

2008

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Recommended Citation

Robert S. Schuda, *Navigating Charted Waters: Port Development And Environmental Planning In The Era Of Sustainability*, 14 *Ocean & Coastal L.J.* (2008).

Available at: <http://digitalcommons.maine.gov/oclj/vol14/iss2/6>

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NAVIGATING CHARTED WATERS: PORT DEVELOPMENT AND ENVIRONMENTAL PLANNING IN THE ERA OF SUSTAINABILITY

*Robert S. Schuda**

I. INTRODUCTION

Ports are vitally important to the economies of our nation and the world. In addition to serving an important economic role, ports are uniquely positioned to undertake roles as good environmental stewards. This Article describes many examples of ports developing in ways that are sustainable and model environmental stewardship, without compromising efficiency or jobs, and demonstrates that the principles embodied in environmental planning statutes, such as the National Environmental Quality Act (NEPA)¹ and the California Environmental Quality Act (CEQA),² are compatible with, and can enhance, port economic and environmental sustainability. When the value of ports as environmental stewards is recognized, the goal of these environmental planning statutes, namely, to maximize protection of the environment in agency decision making, is enhanced.

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1. National Environmental Policy Act, 42 U.S.C. §§ 4321-4370 (2000) [hereinafter NEPA].

2. California Environmental Quality Act, CAL. PUB. RES. CODE tit. 14, §§ 21050-21177 (West 2007) [hereinafter CEQA].

II. SEA PORTS ARE CRITICAL TO THE NATION'S ECONOMY

Since our nation's founding, seaports have been a critical component of our nation's economy. That role continues today. Seaports deliver American goods to consumers throughout the world, domestically and internationally.³ They also create millions of jobs and generate billions of dollars in federal, state, and local tax revenue. For example, in 2007, U.S. seaports and marine cargo operations generated nearly \$3.2 trillion in economic activity and generated \$212.4 billion in federal, state, and local taxes.⁴ In addition, U.S. ports have made nearly \$9 billion in total infrastructure investments since 2005.⁵ With this robust activity, American seaports support the employment of more than 13.3 million people in the United States, accounting for \$649 billion in personal income.⁶ Moreover, for every \$1 billion in exports shipped through seaports, approximately 15,000 jobs are created in the United States.⁷

Seaports are the gateway to domestic and international trade, and connect large and small American businesses to the global marketplace.⁸ American seaports are responsible for moving more than ninety-nine percent of the country's overseas cargo.⁹ Each of our fifty states relies on thirteen to fifteen seaports to move its imports and exports, which total more than \$3.8 billion worth of goods moving in and out of American seaports each day.¹⁰ American seaports handle more than two billion tons of domestic import and export cargo annually. According to census statistics, the value of international goods shipped through United States seaports in 2007 was \$1.4 trillion, accounting for ten percent of the United States' total gross domestic product.¹¹

3. AMERICAN ASS'N OF PORT AUTHORITIES, U.S. PUBLIC PORT FACTS, *available at* <http://www.aapa-ports.org/files/pdfs/facts.pdf>.

4. *Id.*

5. *Id.* at 2.

6. *Id.* at 1.

7. *Id.*

8. *Id.*

9. *Id.*; *Investing in Infrastructure—the Road to Recovery: Hearing Before H. Comm. on Transp. and Infrastructure*, 110th Cong. 2 (2008) (statement of Kurt J. Nagle, President and CEO, American Association of Port Authorities), *available at* <http://aapa.files.cms-plus.com/PDFs/TestimonyandInfrastructureSurveyResults08.pdf>.

10. *Id.*; AMERICAN ASS'N OF PORT AUTHORITIES, SEAPORTS AND THE U.S. ECONOMY, *available at* <http://aapa.files.cms-plus.com/PDFs/Awareness/SeaportsAndTheUSEconomy.pdf>.

11. *Id.*

III. ALTHOUGH SEAPORTS ARE VITAL TO THE NATION'S ECONOMY, IT IS CRITICAL THAT THEY ALSO BE GOOD ENVIRONMENTAL STEWARDS

American seaports are located both in large urban areas and in smaller communities. They are also often co-located with sensitive marine ecosystems and natural resources. Because of the nature of their unique characteristics, American seaports have a responsibility to protect and preserve their surrounding environment. Recognizing these responsibilities, the American Association of Port Authorities (AAPA) created a Port Sustainability Task Force.¹² This Task Force is dedicated to promoting environmental sustainability as a business strategy among ports and establishing guiding principles for all AAPA members to recognize and implement.¹³ At its 2007 Annual Convention, the AAPA unanimously approved a resolution that encourages sustainability as a standard business practice for ports and for the AAPA.¹⁴ In the AAPA's view, if members understand that sustainability, environmental, and social concerns can be balanced with economic goals, they will undertake voluntary actions to reduce pollution in cost-effective ways that yield environmental and economic benefits to their surrounding communities.¹⁵ The AAPA has made it a priority to encourage members to shift their focus from one of regulatory compliance to one that transcends mere compliance, going the extra mile to achieve environmental goals well beyond government standards.¹⁶ The AAPA sustainability resolution is as follows:

Resolution

Embracing the concept of sustainability as a standard business practice for ports and the association
Resolution adopted October 2007 by the American Association of Port Authorities:

WHEREAS, Sustainability involves the simultaneous pursuit of economic prosperity, environmental quality and social responsibility; and

12. *Port Sustainability Task Force Comprises Industry Cross-Section*, AAPA SEAPORTS MAG., Fall 2008, at 40 [hereinafter *Port Sustainability Task Force*].

13. *Id.*

14. *Id.*

15. See AMERICAN ASS'N OF PORT AUTHORITIES, LEGISLATIVE PRIORITIES—IMPROVING AIR QUALITY IN PORT COMMUNITIES 2 (2008), available at http://www.aapa-ports.org/files/PDFs/Air_Quality.pdf.

16. *Id.*

WHEREAS, Ports hold a unique role in transportation, logistics and infrastructure development; and

WHEREAS, Ports must be financially viable in order to achieve their missions and contribute to the economic prosperity of their regions and nations; and

WHEREAS, Ports recognize that their activities may impact the environment and natural resources; and

WHEREAS, Ports recognize that they have responsibilities as members of the communities in which they operate; and

WHEREAS, Ports recognize that a long-term balanced approach is required;

NOW THEREFORE BE IT RESOLVED that AAPA embraces the concept of sustainability as a standard business practice for ports and the Association. For ports, sustainability means business strategies and activities that meet the current and future needs of the enterprise and its stakeholders, while protecting and sustaining human and natural resources; and further Recognizing that each port operates within a unique business, political, environmental and social context, we further our sustainability resolve by putting forth guiding principles for consideration by member ports. Guiding principles in accordance with Resolution D-11, ports should consider the following principles and implement as appropriate:

- 1) Communicate the goals of sustainability across the organization and allocate resource requirements for implementation;
- 2) Integrate sustainability throughout port activities and in both near-term and long-term planning processes;
- 3) Build upon and share existing sustainability best practices, keys to success, lessons learned and approaches for implementation;
- 4) Communicate and engage with internal and external stakeholders to encourage open dialogue, accountability and collaboration;
- 5) To the extent possible, use appropriate data and metrics as part of the process for implementing sustainability;
- 6) Evaluate the total life cycle costs of projects and decisions;

- 7) Recognize that sustainability is a dynamic effort requiring flexibility and continuous improvement.¹⁷

In implementing these principles, there are many ways seaports can work to preserve and enhance the natural environment. For example, seaports can control emissions by retrofitting older equipment, using cleaner fuels, improving operational efficiency, and purchasing new electric and battery-powered equipment.¹⁸ Seaports can also implement programs for reducing or eliminating soil and groundwater contamination from entering waterways around their facilities through increased tree planting, soil testing, and storm-drain filtering.¹⁹ For example:

- a. The Ports of Los Angeles and Long Beach have implemented a San Pedro Bay Ports Clean Air Action Plan that includes the use of new vehicles that run on cleaner energy sources;²⁰
- b. The Port Authority of New York and New Jersey has announced plans to be carbon neutral by the year 2010;²¹
- c. The Port of Seattle, the Port of Tacoma and the Port of Vancouver, British Columbia established the Puget Sound Maritime Air Emissions Inventory and the Northwest Ports Clean Air Strategy to reduce diesel and greenhouse gas emissions. The air emissions inventory measured the impacts of five sectors related to port and maritime operations in the Georgia Basin-Puget Sound air shed, including oceangoing vessels, cargo-handling equipment, harbor vessels, rail, and trucks and other motor vehicles;²²
- d. During a port expansion and development project, The Port of the Americas at Ponce Harbor, Puerto Rico preserved more than 500 acres of wetland habitat, implemented an education

17. *Port Sustainability Task Force*, *supra* note 12, at 40.

18. APPA, FACT SHEET, SEAPORTS AND THE ENVIRONMENT, *available at* <http://aapa.files.cms-plus.com/PDFs/Awareness/SeaportsAndTheEnvironment.pdf>.

19. *Id.*

20. THE PORT OF LOS ANGELES AND THE PORT OF LONG BEACH, SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN 7 (2006), *available at* http://www.portoflosangeles.org/CAAP/CAAP_Overview_Final.pdf [hereinafter CLEAN AIR ACTION PLAN]; *see also* Paul Scott Abbott, *Environmental Initiatives Grow As Passion for Ports*, AAPA SEAPORTS MAG., Fall 2008, at 19-20.

21. *Id.* at 19.

22. *Seattle Sees "Green" Pledge as Competitive Advantage*, AAPA SEAPORTS MAG., Fall 2008, at 29.

- program about fish habitats and regularly monitors water quality;²³
- e. In 2002, the Port of Houston Authority became the first port authority in the United States to implement an Environmental Management System [EMS] that meets the International Organization for Standardization [ISO] environmental standards;²⁴
 - f. “[A] 350,000-square-foot food facility at the Port Authority of New York and New Jersey’s Elizabeth, New Jersey, marine terminal is powered by more than 5,000 roof-mounted solar panels,” reported to reduce environmental impacts while cutting utility bills in half;²⁵ and
 - g. At Toledo, Ohio’s port, remediation and redevelopment of two brownfield sites resulted in a new marina, new cargo berths and a future maritime museum. Port officials are planning construction of several islets in Lake Erie utilizing reused materials from the maintenance of Toledo Harbor in order to enhance wildlife habitat.²⁶

Actions taken by the ports of Los Angeles and Long Beach are an example of cooperation between two extremely large ports to attain common environmental goals. These ports, which process more than forty percent of the United States’ sea freight,²⁷ adopted the San Pedro Bay Ports Clean Air Action Plan (CAAP) in 2006.²⁸ The goal of the CAAP is to cut port-related emissions from ships, trains, trucks, terminal equipment and harbor craft by forty-seven percent by 2011.²⁹ The CAAP overlays port operations in managing the flow of cargo, expanding terminal operations, and minimizing the environmental and health impacts of port operations. Under the CAAP, the ports will replace or retrofit more than 16,000 old, diesel-powered drayage trucks, by bringing them up to 2007 emission standards by 2012 and reducing their emissions by eighty percent.³⁰ The

23. *Ponce Port Plan Sparks Interest in Puerto Rico*, AAPA SEAPORTS MAG., Fall 2008, at 30.

24. Noeleen Tillman, *Management Systems Facilitate Stability*, AAPA SEAPORTS MAG., Fall 2008, at 42.

25. Abbott, *supra* note 20, at 20.

26. *Id.*

27. CLEAN AIR ACTION PLAN, *supra* note 20, at 7.

28. Abbott, *supra* note 20, at 19-20.

29. Geraldine Knatz, *Ports Respond to Challenge by Setting Higher Standards*, AAPA SEAPORTS MAG., Fall 2008, at 13.

30. *Id.* at 14.

Ports encourage vessels “to reduce speeds from 20 knots to 12 knots within 20 miles of the San Pedro Bay, and to burn low-sulfur fuel during arrival and departure.”³¹ The CAAP also calls for the use of less polluting fuels by ships, trucks, rail engines, and terminal equipment.³²

Many ports are also implementing or expanding the use of EMS, a systematic process-based approach to managing and reducing environmental risks,³³ and reviewing and improving operations resulting in better organizational performance.³⁴ By incorporating environmental considerations into an organization's decision-making structure, an EMS introduces employees to their environmental responsibilities and more efficient business processes.³⁵ An EMS makes it easier to find and fix the root causes of potential environmental problems, providing a structured approach for managing environmental responsibilities.³⁶ The EMS may also provide opportunities for collaboration with surrounding communities on a variety of activities. Upon implementation of an EMS, many entities have experienced improved overall environmental performance (even in areas not currently regulated), expanded opportunities for pollution prevention, improved compliance, and enhanced operational control and efficiency.³⁷

Each of the port initiatives *supra* is consistent with the principles embodied by the AAPA sustainability resolution.³⁸ Environmental initiatives undertaken by ports may meet a range of objectives related to sustainable management of air, land, and water quality.³⁹ For example, programs related to air quality include increased use of hybrid vehicles and cargo-handling equipment; increased use of biodiesel, ultra-low-sulfur diesel, liquefied natural gas and other alternative fuels in trucks and equipment; truck appointment systems that reduce engine idling times; increased use of electric and battery power, including electrified gantry cranes; increased use of solar and wind energy; “cold-ironing” systems that provide shore side electric power to ships at berth; and encasement systems to trap air pollutants from vessels. Similarly, programs related to land quality may include protecting and nurturing species; nourishing beaches and restoring habitat; beneficial uses of clean dredged materials; chassis

31. *Id.* at 15.

32. *Id.* at 14-16.

33. *Id.*

34. Tillman, *supra* note 24, at 42-43.

35. *Id.*

36. *Id.* at 42.

37. *Id.* at 42-43.

38. See e.g., *Port Sustainability Task Force*, *supra* note 17.

39. *Eco-friendly Initiatives Enhance Air, Land, Water*, AAPA SEAPORTS MAG., Fall 2008, at 26.

pools that reduce equipment storage requirements and improve traffic flow through marine terminals; treatment of contaminated soils and sediments; and use of recycled materials and recycling of wastes. Moreover, programs related to water quality include protecting and nurturing aquatic species; managing and treating ballast water; and storm water treatment.⁴⁰

IV. THE PRINCIPLES EMBODIED IN THE MAJOR ENVIRONMENTAL PLANNING STATUTES CAN PROVIDE IMPORTANT STRUCTURE AND GUIDANCE TO CONSIDERATIONS UNDERLYING PORT SUSTAINABILITY

Modern, navigable seaports are vital to domestic and international trade and economic prosperity. Investing resources into the infrastructure of seaports, such as rail, highways, and waterways, is imperative for meeting both consumer and economic demands.⁴¹ Air quality issues are receiving increased attention at U.S. ports as international trade continues to grow.⁴² As larger vessels enter U.S. waters bringing more cargo, ports must expand their shore side operations to accommodate this growth. As landside infrastructure expands, truck and rail traffic to and from U.S. ports also increases. While this increased trade yields tremendous economic benefits for port communities, as well as local, state, and federal governments, it can impact air quality, land quality, and water quality in and around port communities if the growth is not carefully planned.⁴³

Container volumes are expected to surge over the next ten to twenty years.⁴⁴ As that occurs, ports must expand operations in ways that increase cargo capacity while decreasing health risks for surrounding communities. The increase in seaborne trade means more ship traffic, larger cargo ships, increases in truck and train traffic, and more harbor craft and yard equipment.⁴⁵

Incorporating sustainable solutions to port growth will necessitate the careful application and consideration of sound environmental planning principles. Indeed, proper environmental planning can identify a project's potentially significant environmental effects, providing the opportunity to fine-tune the plan to meet environmental goals. Two statutes, NEPA and

40. *Id.*

41. Knatz, *supra* note 29, at 14.

42. *Id.*

43. *Id.* at 13.

44. For example, "[e]conomic forecasts suggest that the demand for containerized cargo moving through the San Pedro Bay region will more than double by the year 2020." CLEAN AIR ACTION PLAN, *supra* note 20.

45. *Id.*

its California “equivalent,” CEQA, provide an environmental planning structure for the development of sustainable ports.⁴⁶

A. The National Environmental Policy Act (NEPA)

NEPA is the “basic national charter for protection of the environment.”⁴⁷ NEPA requires all federal agencies to prepare an environmental impact statement (EIS) for “major federal actions significantly affecting the quality of the human environment.”⁴⁸ Such action potentially includes federal permitting decisions, federal rulemaking, federally approved construction projects, federal leases, and the federal financing of projects. The particular federal agency may first choose to prepare an environmental assessment (EA); a preliminary document which “[b]riefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.”⁴⁹ After considering the EA, the agency may then decide to issue either a finding of no significant impact (FONSI) or require a more detailed EIS.⁵⁰

NEPA is a procedural statute, not a statute that requires a substantive outcome.⁵¹

It does not require that agencies achieve particular substantive environmental results. Rather it requires agencies to collect, analyze and disseminate information so that the agency will not act on incomplete information, only to regret its decision after it is too late to correct. Federal agencies comply with NEPA by carrying out this procedural mandate.⁵²

Because NEPA is a procedural statute and requires a federal agency to consider the environmental effects of its actions, it provides an important framework for considering requirements embodied in federal statutes such

46. “Fifteen other states, the District of Columbia, and Puerto Rico have followed California’s lead and enacted their own environmental policy acts, often referred to as ‘mini-NEPAs.’” *Id.* at 17-18. Similar to CEQA, these laws require government decision-makers to document and consider the environmental impacts of certain governmental actions. *See* David T. Hayes, *Navigating Climate Change Issues in a Dynamic Legal Environment*, in *GLOBAL WARMING: CLIMATE CHANGE AND THE LAW* 9, 17-24 (2008).

47. 40 C.F.R. § 1500.1(a) (2008).

48. *San Francisco Baykeeper v. U.S. Army Corps of Eng’rs*, 219 F. Supp. 2d 1001, 1007 (N.D. Cal., 2002).

49. *Id.* at 1007 (quoting 40 C.F.R. § 1508.9).

50. *Id.*

51. *See* CEQA, CAL. PUB. RES. CODE, § 21050 (West 2007).

52. *San Francisco Baykeeper*, 219 F. Supp. 2d at 1007 (citations omitted).

as the Endangered Species Act (ESA),⁵³ and consulting with experts in the field. “Section 7 of the ESA requires every federal agency to ensure that any action that it funds, authorizes, or carries out is not likely to jeopardize. . . any listed endangered species or adversely modify the critical habitat of any such species.”⁵⁴ If a federal agency (action agency) determines that a proposed action may affect endangered or threatened species or critical habitat, the agency must initiate consultation with the appropriate consulting agency: the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS).⁵⁵ An action agency may initiate informal consultation with the appropriate agency.⁵⁶ If the action agency and the consulting agency agree that the proposed action is unlikely to have adverse effects on listed species or habitat, the consultation process is terminated when the two agencies concur in writing.⁵⁷ If the informal consultation does not result in a resolution, the action agency must seek formal consultation.⁵⁸ Formal consultation procedures require the consulting agency to evaluate the effects of the proposed action on the listed species and issue a “biological opinion” (BO), stating whether the action is likely to jeopardize the continued existence of the species (hereinafter a “jeopardy finding” or “no jeopardy finding”).⁵⁹

In the context of seaports, the interplay between the environmental considerations under NEPA and the consultation and species protection goals of the ESA is illustrated by the Port of Oakland’s two-part expansion project which includes dredging and new berth construction, and which was the subject of *San Francisco Baykeeper v. U.S. Army Corps of Engineers*.⁶⁰

First, the Port of Oakland and the Army Corps of Engineers proposed a jointly funded project to dredge Oakland’s shipping channels so that the latest generation of large, “post-Panamax” container ships could be accommodated.⁶¹ Without dredging to the forty-two foot deep channel to

53. Endangered Species Act, 16 U.S.C. §§ 1531-1544 (2007).

54. *San Francisco Baykeeper*, 219 F. Supp. 2d at 1007 (citations omitted).

55. 16 U.S.C. § 1536(a)(2) (Supp. 2007); *see also* 50 C.F.R. § 402.14(a) (2007). “FWS and NMFS . . . share responsibility for administering the ESA, with FWS responsible for listing terrestrial and freshwater species . . . and NMFS charged with protecting marine and anadromous species. . . .” *San Francisco Baykeeper*, 219 F. Supp. 2d at 1007 (citations omitted); *see also* 50 C.F.R. § 402.01(b).

56. *San Francisco Baykeeper*, 219 F. Supp. 2d at 1007.

57. *Id.*

58. *Id.*

59. *Id.*

60. *See id.*

61. *Id.* at 1006 n.1. “‘Panamax’ vessels are the older class of vessels whose width is constrained by the dimensions of the Panama Canal. Post-Panamax vessels are wider than those in the Panamax class.” *Id.*

a depth of fifty feet, newer ships would have to enter and exit the port “light loaded” (loaded at less than capacity so they could ride higher in the water), or wait for high tides to maneuver in the port.⁶² The reality was that only older Panamax class vessels could use the Port of Oakland efficiently.⁶³ Second, the Port of Oakland also proposed a separate project, undertaking the creation of four new berths, two new container terminals, and a shorefront park in order to meet projected demand for transportation services.⁶⁴ In this separate project, the Corp was required, pursuant to section 404 of the Clean Water Act, to issue permits for the dredging, filling, and construction on submerged lands.⁶⁵

In *San Francisco Baykeeper*, plaintiffs’ attacked the projects’ EIS on the grounds that, *inter alia*, it contained an insufficient analysis of invasive species.⁶⁶ However, the Corps had determined that the increased size of the vessels at issue would result in a substantial *decrease* in the number of vessel calls per existing berth. The larger vessels, being newer vessels, while having more carrying capacity, are also wider and more stable, and thereby typically carry only one-fourth of the ballast water carried by the older, Panamax vessels.⁶⁷ As a result, the total ballast water to be discharged by vessels calling on the Port of Oakland was expected to drop from six million metric tons in 1996 to 3.5 million metric tons in 2010.⁶⁸ The Corps concluded that the dredging and berths projects would result in mitigation of, rather than increase in, the risk of introduction of non-native species because the projects result in a reduction of the overall volume of ballast water, a vector for the introduction of invasive species, discharged into San Francisco Bay.⁶⁹

B. The California Environmental Quality Act (CEQA)

CEQA is California’s equivalent to NEPA.⁷⁰ CEQA’s fundamental policy is that California state agencies shall regulate their activities “so that

62. *Id.*

63. *Id.*

64. *Id.* at 1006-07.

65. *Id.*

66. *Id.* at 1013.

67. *Id.* at 1015.

68. *Id.* at 1015, 1022.

69. *Id.* at 1016-17.

70. CEQA and NEPA can function simultaneously. CEQA provides that when a project will require both a NEPA EIS and a CEQA Environmental Impact Report [EIR], the lead agency “shall, whenever possible, use the environmental impact statement as [the] environmental impact report.” CAL. PUB. RES. CODE § 21083.7 (West 2007).

major consideration is given to preventing environmental damage.”⁷¹ CEQA is designed to inform agency decision-makers and the public about the potential significant environmental effects of a project.⁷² The “primary means” by which the legislative goals of CEQA are achieved is the preparation of an EIR. Thus, an EIR is intended to serve as “an environmental full disclosure statement.”⁷³

In addition to this basic requirement, a CEQA EIR must identify alternatives to a proposed project, which may reduce or avoid the project’s significant adverse impacts to the environment.⁷⁴ Analysis of a reasonable range of alternatives is crucial to CEQA’s substantive mandate that significant environmental damage be substantially lessened or avoided where feasible.⁷⁵

The purpose of the CEQA process is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made.⁷⁶ The EIR serves to provide public agencies, and the public in general, with information about the consequences that a proposed project is likely to have on the environment before the project begins, and helps “[i]dentify ways that environmental damage can be avoided or significantly reduced.”⁷⁷ Thus, the EIR “protects not only the environment but also informed self-government.”⁷⁸ Any analysis that complies with CEQA requires a full and accurate description of the proposed project.⁷⁹

Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e.,

71. *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.*, 47 Cal. 3d 376, 390 (1988); CAL. PUB. RES. CODE § 21000(g).

72. Guidelines for the Implementation of the California Environmental Quality Act, CAL. CODE REGS. tit. 14, § 15002(a)(1) (2005).

73. *Rural Land Owners Ass’n v. City Council of Lodi*, 143 Cal. App. 3d 1013, 1020 (1983).

74. See *Laurel Heights*, 47 Cal.3d at 400-03; *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 564-65 (1990).

75. CAL. PUB. RES. CODE §§ 21002, 21081, 21100 (1994); CAL. CODE REGS. tit. 14 § 15002(a)(2), (3) (2003); *Laurel Heights*, 47 Cal.3d at 404-05.

76. See CAL. PUB. RES. CODE § 21151; CAL. CODE REGS. tit. 14, § 15002(a)(2); *Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm’rs*, 91 Cal. App. 4th 1344, 1354 (2001).

77. CAL. CODE REGS. tit. 14, § 15002(a)(2); *Berkeley Keep Jets Over the Bay*, 91 Cal. App. 4th at 1354.

78. *Citizens of Goleta Valley*, 52 Cal. 3d at 564.

79. *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 192 (1977); see also CAL. CODE REG. tit. 14, § 15124 (1998).

the “no project” alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.⁸⁰

Lack of such detail will deprive the public of the information necessary to inform them of what is proposed, and of the opportunity to convey comments on the impacts.

Moreover, CEQA requires ports to consider “past, present, and probable future projects producing related or cumulative impacts.”⁸¹ Ports should interpret this requirement as a directive to “afford the fullest possible protection of the environment.”⁸² Indeed, by contributing to existing significant effects, a project will be considered to have significant impacts on the environment.⁸³ Ports should not avoid a finding of significant impacts by the incremental, rather than cumulative, impacts that may occur.⁸⁴

The CEQA process has been described as “essentially pragmatic.”⁸⁵ Determining the adequacy of an environmental review involves an evaluation of whether the discussion of environmental impacts reasonably sets forth sufficient information to foster informed public participation and enables the decision makers to consider the environmental factors necessary to make a reasoned decision.⁸⁶

Under these standards, ports in California must engage in an environmental planning process that adequately identifies, analyzes, and addresses numerous potential environmental impacts, including cumulative impacts associated with port development projects. Potential congestion must also be analyzed. Impacts to storm water effluence must be analyzed to meet permit requirements for: regional water boards, the Clean Water Act, and the National Pollution Discharge Elimination System. Potential hazards must be analyzed and investigated. These potential hazards include: the release of hazardous substances, and the creation of any health hazards

80. *See County of Inyo*, 71 Cal. App. 3d at 192-93.

81. CAL. CODE REGS. tit. 14, § 15130(b)(1)(A) (1998); *see also* *Friends of the Eel River v. Sonoma County Water Agency*, 108 Cal. App. 4th 859 (2003).

82. *Citizens Assn. for Sensible Dev. of Bishop Area v. County of Inyo*, 172 Cal. App. 3d 151, 168 (1985).

83. *See Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692 (1990).

84. *See e.g., id.* at 720-24 (rejecting agency’s finding that “since the project’s emissions are relatively minor when compared with other sources . . . the project would have no significant impact on air quality”).

85. CAL. PUB. RES. CODE § 21151(West 2007); CAL. CODE REGS. tit. 14, § 15000; *Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm’rs*, 91 Cal. App. 4th 1344, 1356 (2001).

86. *Id.*

arising from the increased use and transportation of hazardous materials or hazardous waste. Noise pollution and fugitive dust emissions must be analyzed. Cumulative impacts from other expansion projects must also be addressed. A cumulative impacts analysis is particularly important in areas such as those serviced by a port, where already-existing cumulative impacts related to traffic, noise, aesthetics, sediment loading, and air or water pollution may be significant.⁸⁷

C. Application

If economic prosperity, environmental quality, and social responsibility can be achieved simultaneously, it is through the measured and consistent application of systems for measuring environmental performance. Ports hold a unique role in transportation, logistics and infrastructure development. They contribute to the economic prosperity of their regions and nations, and may impact the environment and natural resources. As the environmental planning cases above demonstrate, the principles contained in various environmental planning statutes when applied to port development, can further the principles of sustainability, and the AAPA's Resolution on Sustainability.⁸⁸ Sufficient planning can foster a long-term balanced approach to development, and achieve business strategies and activities that meet the current and future needs of ports and their stakeholders, while protecting and sustaining human and natural resources. Such planning can foster the unique business, political, environmental, and social context in which ports operate.⁸⁹ Planning can foster communication of the goals of sustainability across an organization and aid in the allocation of resource requirements for implementation.⁹⁰ It can foster integration of sustainability throughout port activities and in both the near-term and long-

87. For example, past SEIS/SEIR reviews of port improvement projects under CEQA have considered specifically: the purpose and need for the proposed project; the impact of dredging and filling; container throughput capacity, truck operations in daily trips, rail operations; the addition of employees and shifts; duration of vessel hoteling; duration of cargo handling; tug boat use; the potential of decreasing the number of vessels entering the port by increasing the accessibility of the port to larger vessels; the emissions from container ships, tugboats, container traffic, truck traffic, and on dock equipment, and, in the case of airport expansion, noise pollution. *See* Natural Res. Defense Council, Inc. v. City of Los Angeles, 103 Cal. App. 4th 268, 275-78 (2002); *Berkeley Keep Jets Over the Bay Comm.*, 91 Cal. App. 4th at 1352.

88. *See supra* notes 14-16 and accompanying text.

89. *See id.*

90. *See id.*

term.⁹¹ Such planning should account for best practices, keys to success, lessons learned, and approaches for implementation.⁹² Such planning fosters communication and engagement with internal and external stakeholders to encourage open dialogue, accountability, and collaboration. Such planning requires: the use of appropriate data and metrics, taking into account the total life cycle costs of projects and decisions, and calls for flexibility and continuous improvement.⁹³

It should be noted that environmental planning laws are becoming important tools in the measurement and potential reduction of greenhouse gasses.⁹⁴ For example, NEPA and CEQA require government agencies to consider and disclose to the public a project's projected emissions, thus generating information about sources of greenhouse gasses.⁹⁵ The procedural requirements of these statutes create incentives to minimize or offset those emissions.⁹⁶ Specifically, avoiding or neutralizing a project's contribution to greenhouse gasses can reduce the need for a full-blown review.⁹⁷ Moreover, by requiring implementation of feasible mitigation, CEQA incorporates a prohibitory element while also allowing flexibility in choosing mitigation measures.⁹⁸ Those features can reduce emissions while allowing reductions to occur in creative ways.⁹⁹

91. *See id.*

92. *See id.*

93. *See id.*

94. *See Hayes, supra* note 46, at 17-24; *see Environmental Impact Assessment 2007, Annual Report 2007, ABA ENV'T, ENERGY, & RESOURCES L.: YEAR IN REV.* 345-46 (2007) "While a consensus has emerged that environmental documents must consider climate change in some manner, debate continues as to whether and how the contributions of individual actions to the global climate should be quantitatively evaluated and mitigated." *Id.* at 345. The latter article points out that in response to climate change developments, the California Legislature barred CEQA challenges to certain transportation and levee projects on greenhouse gas related grounds until January 2010 and directed the state resources agency to adopt guidelines for mitigating greenhouse gas emissions by that date. Further, the article notes that other jurisdictions have begun to incorporate climate change into their impact review procedures. For example, the article points out Massachusetts adopted a state policy requiring developers to quantify greenhouse gas emissions and identify mitigation measures for certain projects. Further, in King County, Washington, an executive order required county departments to evaluate climate change impacts. The city of Seattle also adopted an ordinance requiring assessment and mitigation of direct and indirect greenhouse gas emissions.

95. Dave Owen, *Climate Change and Environmental Assessment Law*, 33 COLUM. J. ENVTL. L. 57, 118 (2008).

96. *Id.*

97. *Id.*

98. *Id.*

99. *See Eric B. Rothberg & Robert S. Nicksin, Latest Developments in International*

V. CONCLUSION

Proper environmental planning can and should enhance emissions control, promote energy cleanliness and efficiency, reduce or eliminate soil and groundwater contamination, reduce maritime and port-related diesel and greenhouse gas emissions, preserve wetlands, improve public awareness, increase recycling, promote environmental management, increase conservation, reduce risk, promote species preservation, incorporate environmental considerations into decision-making, expand pollution prevention and improve compliance. It is possible to grow while achieving air, land and water sustainability.

Maritime Environmental Regulation, 33 TUL. MAR. L.J. 137, 151-52 (2008). The article notes that as part of the regulatory response to California's greenhouse gas reduction law (AB 32), the California Air Resources Board has adopted a strategy of requiring port terminals to provide alternative marine power (AMP or cold ironing) and requiring ships to shut down auxiliary petroleum engines while at berth. *Id.* at 151. The article further notes that the California Attorney General is using CEQA to address greenhouse gas emissions. *Id.* at 152. The article concludes that while state agencies may not be able to directly limit greenhouse gas emissions from vessels, they may attempt to require the mitigation of such emissions from maritime transportation projects. *Id.*