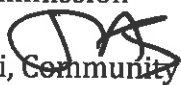


# *City of Brisbane Planning Commission*

**TO:** Planning Commission For the Meeting of October 22, 2015  
**FROM:** John Swiecki,  Community Development Director  
**SUBJECT:** Brisbane Baylands Public Hearing #4 – Air Quality, Greenhouse Gas Emissions, Energy Resources

## **Background:**

Tonight's public hearing is the fourth scheduled public hearing for the Brisbane Baylands, and will focus on addressing issues related to air quality, greenhouse gas (GHG) emissions, and energy resources. Considerations that the Planning Commission might want to take into account when making their recommendations to the City Council pertaining to environmental considerations, land use, and future development of the Baylands will also be discussed. Future hearings will continue to focus on the environmental resource topics included in the Brisbane Baylands EIR

Although this evening's hearing focuses on air quality, GHG, and energy resources, it is important to understand that the EIR and pending planning applications are the subject of each public hearing, including tonight. This approach recognizes that planning and environmental issues are intertwined and that each of the issues being focused on in the public hearings is relevant to the EIR as well as to the land use planning recommendations the Planning Commission is tasked with making.

Specifically, tonight's public hearing will focus on:

- Providing the public and Commission with a summary of the conclusions and mitigation measures set forth in the Brisbane Baylands Final EIR related to the topics under discussion;
- Identifying major issues that were raised in public and agency comments on the Draft EIR;
- Providing some context regarding the implications of these issues on the larger planning and land use considerations that are before the Planning Commission as it considers its future recommendations to the City Council; and
- Providing the public with the opportunity to provide input regarding the discussion of air quality, GHG, and energy resources issues in the EIR, and how these issues should be taken into consideration by the Planning Commission as part of its ultimate planning recommendation at the close of the public hearing process.

## **Discussion:**

### ***Air Quality***

The air quality issues addressed in the EIR and to be considered by the Planning Commission focus on mobile (transportation-related) sources of air pollutant emissions, which are the greatest source of emissions. While emissions standards for vehicles are set at the federal and state levels, the City has an important role in helping achieve air quality standards by defining land use patterns, which affect vehicle miles travelled, transit use, and use of non-motorized modes of travel and the resulting amount of mobile source emissions from those vehicles.

As required by the 1970 federal Clean Air Act, the U.S. EPA has identified seven criteria air pollutants that are pervasive in urban environments, and for which state and national health-based ambient air quality standards have been established. These “criteria air pollutants” include Ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead. Analysis of air quality issues can be found in the June 2013 Baylands Draft EIR in Section 4.B.

### **Existing Conditions**

The Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (CARB) operate a regional air quality monitoring network that measures the ambient concentrations of the seven criteria air pollutants. The nearest air quality monitoring station to the Baylands is located on Arkansas Street in San Francisco, approximately 4.2 miles to the northeast.

The Bay Area is in a “non-attainment” status for the following criteria air pollutants: Ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. Among the criteria pollutants that are regulated, particulates (PM<sub>10</sub>, PM<sub>2.5</sub>) represent a serious ongoing health hazard. Exceedances of the state PM<sub>10</sub> standard have routinely occurred in the San Francisco area, including Brisbane.

Toxic Air Contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. There are hundreds of different types of TACs with varying degrees of toxicity. TACs do not have ambient air quality standards, but are regulated by BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.<sup>1</sup>

The nearest BAAQMD ambient TAC monitoring station to the Baylands is the station at 16th and Arkansas Streets in San Francisco. TAC measurements at this station indicate cancer risks associated with TAC concentrations to be similar to those for the Bay Area Basin as a whole.

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<sup>1</sup> In general, a health risk assessment is required if BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk, then the applicant is subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

Records indicate six permitted TAC sources within the Baylands and nine sources within 1,000 feet of the Project Site boundary. These sources and their BAAQMD-identified cancer risks are presented in Table 4.B-3 of the Draft EIR.

## **Potential Impacts**

### *Construction Impacts*

Project-related demolition, soil transport, remediation, grading and other construction activities within the Baylands would generate fugitive dust and particulate matter releases into the atmosphere. Fugitive dust includes not only PM<sub>10</sub> and PM<sub>2.5</sub>, but also larger particles that can represent a nuisance impact. Baylands-related construction activities would also generate air pollutant emissions through the use of heavy-duty and other construction equipment, paving of roadways and parking areas, painting of buildings, from vehicle trips hauling materials, and from construction workers traveling to and from construction sites within the Baylands.

Baylands development would occur over 20 years, the specific timing and sequence of which depends upon numerous factors, including future market conditions, public investment, and private initiatives and investment. As discussed in the EIR, maximum daily emissions would exceed the BAAQMD daily significance thresholds for ROG (reactive organic gases) and NO<sub>x</sub> (nitrogen oxides) throughout Baylands construction activities. For ROG, the predominant construction activity associated with the significant emissions would be application of architectural coatings. For NO<sub>x</sub>, the predominant construction activity associated with the significant emissions would be off road diesel equipment and on-road haul trucks during demolition, and grading and vendor trucks during building construction.

Project construction activities would produce diesel particulate matter and PM<sub>2.5</sub> emissions due to combustion equipment such as loaders, backhoes, and cranes, as well as haul truck trips, and would result in elevated concentrations of at nearby receptors (both new [DSP/DSP-V scenarios] and existing residences). Because these elevated concentrations could lead to an increase in the risk of cancer or other health impacts, a health risk assessment was performed. The health risk assessment was based on recommended methodology of the state Office of Environmental Health Hazard Assessment and adopted by BAAQMD. As detailed in the EIR, the health risk assessment determined that health risks associated with construction activities would be less than significant.

### *Operations Impacts*

Following construction, Baylands development would result in a long-term increase in criteria air pollutant and precursor emissions, including ROG, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> from a variety of emissions sources, including onsite area sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products, etc.) and mobile on-road sources. Exhaust emissions from on-road vehicle traffic associated with Project Site development were calculated by using the URBEMIS2007 program, as recommended by the May 2011 version of the BAAQMD *CEQA Guidelines*, and updated to account for the subsequent availability of EMFAC2011 emission factors.

As indicated in the EIR, Baylands development-related operational emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> would exceed the BAAQMD significance threshold for each of the development scenarios analyzed in the EIR. Impacts would therefore be considered to be significant, requiring the implementation of mitigation measures. The health risk assessment determined that ongoing activities related to development within the Baylands would not expose existing sensitive receptors to substantial concentrations of toxic air contaminants or respirable particulate matter (PM<sub>2.5</sub>) or significant cancer risk. Analysis was also undertaken to determine whether persons would be subject to substantial levels of toxic air contaminants (TACs), which may lead to adverse health, as the result of Baylands development. The highest hazard index was determined to be well below the BAAQMD threshold of 1.0, and impacts would be less than significant.

### *Odors*

BAAQMD was contacted during preparation of the Draft EIR and again during preparation of the final EIR to identify the odor complaint history of the existing Recology transfer station. Based on BAAQMD records, no complaints have been confirmed for the past seven years.

An onsite recycled water plant is proposed to be constructed to supply recycled water to Baylands development and discharge sewage in excess of the Baylands recycled water demand to a 78-inch San Francisco Public Utilities Commission sewer line along Sunnydale Avenue. While odor control is proposed to be provided, receptors would be as close as 400 feet to proposed residential units in the DSP/DSP-V scenarios, and about one-half mile from the nearest existing residential receptor.

### **Recommended Mitigation Measures**

To address fugitive dust emissions during construction, Mitigation Measure 4.B-1 requires implementation of best management practices (BMPs), which has been demonstrated to be a pragmatic and effective approach to the control of fugitive dust emissions. Studies have demonstrated (Western Regional Air Partnership, U.S. EPA) that the application of BMPs at construction sites have significantly controlled fugitive dust emissions. Mitigation Measure 4.B-2a and 4.B-2b place requirements on construction projects in relation to emissions from construction vehicles.

Measures identified in the 2012 BAAQMD *CEQA Guidelines* are required to be implemented for site-specific development projects within the Baylands per the requirements of Mitigation Measure 4.B-4. However, the 86 to 92 percent reductions in emissions necessary to reduce PM<sub>10</sub> emissions to less than significant, or the 60 to 86 percent reductions in emissions to reduce NO<sub>x</sub> and ROG impacts to less-than-significant exceed BAAQMD best reduction estimates for air quality mitigation. Consequently, implementation of Baylands development would still result in significant environmental effects on air quality and contribute substantially to an existing air quality violation (ozone precursors and particulate matter). Therefore, even with implementation of Mitigation Measure 4.B-4, emissions impacts would remain significant and unavoidable ROG NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>.

In addition, Mitigation Measure 4.B-9 requires implementation of applicable air pollutant emissions control strategies from the BAAQMD's Clean Air Plan to address consistency with that plan. Because all four of the proposed development scenarios would result in significant construction or operational emission impacts even with implementation of all feasible mitigation measures (Mitigation Measures 4.B-2, 4.B-4, and 4.B-9), proposed Baylands development would be considered to be inconsistent with *2010 Clean Air Plan*, and the resulting impact would be considered to be significant and unavoidable.

Mitigation Measure 4.B-8 addresses potential impacts of the proposed water recycling plant. This measure requires preparation and implementation of a progressive Odor Management Plan that would be reviewed by BAAQMD and subject to approval by the City. The Odor Management Plan is required to include a sufficient number of control measures from options identified by BAAQMD to attain a performance standard which meets the odor detection thresholds of BAAQMD Regulation 7.

### **Major Issues Addressed in the Final EIR**

#### *Disparity between Air Pollutant Emissions Estimated for the DSP/DSP-V Scenarios and those Estimated for the CPP/ CPP-V Scenarios*

A number of comments on the Draft EIR questioned why air pollutant emissions for the CPP/ CPP-V scenarios were so much higher than for the DSP/DSP-V scenarios.

The higher air pollutant emissions resulting from the CPP/ CPP-V scenarios are largely the result of mobile vehicular emissions and the greater amount of vehicle miles travelled in the CPP/ CPP-V scenarios as compared to the DSP/DSP-V scenarios. This result occurs for several reasons. First, the inclusion of residential development in the DSP/DSP-V scenarios will result in an estimated 5 percent of home to work trips remaining within the Baylands. In addition, approximately 16 percent of "home to other" trips, such as for shopping, are also estimated to remain within the Baylands. Together, these trips that remain within the Baylands provide some reduction in vehicle miles travelled as compared to the CPP/ CPP-V scenarios which provide no housing and therefore no opportunities for trip reduction based on close proximity of housing to employment or other destinations. The CPP/ CPP-V scenarios also have a greater amount of proposed commercial retail use than the DSP/DSP-V scenarios, which results in greater vehicle miles travelled as the result of the following.

- The larger market area needed to support development of the greater amount of retail use in the CPP/ CPP-V scenarios; and
- The absence of residential development within the Baylands reduces internal capture of shopping trips, resulting in average longer trip distances than for the DSP/DSP-V scenarios.

Under any circumstances, each of the four proposed development scenarios would result in significant unavoidable air pollutant emissions impacts.

## **Planning Considerations**

As noted above, air pollutant emissions are significant and unavoidable for each of the four proposed development scenarios, even with the implementation of all feasible mitigation measures. Air pollutant emissions can be substantially reduced compared to the proposed development scenarios through implementation of lower intensity of alternatives, strengthening the transit orientation of onsite uses, and reducing the amount of retail use within the Baylands to that which can be supported by the local community and freeway travelers.

## ***Greenhouse Gas Emissions***

“Global climate change” is the term used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation from a combination of natural processes and human actions. Increases in greenhouse gas (GHG) concentrations in the earth’s atmosphere are thought to be the main cause of human contribution to climate change. Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, greenhouse effects may be magnified.

CO<sub>2</sub> is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP), which indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO<sub>2</sub>. CH<sub>4</sub> and N<sub>2</sub>O are substantially more potent GHGs than CO<sub>2</sub>, with GWPs of 21 and 310 times that of CO<sub>2</sub>, respectively.

## **Existing Conditions**

GHG emissions are generated by existing Baylands uses, which include lumberyards, the Recology solid waste facility, a cooking fuels and equipment company, an industrial park, a rock and concrete crushing operation, a soils processing operation, and associated construction equipment parking. The lumberyard use would be relocated by Baylands development while others, such as the industrial park, would be replaced; existing emissions from uses to be replaced are considered in the impact analysis. GHG emissions from these facilities are generated primarily from motor vehicle and truck trips, but also by existing electrical demand, natural gas demand, solid waste generation, and water and wastewater treatment. The BAAQMD Bay Area Greenhouse Gas Model estimates GHG emissions associated with the existing 231,400 square feet of industrial uses to be replaced by new development currently generate 2,762 metric tons per year of CO<sub>2</sub>e (CO<sub>2</sub> equivalent).

## **Potential Impacts**

Analysis of GHG emissions conducted for the Draft EIR concluded that GHG emissions from the DSP and DSP-V scenarios would be below BAAQMD’s “efficiency threshold<sup>2</sup>” of 4.6 metric tons of CO<sub>2</sub>e

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<sup>2</sup> The “efficiency threshold” measures CO<sub>2</sub>e emissions in relation to service area population (residential + employees), providing the ability to compare the GHG emissions for projects of any size to a single threshold. In this way, small

per service population per year. This would represent a cumulatively less-than-significant GHG impact for these two scenarios.

By comparison, the Draft EIR determined that GHG emissions associated with the CPP and CPP-V scenarios would exceed BAAQMD's "efficiency threshold" of 4.6 metric tons of CO<sub>2e</sub> per service population per year. Consequently, the Draft EIR determined the CPP and CPP-V scenarios would have a significant GHG emissions impact.

Subsequent to the release of the Draft EIR in June 2013, the BAAQMD CEQA updated the model to be used to estimate GHG emissions as of August 5, 2013. The Final EIR now includes an updated estimation of Project Site development-related GHG emissions based on the latest version of the CalEEMod model. The updated emission inventory is provided as a text revision in Section 4.F, *Greenhouse Gas Emissions*. GHG emissions under the CPP and CPP-V scenarios evaluated based on the latest version of the CalEEMod model are estimated to be 3.2 metric tons per year per service population, and are below the GHG significance threshold. Consequently, the CPP and CPP-V scenarios would have a less than significant impact with regard to GHG emissions. Because the Final EIR determined that GHG emissions for the CPP/ CPP-V scenarios would, in fact, be less than significant, implementation of Mitigation Measure 4.F-1 was no longer required under CEQA, and was removed from the Final EIR.

### **Recommended Mitigation Measures**

Because the Final EIR determined GHG impacts to be less than significant, no mitigation measures were required.

### **Major Issues Addressed in the Final EIR**

#### *Use of the BAAQMD Efficiency Threshold vs. Total GHG Emissions Generated*

Some comments stated that the Draft EIR should have analyzed the significance of GHG emissions based on total emissions, rather than the BAAQMD's efficiency threshold.

The BAAQMD had identified a *potential* threshold based on total GHG emissions of 1,100 metric tons per year of CO<sub>2e</sub> as discussed on page 4.F-12 of the Draft EIR. As a practical matter, this threshold would typically be exceeded by development projects of more than 500 residential units, 100,000 square feet of retail, or 350,000 square feet of office. Use of such a threshold would also ignore small projects with relatively high GHG emissions. In addition, the use of the BAAQMD efficiency threshold provides a direct connection to statewide GHG reduction efforts pursuant to the provisions of AB 32 and SB 375, as well to regional plans such as Plan Bay Area.

In an effort to encourage mixed-use development, focus on the efficiency of proposed developments of all sizes, and provide for analysis and mitigation of numerous smaller development projects,

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development projects with relatively large GHG emissions could be determined to have significant impacts, while large projects such as General Plans and large-scale development such as the Baylands could be determined to have less than significant impacts based on GHG impacts relative to the size of the project.

BAAQMD identified the service population<sup>3</sup>-based efficiency threshold used in the EIR analysis, which is more applicable to assessing the impacts of a large-scale Specific Plan. BAAQMD has indicated its intent to have the efficiency threshold apply to Specific Plans in its 2011 CEQA Air Quality Guidelines, which specifically states that specific plans should use the project-level threshold of 4.6 CO<sub>2</sub>e per service population per year. Thus, the EIR used the significance threshold recommended by the BAAQMD to determine the significance of impacts.

The Draft EIR identifies total GHG emissions as well as emissions per service area population. As noted above, GHG emissions estimates for the CPP/PP-V scenarios were revised in the Final EIR based on the updated model approved by BAAQMD subsequent to the release of the Draft EIR. For information purposes, total emissions per service population estimates of GHG emissions for each development scenario are as follows.

Development Scenario	GHG Emissions per Service Area Population (metric tons of CO <sub>2</sub> e annually)	Total GHG Emissions (metric tons of CO <sub>2</sub> e annually)
DSP	3.1	86,203
DSP-V	3.6	90,395
CPP	4.0	66,109
CPP-V	3.2	51,081

### Planning Considerations

Even though GHG emissions impacts were determined to be less than significant, implementation of air quality and energy resources mitigation measures will serve to further reduce GHG emissions from proposed development. In addition, any measures to reduce air pollutant emissions such as those discussed above, as well as measures to increase renewable energy production will serve to reduce GHG emissions.

### Energy Resources

#### Existing Conditions

The EIR estimated that 1,784.6 megawatt hours of electricity and 10,002.5 million British Thermal Units (Btu) of natural gas are used annually within the Baylands, exclusive of Recology's operation. Recology has reported its 2010 baseline energy use as 6,300 megawatt hours of electricity and 400,000 cubic feet of natural gas (406 million Btu) annually.

Existing light industrial land uses within the Baylands result in offsite vehicle use. The 2010 annual baseline volume of consumed diesel and gasoline fuel was estimated by comparing the baseline-related generation of carbon dioxide (CO<sub>2</sub>) emissions to emission factors identified by The Climate

<sup>3</sup> "Service Population" is an efficiency-based measure used by BAAQMD to estimate the development potential of a general or area plan. Service Population is determined by adding the number of residents to the number of jobs estimated for a proposed project.



Registry (TCR, 2011). With total baseline transportation emissions of 2,084.6 metric tons per year, it is estimated the existing light industrial uses within the Baylands consume approximately 3,309 gallons of diesel fuel and approximately 222,514 gallons of gasoline each year.

### **Potential Impacts**

Construction activities associated with development of the Baylands would require:

- Electricity, for operation of hand tools, air compressors, mobile project offices, and security lighting
- Diesel, for grading and construction equipment, delivery trucks, and earth hauling trucks; and
- Gasoline, to fuel construction worker commute vehicles.

In addition, proposed Baylands development would require installation of both onsite and offsite electrical infrastructure and natural gas improvements under all four development scenarios.

Construction of proposed energy infrastructure and other onsite development would require the use of energy, such as the use of fuels for vehicles and electricity to run equipment. Construction activities throughout the Baylands would result in wasteful, inefficient, or unnecessary use of energy if construction equipment is old or not well maintained, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. Energy would also be used in a wasteful manner if alternative energy sources, such as solar energy, are not used where feasible, in place of more traditional sources. Project Site construction would not be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in the region, with the exception that remediation of hazardous materials needs to be undertaken within the Baylands.

Operational use of energy includes the heating, cooling, and lighting of buildings; water heating; operation of electrical systems and plug-in appliances within buildings; parking lot and outdoor lighting; the transport of electricity, natural gas, and water to the areas where they would be consumed; and operation of the proposed onsite recycled water plant. Given the substantial increase in the level of development of the Project Site that would occur under any of the four proposed development scenarios, the increase in energy use resulting from the proposed Project Site development also would be substantial.

Onsite electrical generation would supply between 56.6 percent (DSP-V) and 80.8 percent (CPP-V) of Baylands electrical demand. Thus, to achieve net-zero use of electricity, a combination of improved building energy efficiency (improved conservation beyond current state and local requirements) and expanded provision of onsite renewable energy generation would be needed. The CPP/CPP-V scenarios assume that renewable energy production for those scenarios would be equivalent to the renewable energy production of the DSP/DSP-V scenarios.

Proposed Baylands development would result in a substantial increase in existing natural gas consumption. Estimates of natural gas use set forth in the EIR are based on compliance with Title 24 standards. While the Baylands development-related increase would represent a substantial

increase in natural gas consumption by uses within the Baylands, on a per-square-foot basis, such development would consume natural gas at a rate similar to other developments throughout the state that comply with Title 24 requirements only.

### **Recommended Mitigation Measures**

Construction activities related to installation of proposed electric, gas, and renewable energy facilities would result in significant impacts related to ground disturbance, damage to existing vegetation, and construction-related traffic, air emissions, and noise. These construction-related impacts are discussed, and specific mitigation measures are proposed, as follows: Mitigation Measures 4.B-2a and 4.B-2b (construction air emissions); Mitigation Measures 4.C-1a through 4.C-1c, Mitigation Measures 4.C-2a through 4.C-2c, and Mitigation Measures 4.C-4d, 4.C-4e, and 4.C-4f (biological resources); Mitigation Measures 4.D-2 and 4.D-4 (archaeological resources and human remains); Mitigation Measure 4.E-2a (ground settlement); Mitigation Measures 4.G-2a, 4.G-2b, 4.G-2d and 4.G-2f through 4.G-2h (hazardous materials); Mitigation Measures 4.J-4a and 4.J-4b (construction period noise); and Mitigation Measure 4.N-12 (construction circulation patterns). Implementation of these measures is recommended to reduce construction impacts related to the installation of energy infrastructure to less-than-significant levels.

During all Baylands construction activities, construction contractors are required to implement the following measures to prevent the wasteful or inefficient use of energy during construction:

- Implement work schedules and procedures that minimize equipment idle time and double-handling of material;
- Minimize equipment idling time either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxic Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]);
- Switch off office equipment and lights when not in use;
- Use solar power sources for road signs and other applicable equipment that will be required at the construction site;
- Design all temporary roads to minimize travel distances; and
- Maintain and properly tune all construction equipment in accordance with manufacturer's specifications. It shall be the contractor's responsibility to ensure that all equipment has been checked by a certified mechanic and determined to be running in proper condition prior to operation.

Brisbane Municipal Code Section 15.80 specifies green building standards for new developments, including meeting a minimum Leadership in Energy and Environmental Design (LEED) "Silver" rating on the Green Building Project Checklist for all new commercial projects over 10,000 square feet and achieving a "green home" rating on the Multi-Family GreenPoint Checklist<sup>4</sup> for any residential developments with 20 or more units. Mitigation Measure 4.P-2a requires that all new

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<sup>4</sup> Build It Green, a nonprofit organization, has developed New Home Construction Green Building Guidelines and a MultiFamily GreenPoint Checklist, based upon the Multi-Family Green Building Guidelines established by the Alameda County Waste Management Authority.

buildings within the Baylands that are subject to the provisions of Municipal Code Section 15.80 achieve a LEED Gold rating, rather than the LEED Silver rating now required by the Municipal Code. In addition, all appliances installed within the Project Site as part of original building construction shall be ENERGY STAR rated or equivalent. Mitigation Measure 4.P-2b requires that all street and parking lot lighting be energy efficient light emitting diode (LED) based lighting. Mitigation Measure 4.P-2c requires the CPP/CPP-V scenarios to provide a minimum of 42,000 to 45,000 megawatt hours of renewable energy annually.

### **Major Issues Addressed in the Final EIR**

Some EIR comments suggested that proposed development within the Baylands be “energy neutral” (i.e., generate as much energy and onsite uses would consume). Of the scenarios and alternatives analyzed in the EIR, the Renewable Energy Generation Alternative is the only scenario or alternative that would generate more energy than is needed to serve onsite uses.

### **Planning Considerations**

Implementation of air quality mitigation measures will serve to further reduce energy consumption by proposed development. In addition, any additional measures to reduce air pollutant emissions such as those discussed above, as well as measures to increase renewable energy production will serve to reduce reduce consumption of fossil fuels.

The National Renewable Energy Laboratory (NREL), which is part of the U.S. EPA conducted a study that looked at the feasibility of implementing a solar energy production system within the Baylands. The purpose of U.S. EPA report was to assess the site for a possible PV system installation and estimate the cost, performance, and site impacts of different PV options. The modeled scenarios in the U.S. EPA study did not include available renewable energy incentive programs, and concluded that the economics of “all systems were favorable without these incentives, and their inclusion will only make the economics even better.”

The US EPA study reviewed both the DSP/DSP-V scenarios and the Renewable Energy Generation Alternative. The DSP/DSP-V scenarios includes approximately 25 acres dedicated to renewable energy generation, as well as building-integrated and rooftop renewable energy-generating features. According to the study, the DSP/DSP-V scenarios include approximately 24.7 acres appropriate for installation of a ground-mounted PV system and 257.4 acres appropriate for installation of roof-mounted PV. This would allow for installation of a 24- to 28-MW PV system producing approximately 42,000 to 45,000 megawatt hours (MWh) of energy annually. The study also notes that in order for the site to be net-zero (i.e., to generate as much energy as it uses), an approximately 50-MW PV system would have to be installed to offset the energy use of the buildings.

The Renewable Energy Generation Alternative provides for 170 acres of alternative energy uses consisting of a large PV solar farm, small vertical-axis wind turbines, wind turbines placed within development, and rooftop PV solar panels, along with research and development facilities and retail/entertainment uses. Overall, the Renewable Energy Generation Alternative would generate

more energy than needed to serve onsite uses. Such surplus energy could potentially be used to meet demand within the City of Brisbane as a whole.

**Next Steps:**

Following this hearing, the Planning Commission will continue its series of public hearings:

**October 29, 2015:** Public Services and Facilities, Recreation, Utilities and Service Systems, Water Supply

**November 4, 2015:** Aesthetics, Land Use and Planning Policy, Population and Housing, Alternatives

**November 12, 2015:** Continuation of Traffic and Circulation from October 13

**November 16, 2015:** Applicant and Community Group Presentations