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Open Space and Ecology Committee
EIR Scoping Comments on the Baylands Project

"The City takes the view that it must do at home what must be done on a state, national and global scale...Development decisions are to be analyzed so as not to overwhelm the long-term environment and in a manner that provides for sustainable development. Such sustainable development has been defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'"[1]

The Open Space and Ecology Committee views the Baylands development through the lens of environmental sustainability. Designing and building an ecologically sustainable project in the Baylands is the overarching core goal against which the Committee proposes the project and its alternatives be evaluated. Therefore, the Committee's comments will focus on a set of goals and objectives pertaining to issues of environmental sustainability in the Baylands.

Development of the Baylands presents a formidable challenge, as well as a unique and historic opportunity for transformation from a contaminated brownfield into an environmentally sustainable development. The Committee recognizes that ecologically responsible remediation and redevelopment of brownfields is an environmentally sustainable practice, and that clean up of the Baylands implements General Plan Policy 172 which states that "it is of the highest priority that contaminated lands in Brisbane be remediated."

Many aspects of environmental sustainability will be analyzed in the EIR through the CEQA process, which requires agencies to identify significant environmental impacts and to avoid or mitigate such impacts if feasible. The Open Space and Ecology Committee recommends that the EIR calculate the expected level of energy, water, waste and pollution associated with the proposed development and study how these projected impacts could be mitigated to zero. The Committee believes that mitigating to the lowest level of impact is necessary in order to ensure that any development on the Baylands is sustainable and serves the public interest by conserving resources, reducing pollution, and protecting open space.

To determine the feasibility of mitigating environmental impacts, the proposed Baylands project and project alternatives should be evaluated using sustainability metrics. Because market pricing excludes externalities and focuses only on the short term, a life-cycle costing approach should be applied, in addition to conventional market analysis, in the determination of project feasibility. Life-cycle costing aims to measure true costs and benefits over time – an essential tool for assessing sustainability.

[1] General Plan, Chapter IV.4 Environmental and Natural Resources, quoting from World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).

Although CEQA provides a standardized process and terminology for assessing environmental impacts in terms of significance, there is no set definition of significance; the determination is made by the local agency. The analysis of what constitutes a "significant" impact or a preferable alternative project rests on assumptions, either explicit or implicit, about the project's goals and objectives.

The following are the goals, objectives, issues, and principles that have been identified by the Committee as fundamental for a successful and environmentally sustainable Baylands development. The Committee recommends that the proposed project, the Community Alternative, the Renewable Energy Alternative, and any new proposed alternatives be assessed holistically in light of these aims.

I. Energy

The project should be energy neutral, i.e. the Baylands development should generate sufficient power from on site renewable sources to be primarily self-sufficient. When necessary, the project could purchase green power from the grid, while at other times it could sell excess power to the grid, resulting in net energy neutrality. The potential of the project achieving this goal should be investigated in the EIR.

Energy requirements of the Baylands development should be met through using maximum achievable energy efficiency standards, as well as passive and active renewable energy sources, in order to achieve the goal of energy neutrality.

Consideration should be given to whether the Baylands has the potential to generate renewable energy beyond the project's needs, so that the Brisbane community could reduce its reliance on energy generated by fossil fuels. The Committee recommends that the Baylands project meet the following energy related objectives:

- Minimize consumption of non-renewable energy by maximizing efficiency, utilizing locally-generated thermal and electric renewable forms of energy, and purchasing green power from the electrical grid.

- Develop a comprehensive, integrated energy plan, including a renewable energy distributed power system. Include renewable energy sources such as wind and photovoltaic solar electricity. Utilize a network of locally interconnected generators; maximize use of solar thermal water heating systems.

- Maximize use of passive solar design. Design buildings to use thermal mass to reduce fossil fuel demand and minimize energy consumption. Orient buildings so that their long axis faces south and north to the maximum extent feasible. This allows for the effective use of sunlight, and the minimal use of artificial lighting, mechanical heating and cooling. Orient streets to allow for maximum solar exposure, and stagger cross-streets to reduce wind impacts.

The Committee believes that the Renewable Energy Alternative should be studied thoroughly and compared in all respects with the other alternatives.

II. Open Space

The project should maximize open space (as distinguished from open areas), consistent with the Open Space Plan. According to Chapter VII of the General Plan, "the land use designation 'Open Space' is reserved for lands that are essentially unimproved and dedicated or proposed to be dedicated to the public for outdoor recreation and for the preservation of biotic communities..." In contrast, "open area" is defined in the General Plan as "parcels of land or portions thereof, primarily in private ownership, that serve to soften the impacts of urban development and otherwise provide primarily green areas and a feeling of 'openness' to the development pattern."

General Plan Policy 331 states to "maximize opportunities for open space and recreational uses in any land use planning for this (Baylands) subarea." Figure 8 of the Open Space Plan shows the resource protection recommendations for the Baylands open space and wetlands resources. The Baylands development should meet or exceed the goals articulated in the Open Space Plan.

The project should maximize natural areas. While much of these natural areas should be freely accessible to the public, some areas should be protected for habitat that is historically native to the area. Closeness to nature and permanent conservation of high quality open space can be compatible with carefully planned, compact development. Greenways, such as corridors of native vegetation along streams, and small nature preserves should be incorporated throughout the Baylands.

In general, the Committee supports the open space, public space and wetland configurations that emerged from the Council-initiated process that are incorporated in the Community and Renewable Energy Alternatives, as informed and modified by the following concerns and recommendations:

- Freshwater wetlands should be maximized in the Open Space areas of the plan.

- Open space designed to undergo natural change over time.

- A wetland river park with seasonal flood plain.

- Open space (specifically the wetland park) linked to San Bruno Mountain and the Bay; a progression of wetlands types, from tidal wetlands near the Bay changing gradually to upstream riparian habitat, and extending to grassland on the mountain.

- Walkways and observation platforms that bring people close to the wetlands.

- S.F. Bay native plant materials for landscaping.

- Trail corridors wide enough to serve as wildlife corridors.

- Open space woven into the development and made readily accessible to people.

- Open Space for public health and safety as a buffer between the tank farm and Icehouse Hill.

- Lagoon enhanced as a natural area with primarily passive low-impact recreational uses, and some protected habitat areas.

- Evaluation of potential project impacts on resident and migratory birds both at the river park and the lagoon.

- Study of the optimum configuration of the lagoon that would best support resident and migratory birds; analysis of the prospective re-creation of habitat for animal species that live and breed in the Baylands.

- Analysis of potential impacts of sedimentation, drainage flows, and their interaction on the lagoon and wetlands; modeling of entire drainage basin.

- Evaluate freshwater resources and impacts on the salinity of the Bay. Maintain historic salinity levels in the channel close to the Bay. Ensure that fresh water plants do not outcompete native saltwater vegetation. Study impact of fresh/salt water balance on fish, wildlife, and ecosystem.

III. Contamination and Remediation

The project should exceed minimum regulatory standards for remediation, study all methods for reducing contamination and limiting exposure, and employ a comprehensive, precautionary approach rather than rely on conventional risk assessment. The Committee recommends a multidisciplinary analysis that goes beyond minimum human exposure standards and addresses non-human impacts as well. All remediation techniques, including the use of plants and bio-remediation, should be explored in order to reduce contamination and limit exposure.

The EIR should incorporate the study by Dr. Fred Lee entitled "Adequacy of the Investigation/Remediation of the Brisbane Baylands UPC Property Contamination Relative to Development of this Property." This independent assessment of past studies of the pollutants in soil, water, and gaseous releases was undertaken to determine the public health and environmental quality implications of hazardous chemicals in the Baylands that may impact its development.

Dr. Lee noted that currently allowed hazardous chemical monitoring and regulatory programs for hazardous chemical sites consider only a small number of potentially hazardous chemicals that can be present in waste disposal areas. He highlighted the need for ongoing monitoring and independent third-party review to help ensure public health and environmental quality for the life of the project.

Further research is needed in several areas:

- Contaminants in the Baylands should be comprehensively tested and identified.

- Test storm water run-off, lagoon sediment and contamination from the Tank Farm.

- Develop a complete hydrologic model of the site.

- Study marine life in the lagoon, and the impacts of contamination on all wildlife in the Baylands.

- Remediate contaminants to the highest standard possible, regardless of the ultimate land use in the Baylands. The feasibility of alternative methods for remediation should be studied, including capping, hauling away contaminants, and bioremediation.

- Evaluate bioremediation techniques that utilize plants and biological organisms to clean up pollution and remove contaminants from soil and water resources. Bioremediation is the process by which living organisms and biological processes are employed to cleanup hazardous chemicals, destroy organic wastes, and reduce environmental risk. Wetlands use natural physical, biological and chemical aquatic processes to bioremediate polluted waters. There is a growing recognition of the restorative and purification functions performed by wetland environments, and the role that bioremediation can play in the restoration and enhancement of scarce wetland habitats.

IV. Sustainable Development / Green Building

All new buildings in the Baylands should be sited, designed, constructed, and operated to ensure resource conservation, minimize water use, waste and pollution, maximize energy and resource efficiency, and promote healthy indoor environments. LEED (for commercial construction) and Green Point Rated (for the residential sector) provide rating systems for measuring individual building construction and performance by promoting strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor air quality.

LEED and Build It Green criteria should be utilized to ensure appropriate environmental standards for each new building constructed on the Baylands. However, these systems should not limit the overall sustainability objectives for individual buildings or the Baylands project as a whole.

The Committee recommends that the Baylands project meet the following objectives:

- Each building and the resulting aggregate should be zero carbon in terms of its operation.

- Sustainable green building practices should be used that take the environment into account throughout the design and construction process. Construction materials should have high

recycled content and be recyclable, rapidly renewable, sustainably grown, and locally available.

- Create buildings and landscapes that are energy and water efficient, durable and nontoxic.

- Create landscapes that incorporate vegetation historically native to this ecological and climate zone, and that discourage encroachment of non-native invasive plants.

- Use the latest technology including computerized energy management systems to control heating, cooling and lighting systems, in order to reduce power needs and to monitor and track data related to building operation and reducing building energy consumption.

- Maximize indoor air quality by reducing pollutants. Design buildings to provide good ventilation and comfortable conditions, maintain quality lighting, incorporate daylight and views, and use low-emitting materials including paint, carpets, adhesives and sealants.

These green building practices and rating systems are necessary but not sufficient standards for assessing the sustainability of the built environment as a whole. Therefore, the Open Space and Ecology Committee recommends supplementing green building measures with other standards of evaluation. The Baylands project and project alternatives should be evaluated in the context of comprehensive sustainability frameworks, such as One Planet Living, International Ecocity Standards, LEED for Neighborhood Development, and ICLEI's STAR Index for "Sustainable" Community Development. The following is a summary of each approach.

One Planet Living

The 10 One Planet Living principles offer a framework to create model projects where people can live and work within a fair share of the planet's resources. The ten principles are:

- Zero Carbon

Achieve net CO2 emissions of zero by implementing energy efficiency in buildings and infrastructure, supplying energy from on-site renewable sources, and new off-site renewables where necessary.

- Zero Waste

Eliminate waste flows to landfill and for incineration by reducing waste generation, encouraging re-use, recycling and composting, and generating energy from waste cleanly.

- Sustainable Transport

Reduce reliance on private vehicles and reduce CO2 emissions from transport by providing transport systems and infrastructure that reduce dependence o fossil fuels, and offset carbon emissions from car and air travel.

- Local and Sustainable Materials

Transform materials supply to the point where it has a net positive impact on the environment and local economy by using local, reclaimed, renewable and recycled materials in construction and products.

- Local and Sustainable Food

Transform food supply to point where it has a net positive impact on the environment, local economy and peoples' well-being by supporting local food production that provides healthy, quality food in an environmentally beneficial manner.

- Sustainable Water

Achieve a positive impact on local water resources and supply by implementing water use efficiency measures, re-use and recycling, minimizing water extraction and pollution, and fostering sustainable water and sewage management.

- Natural Habitats and Wildlife

Regenerate degraded environments and halt biodiversity loss by protecting or regenerating existing natural environments and the habitats they provide to fauna and flora.

- Culture and Heritage

Protect and build on local cultural heritage and diversity by celebrating and reviving cultural heritage and the sense of local and regional identity.

- Equity and Fair Trade

Ensure that One Planet Living community's impact on other communities is positive by promoting equity and fair trading relationships to ensure a beneficial impact on places both locally and globally, notably disadvantaged communities.

- Health and Happiness

Increase health and quality of life of community members and others by promoting healthy lifestyles and physical, mental and spiritual well-being through well-designed structures and community engagement.

For an example of the application of these principles, please see the last chapter of the Environmental Impact Report prepared for the Sonoma Mountain Village Project.

International Ecocity Standards

The International Ecocity Standards (IES) is a project under development by the nonprofit Ecocity Builders. They define an ecocity as "an ecologically healthy human settlement modeled on the self-sustaining resilient structure and function of natural ecosystems and living organisms." The aspiration is to create a comprehensive rating system to apply not to buildings, but rather to entire cities.

The IES framework provides a diagnostic tool for cities to measure progress toward ecocity objectives. It expects to enable the user to chart a direction moving from existing conditions toward a threshold ecocity standard.

The following attributes have been identified as central to the development of the International Ecocity Standards. The draft scale ranges from -10 (unhealthy city) to +10 (healthy city). The biological and physical features in the ecocity approach include:

Access by Proximity – not accessible to complete access by foot, bicycle, transit
Air – pollutes to purifies
Biodiversity – endangered to abundant
Carry Capacity – overshoot to within the biosphere's limits
Energy – nonrenewable to clean and renewable
Food – not provided to nutritious and abundant
Resources & Materials – depletes to sustains
Soils – destroys to restores
Water – pollutes and wastes to purifies

STAR Community Index

ICLEI (Local Governments for Sustainability) launched the STAR Community Index in October 2010. Its purpose is to establish sustainability goals and guiding principles for local governments. In the next two years, ICLEI plans to develop a national rating system that will offer cities and counties a standard by which to measure sustainability and a roadmap for creating healthy, inclusive, and prosperous communities.

According to ICLEI, "STAR takes an integrated approach, addressing the three intertwining facts of sustainability – economy, environment, and society." They are working to identify and define specific sustainability goals and metrics and to set performance levels and evaluation standards.

STAR's 10 Guiding Principles are: Think – and act – systemically; Instill resiliency; Foster innovation; Redefine progress; Live within means; Cultivate collaboration; Ensure equity; Embrace diversity; Inspire leadership; and Continuously improve.

STAR's Environmental Sustainability Goals are focused on three areas:

- Natural Systems:

Natural resource planning and inventory; Green infrastructure; Land Use in watersheds; Water quality and supply; Agriculture and aquaculture; Resource lands; Biodiversity and invasive species; Ambient noise and light; and Waste minimization

- Planning & Design:

Comprehensive planning; Excellence in design; Interconnected land use; Compact and complete communities, Design for people; Housing; Public spaces; Transportation and mobility; Land conservation; Historic preservation and cultural heritage; Code barriers; and Public engagement and participation.

- Energy & Climate:

Greenhouse gas mitigation; Climate adaptation; Energy supply; Energy use; Resource efficient buildings; Alternative fuels and infrastructure; Industrial sector energy use; and Agricultural climate impacts.

LEED for Neighborhood Development

LEED for Neighborhood Development (LEED-ND) integrates the principles of smart growth, new urbanism and green building into a national rating system for neighborhood design. LEED – ND recognizes development projects that protect and enhance the overall health, natural environment and quality of life of communities. The rating system promotes the location and design of neighborhoods that reduce vehicle miles traveled (VMT) and create developments where jobs and services are accessible by foot or public transit. It also promotes an array of green building and green infrastructure practices, particularly more efficient energy and water use.

The following credit categories are included in the LEED-ND rating system:

- Smart Location and Linkage - encourages communities to consider location, transportation alternatives, and preservation of sensitive lands while also discouraging sprawl.
- Neighborhood Pattern and Design - emphasizes vibrant, equitable communities that are healthy, walkable, and mixed-use.
- Green Infrastructure and Buildings - promotes the design and construction of buildings and infrastructure that reduce energy and water use, while promoting more sustainable use of materials, reuse of existing and historic structures, and other sustainable best practices.
- Innovation and Design Process - recognizes exemplary and innovative performance beyond the existing credits in the rating system, as well as the value of including an accredited professional on the design team.
- Regional Priority - encourages projects to focus on earning credits of significance to the project's local environment.

LEED-ND projects are required to have at least one certified green building. Points are earned for additional certified green buildings within the development and for integrating green building and infrastructure practices in the project. These credits relate to energy efficiency, reduced water use, building reuse, recycled materials, and heat island reduction.

During the course of the EIR preparation the Committee recommends that the consultants study the above systems and determine which system singularly or which components in combination from several systems makes the most sense to use as an evaluative metric for sustainability in the Baylands. Some of the above metrics are more developed than others. Some are more quantifiable than others. Some are weaker than others. For instance, the LEED-ND only requires one green certified building in the project, clearly inadequate.

V. Other topics to be studied in the EIR

The Open Space and Ecology Committee recommends that the environmental review of the Baylands proposed project and alternative plans include the following:

Housing:

Consider what scale and amount of housing, if any, would be appropriate for the Baylands. Study the impacts of housing development on the current population and community patterns as well as impacts on future generations. Analyze the effect on housing of industrial operations, including the tank farm, recycling center, and rail infrastructure. Investigate the trade-offs of a residential component: what are the pros and cons from a sustainability perspective? Housing impacts might best be studied incrementally, for instance at 500 unit increments.

High Speed Rail:

The alignment for the high speed rail between San Jose and San Francisco is planned for the Caltrain right of way. Since Caltrain runs directly through the length of the Baylands, the environmental impacts of the high speed rail should be studied. Those impacts would include noise, separation, special safety requirements, animal movements, etc. Furthermore, the possibility of locating a maintenance yard for the high speed rail system in the Baylands has been mentioned. However, since no explicit plan has been put forth, its environmental impacts will need to be studied in the future if and when such a plan materializes.

Climate Change & Sea Level Rise:

Amendments to the CEQA guidelines that require analysis and mitigation of greenhouse gas emissions pursuant to SB 97 became effective in March 2010. Any development in the Baylands must minimize greenhouse gas emissions that contribute to climate change. The project should plan for sea-level rise and extreme weather events resulting from global climate change that reflect the latest scientific projections and worst-case scenarios. An increase of approximately 8 inches has already been recorded at the Golden Gate Bridge over the past 100 years, and is projected to continue rising, threatening low coastal areas with inundation and increased erosion. BCDC estimates that water levels in the Bay could rise 18" over the course of the 21st century. Other experts project even higher levels. The EIR should study implications of sea level rise for the existing landfill and for future development.

Water:

Any proposed development should quantify projected water use and analyze how it would impact the watershed for the Bay. A complete hydrologic model of the site must be developed. The project should include an integrated storm water and greywater recycling system; develop alternative water systems that utilize wells and springs, if feasible; provide for adequate reserve water storage facilities; minimize storm water runoff and ensure it is clean; and maximize water efficiency and water reuse. The EIR should study how the overlapping jurisdictions of Brisbane and the Bayshore Sanitary District affect the implementation of integrated water, storm water and sewage system. The environmental review should also investigate the impact of fertilizer runoff on waterways and wetlands, and analyze alternatives to chemical fertilizer.

Transit:

The project should offer a range of transportation choices, including walking, biking, and public transportation in order to lessen dependence on automobiles, decrease traffic congestion and air pollution, and significantly reduce the use of fossil fuels. Infrastructure should be designed for alternatives to driving, such as light rail, and should include dedicated Class 1 bike lanes and safe places to store bicycles.

Industrial Operations:

Evaluate the environmental impact of present industrial operations in the Baylands and their effect on potential development. Research the quantity of particulate matter (dirt, dust) that results from current recycling and grading operations. Examine the operation of the Kinder Morgan pipeline and tank farm, and the potential impacts of pipeline failure and emergencies on open space, wetlands resources, and public health and safety. Study the extent of contamination from the tank farm within the Baylands project, and develop a monitoring program to guard against contamination in the future.

Infrastructure:

The project should minimize the impacts of new development on the surrounding existing infrastructure. New infrastructure should protect natural features, and avoid negatively impacting natural areas, such as Icehouse Hill, wetlands, trails corridors, and wildlife corridors. The impacts of artificial light on wildlife behavior and patterns should be studied.

Additional Local and Regional Environmental Issues:

- Maintain the quality of Brisbane's San Francisco Bay views, and minimize light trespass and pollution.

- Develop a noise model to study impacts on the surrounding communities.

- Minimize waste generation both during and after construction.

- Approach the Baylands development as an integrated project; ensure provision of wetlands river park and other open spaces by coordinating implementation of public amenities with private development.

- Explore funding mechanisms for maintenance of natural areas and for monitoring of contaminants.

Conclusion

These issues, concerns, and objectives reflect the Open Space and Ecology Committee's values and vision for the Baylands. The prospective development represents both an unparalleled challenge as well as an unprecedented opportunity to leave the Baylands a healthier site than it is today. To this end, the Committee proposes that the EIR study the feasibility of maximizing renewable energy, open space, and resource conservation, while minimizing negative impacts on the local, regional, and global environment. These goals form the basis for the Committee's central recommendation that any proposed project be evaluated in light of its potential to achieve ecological sustainability in the Baylands.