmental Policy Act (NEPA) review of individual port projects, for several reasons. First, the BWHRA Tool includes only DPM emissions, and includes only emissions from on-port operations and port-related activity along transportation corridors. Therefore, the BWHRA Tool cannot supply certain other information that must be included when evaluating cumulative health-risk impacts under CEQA and NEPA, such as TAC emissions from cumulative non-port sources, or TAC emissions from cumulative non-diesel sources. Second, because the BWHRA Tool was used to evaluate the effect of CAAP implementation over a broad sub-regional area, the BWHRA Tool employed certain inputs that are different than those used to model localized project-specific health-risk impacts under CEQA and NEPA. These different inputs include a more generalized representation of emission source locations, agglomerated spatial allocation of emissions sources, fleet-average versus project-specific modeling source parameters, coarser Cartesian grids to represent off-site receptors, and certain model inputs based on information available today that is likely to change in the future as scientific understanding progresses and/or new data become available. The result is that the BWHRA Tool does not provide the highly detailed information about incremental, project-specific changes at individual points of maximum health risk impact that is used to assess health-risk impacts under CEQA and NEPA. Third, because the BWHRA Tool focuses on emissions in only two milestone years (the baseline year 2005, and the target year 2020), it does not provide accurate information regarding cumulative emissions or cancer-risks in interim years, and so will not accurately describe baseline cumulative conditions surrounding port projects proposed in those interim years. Finally, the 2008 BWHRA Tool evaluates risk based on discrete DPM emissions rates established for 2005 and 2020, and held constant over the subsequent respective 70-year

¹⁶ Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, CARB, April 2006.

averaging times. In contrast, project analyses utilize emissions rates calculated for each year of a project's life. These distinct methodological differences do not support direct comparisons between the two approaches.

For these reasons, CEQA and NEPA documents prepared for port projects will determine consistency of individual proposed projects with the Standards, and will disclose information from the BWHRA Tool as part of their description of cumulative impacts, but will not rely solely on the BWHRA Tool to describe those cumulative impacts. In addition, although consistency of individual port projects with the Standards will advance achievement of the substantial cancer-risk reductions identified by the BWHRA Tool, environmental review of ports projects will not treat consistency with the Standards as determinative of whether a proposed project would make a cumulatively considerable contribution to cumulative health risk impacts, as defined by CEQA or NEPA.

Methods to Assess Progress Against Health Risk and Emission Reduction Standards

The ports will periodically evaluate progress towards achieving the Health Risk and Emission Reduction Standards, as part of the CAAP updates, and will report the results to the public and to the Harbor Commissions of each port. These updates will reflect changes to emissions attributable to new projects, adoption of new regulations, implementation of newly feasible and available emission control technologies, plus other benefits that result from the ports' actions to reduce emissions/exposure and efficiency improvements. At the time of each CAAP update, the necessity of these updates will be determined based upon continuing dialogue between the ports and their regulatory partners. Because the rate of development of regulations, technology, and other factors cannot be predicted, and because the quantitative assessment of progress towards the Standards requires significant resources, assessment updates will be conducted when one or more of the following elements are identified, and whose implementation could significantly enhance reductions in emissions and in risk:

- Significant new feasible technologies become available
- Important new regulations are adopted
- A major new project is approved which has substantial changes in the operations of a tenant from the operations evaluated in the emissions forecast and BWHRA Tool, with respect to the type, number, or distribution of sources, and these changes will have a significant effect on the overall ports-wide emissions forecasting and health risk assessment results

Achievement of the Health Risk Reduction Standard will be affected by the overall reduction in port-related DPM emissions and the relative location of emissions sources and off-port residences. In contrast, criteria pollutant standards can only be met by reducing overall port-related emissions. It is essential that local municipalities make informed land use planning decisions in the areas surrounding the ports in order to avoid aggravating potential health risk impacts. In addition, the ports will evaluate the affect of proposed project locations on community health risk impacts when considering new projects.

When conducting periodic evaluations to assess the status of the ports' efforts to reduce health risks, the ports will first evaluate emissions forecasting results, using DPM reductions as a surrogate for health risk reductions, since they are highly correlated. If significant changes in DPM reductions are expected to occur as a result of greater effectiveness of strategies or implementation of new, advanced technologies, the ports anticipate using the assessment methodology followed in the BWHRA Tool. This approach has the benefit of relying on methodologies that were developed collaboratively between the ports and their regulatory partners. Further, it provides the ports with ability (albeit limited by methodological constraints) to quantify percentage of reduction in overall port-related risk attained by implementation of the emission reduction strategies outlined in this statement. As such, it provides the ports and regulatory agencies the most direct assessment methodology for characterizing emission and risk reduction achievements. Risk reductions calculated in these periodic updates will be determined by comparison to the 2005 baseline year, and will address DPM emissions from ports' sources within the boundaries identified in the BWHRA Tool. Risk reductions will be calculated as population-weighted average risk over that same geographic domain, and will utilize 2000 census data. Updates will rely on the air dispersion model AERMOD and the health risk assessment methodologies used in the BWHRA Tool. Specific parameters used in the BWHRA Tool that may also be utilized in the periodic updates include, but are not limited to, the 2005 baseline year emissions factors, ports growth rate, meteorological data sets, and source spatial distributions.

In addition, through implementation of the Standards for port-related sources, the ports will contribute to achievement of state and federal ambient air quality standards demonstrated at air quality monitoring stations at both ports. Evaluation of port-related compliance with the state and federal ambient air quality standards will be based-upon monitoring data from the ports' six air monitoring stations. It is ultimately the goal of the ports to be able to demonstrate a downward trend in ambient air pollutants, consistent with the reductions in emissions from port-related sources and to prevent port-related violations, allowing timely achievement of the NAAQS and California Ambient Air Quality Standards (CAAQS) in advance of, or on schedule with, the attainment schedule for the SoCAB. The air quality results will be published in the ports' annual air quality monitoring reports. It is important to note, however, that concentrations at monitoring stations will include not only the ports' sources but all emissions sources in the vicinity of the monitors. Therefore, part of the evaluation to identify port-related violations of the NAAQS and CAAQS will include comparison of the concentrations observed at the ports' stations with the regional air quality trends. Further, when scientifically-proven and accepted methods for apportioning pollutants to specific port-related sources become available, the ports will use this information in their evaluations.

Summary and Conclusion

In summary, the primary purpose of the San Pedro Bay Standards is to provide a valuable tool for long-term air quality planning, aiding the ports and the agencies in their effort to achieve substantial reductions in the long-term cumulative air quality impacts of emissions from ongoing and future port operations over time. The forecasting used to develop the Health Risk Reduction and Emission Reduction Standards was based upon implementation of the CAAP through the specified implementation mechanisms and implementation of existing regulations. As long as the project proposed for approval by one of the ports meets assumptions used to develop the San Pedro Bay Standards, including all then-applicable CAAP measures and regulatory requirements, as well as any new emissions control measures determined to be feasible, available and effective at reducing emissions covered under the Standards, then the project can be deemed consistent with the San Pedro Bay Standards.

The San Pedro Bay Standards will also provide a mechanism for the ports to better communicate with the public on the long-term benefits of implementing the CAAP, and the resulting reduction in the ports' overall health risk impacts and criteria pollutant emissions over time. This communication will be further supported by the annual emissions inventory reports, the availability of the ports' air monitoring data on the CAAP publicly accessible website and release of summary information in the ports' annual air monitoring reports.

It is important to emphasize that the ports are making a commitment to achieve the San Pedro Bay Standards as described above. In addition, the ports will strive in the future to achieve greater emissions reductions and health risk reductions than are currently feasible. The San Pedro Bay Standards will push the ports to continue seeking additional emission reduction strategies until health risks to the local communities have been adequately minimized. This has already been evidenced by the ports' decisions to adopt a more stringent Clean Truck Program than originally anticipated in the 2006 CAAP; to implement the Vessel Main Engine Fuel Incentive Program to accelerate and expand CAAP measures; and to pursue the Technology Advancement Program, which will lead to greater emission reduction options in the future. That said, however, it is important to note that the San Pedro Bay Standards are not regulatory thresholds and do not place a cap on the ports' growth. Further, the San Pedro Bay Standards do not provide long-term goals beyond 2023. The ports will need to review the San Pedro Bay Standards over time and update them as necessary to incorporate the latest information on significant newly feasible and available emission reduction strategies or regulations, and also to include the latest information on the ports' cargo growth forecasts.

2.2.2 Project Specific Standards

Project Specific Standards lay out the particular requirements for individual port development projects. The ports regularly develop new facilities and redevelop existing facilities to support the changes in the market and increased demand for imports. The ports will evaluate each project against the following standards:

Project Specific Standards –

- Projects must meet the 10 in 1,000,000 excess residential cancer risk threshold, as determined by health risk assessments conducted subject to CEQA statute, regulations and guidelines, and implemented through required CEQA mitigations associated with lease negotiations.
- Projects that exceed the SCAQMD CEQA significance threshold for criteria pollutants must implement the maximum available controls and feasible mitigations for any emissions increases.
- The contribution of emissions from a particular project to the cumulative effects, in conjunction with CAAP and other adopted/implemented control measures, will allow for the timely achievement of the San Pedro Bay Standards.

As stated above, Project Specific Standards require all new projects to meet or be below acceptable health risk standards (10 in 1,000,000 excess residential cancer risk threshold). Projects that exceed the SCAQMD CEQA significance thresholds for criteria pollutants must implement the maximum available controls and feasible mitigations for any emission increases. The Project Specific Standards do not limit the types of impacts that will be considered or mitigated pursuant to CEQA. For example, while the 10 in a million project standard for cancer risks applies to residential risks, the ports will continue to evaluate and, if required by CEQA, mitigate all impacts. Additionally, the ports will evaluate and mitigate, where required, non-cancer health impacts.

The emissions from an individual project will be analyzed based upon its contribution to cumulative effects. The project contribution will be evaluated in conjunction with the CAAP and other federal, state and local adopted and/or implemented control measures to ensure that the contribution to cumulative effects will allow for the timely achievement of the San Pedro Bay Standards. As stated above, when evaluating projects, a consistency analysis with the assumptions used to develop the health risk and criteria pollutant San Pedro Bay Standards will be performed in order to ensure that the proposed project is contributing to attainment of the San Pedro Bay Standards.

2.2.3 Source Specific Performance Standards

Source Specific Performance Standards lay out particular strategies for individual port emission sources to attain the ultimate goals of the CAAP. These Source Specific Standards are considered generally feasible/achievable in most port-related applications, and therefore should be considered in all decisions related to equipment purchase or operational changes. These standards will be used by the ports in environmental reviews on both new development and substantial redevelopment projects. The ports encourage innovation and will accept equivalent strategies, once proven. The Source Specific Performance Standards are:

Heavy-Duty Vehicles/Trucks

- By January 1, 2012, all trucks calling at the ports will meet or be cleaner than the USEPA 2007 on-road engine standard.
- The ports will support development of alternative fuel infrastructure in the port-complex.

Ocean-Going Vessels

- Compliance with the Vessel Speed Reduction Program out to a distance of 40 nm from Point Fermin
- The use of $\leq 0.2\%$ sulfur MGO or MDO fuel in vessel auxiliary and main engines, and auxiliary boilers, at berth and during transit out to a distance of 40 nm from Point Fermin. By 2012, sulfur content in MGO or MDO fuel used in auxiliary and main engines and auxiliary boilers within 24 nm of the coast will not exceed $\leq 0.1\%$, in compliance with the CARB regulation.
- The use of shore power (or equivalent) for hotelling emissions implemented at all major container and cruise terminals and one liquid bulk terminal in POLA, and at all container terminals, one crude oil terminal, and one bulk terminal in POLB by 2014.

Cargo Handling Equipment

- Beginning 2007, all CHE purchases will meet one of the following performance standards:
 - Cleanest available NO_x alternative-fueled engine, meeting 0.01 g/bhp-hr PM, available at time of purchase, or
 - Cleanest available NO_x diesel-fueled engine, meeting 0.01 g/bhp-hr PM, available at time of purchase.
 - If there are no engines available that meet 0.01 g/bhp-hr PM, then must purchase cleanest available engine (either fuel type) and install cleanest Verified Diesel Emissions Control Strategy (VDECS) available.
- By the end of 2010, all yard tractors operating at the San Pedro Bay Ports will meet, at a minimum, the USEPA 2007 on-road or Tier 4 off-road engine standards.
- By the end of 2012, all pre-2007 on-road or pre-Tier 4 top picks, forklifts, reach stackers, rubber tired gantry (RTG) cranes, and straddle carriers <750 hp will meet, at a minimum, the USEPA 2007 on-road engine standards or Tier 4 off-road engine standards.

- By end of 2014, all CHE with engines >750 hp will meet, at a minimum, the USEPA Tier 4 off-road engine standards. Starting 2007 (until equipment is replaced with Tier 4), all CHE with engines >750 hp will be equipped with the cleanest available VDECS.

Harbor Craft

- By 2008, Harbor Craft home-based at San Pedro Bay Ports will meet USEPA Tier 2 for harbor craft or equivalent reductions.
- After Tier 3 engines become available between 2009 and 2014, within five years HC home-based at San Pedro Bay Ports will be repowered with the new engines.
- All tugs will use shore power while at their home fleet location.

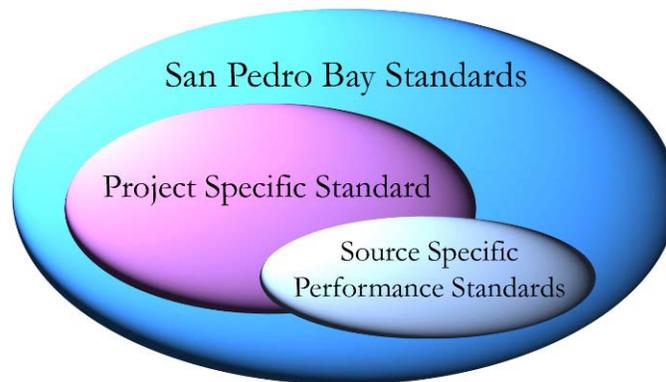
Railroad Locomotives

- By 2008, all existing Pacific Harbor Line switch engines in the ports will be replaced with Tier 2 engines equipped with 15-minute idling limit devices, retrofitted with either DOCs or DPFs, and shall use emulsified or other equivalently clean alternative diesel fuels available.
- Any new switch engine acquired after the initial Pacific Harbor Line replacement must meet USEPA Tier 3 standards or equivalent to 3 g/bhp-hr NO_x and 0.0225 g/bhp-hr PM.
- By 2007, all Class 1 switchers and by 2008, all Class 1 long-haul locomotives, use ULSD.
- By 2010, all use 15-minute idle restrictors on all Class 1 switchers and line-haul locomotives.
- By 2010, the fleet average for Class 1 line-haul locomotives entering the ports will meet Tier 2 Line Haul Locomotive Standards.
- By the end of 2015, all Class 1 switcher and helper locomotives entering the ports will meet the final Tier 4 off-road engine standards.
- By 2020, goal for 95% of Class 1 line-haul locomotives entering the ports to meet Tier 4 locomotive standards.

Relationships of the Standards

The three levels of CAAP Standards are inter-related. Compliance with the Project Specific Standards may require that an individual terminal go beyond the Source Specific Performance Standards or advance the date of compliance with those performance standards. In addition, projects that meet the Project Specific Standard associated with health risk, must also meet the criteria pollutant emissions reductions identified in the Source Specific Performance Standards, which may require them to implement greater levels of control than would be necessary to meet the health risk standard alone. Projects must include compliance with the Source Specific Performance Standards in order to achieve the ports “fair share” of regional emissions reductions, and health risk reductions, as stated in the San Pedro Bay Standard. The relationships between these three standards are illustrated below.

Figure 2.4: Relationships of the Standards



Greenhouse Gases

The ports do not include greenhouse gas emission reduction standards in the CAAP since reductions in greenhouse gas emissions from all harbor department, tenant, and shipping line activities are being addressed separately in each port’s comprehensive greenhouse gas programs currently being developed in partnership with their respective cities. As the CAAP is focused on a sub-set of the greenhouse gas emissions sources, it does not address the entire array of strategies that will be deployed to address these emissions reductions, and therefore only represents a portion of the overall picture. Through each port’s efforts with their cities, the ports will endeavor to establish comprehensive goals and strategies for achievement of greenhouse gas emissions reduction in accordance with, or exceedance of, AB 32 requirements.