

5 Recommended Mitigation for Potential Project Impacts

There are five categories of mitigations proposed in these Comments. All are based on actual requirements used in other EIR and planning documents.

5.1 Site-Specific Final Wind Analysis Studies

Other projects for which similar wind tunnel wind impact studies were conducted were much smaller projects for which specific building footprints and site plan configurations were known or mostly known. Some of these other projects even had elevation sections or orientation and streamlining details depicted for analysis and consideration.

This Project, by contrast, is an order of magnitude larger and less defined. For this reason, the confidence level of the results of the Analysis must be less than for these other projects.

To ensure the same minimum confidence standards of other EIR analyses, prior to specific development within the Project, final wind impact analyses should be conducted to examine the individual development impact along with the surroundings, cumulative development programmed and approved up to that point, and future Project details as well as they are known at that time. These subsequent analyses should be directly tied to the impact on usability of the Resource as it exists today rather than thresholding a related but indirectly connected factor, such as wind speed.

5.2 Alemany Gap Wind Flow

The primary source of wind for the Resource is the Alemany Gap. This topographical feature channels and accelerates wind from the Pacific Ocean directly to CPSRA. Obstructions in the path of flow through and beyond the Alemany Gap would have the most impact on the Resource.



Figure 25: Critical Upwind Section and Proposed Waterfront Preservation District
 The Critical Upwind Section and the proposed minimum Waterfront Preservation District immediately upwind of the Practical Sailing Area and downwind of the Alemany Gap. The waterfront is currently a mix of industrial operations but is slated in some proposed plans to be barricaded by a virtual wall of development up to 200' above sea level in some locations according to the DEIR. The Waterfront Preservation District shown at 900', which is half the width of the Chicago Lakefront Park System. This figure includes areas outside of the Project scope to show non-residential areas that could also developed or redeveloped in the future into commercial or industrial uses.

- The minimum Waterfront Preservation District shown should established with only low vegetation and structures and minimal topographical variation or rise above sea level
- Filtration and catchment systems can be introduced in the Waterfront Preservation District to comprehensively filter and improve runoff and reduce litter that ends in the Bay
- All new development including building and parking areas should be located and clustered outside the Critical Upwind Section as much as possible or as far to the West and South as possible
- Vegetation, other structures, and topography that would present an impediment to wind flow or increase surface roughness should be kept at very low heights and uniform roughness to minimize increased wind turbulence
- Impervious surface area should be kept to an absolute minimum to avoid creating thermal conditions that create convection cells or otherwise interfere with the natural flow of wind through this area
- All industrial processes with the potential for discharging odor, dust, pollution, or other air or water quality impact should be prohibited from this area
- Trip generation that would result in diesel discharge or other air quality impact in this area should be discouraged

Project areas closest to the shoreline should be devoted to a substantial public open space to ensure the accessibility and utility of the shoreline for all. Such public access is critical to a successful waterfront development.



Figure 26: Olympic Sculpture Park, Seattle

Another excellent example of waterfront development is the Olympic Sculpture Park in Seattle. It is a nine acre park on a former brownfield industrial site but is now one of the only green spaces in Downtown Seattle. The site is award-winning and has been called “the best thing to happen to Seattle in years” (Frommer’s travel guide). The potential scale of public waterfront preservation space on the Baylands is an order of magnitude larger.

5.3 Architectural Requirements

In addition to minimizing or eliminating impact in the Critical Upwind Section and proposed Waterfront Preservation District, the following architectural requirements are recommended to mitigate potential impact caused by development activities outside of no-build and open-space areas:

- Building heights and massing should be stepped such that the heights closest to the Bay are minimum and the heights rise as development proceeds West to reconnect air flow to the surface as gradually as possible
- Maximum building heights, topography, and other impacts to wind flow relative to mean sea levels should not exceed the current levels of the so-called “Brisbane dirt mounds”
- Structures should be oriented and streamlined to present minimal wind obstruction and minimal increase in wind turbulence consistent with similar efforts in other nearby jurisdictions
- Overall surface roughness impacts created by development activities should be kept to an overall minimum

- Vegetation should be limited in height and scope to avoid creating additional surface roughness, sudden interruptions in wind flow, or exceptional height

Buildings and substantial development should begin to the West and should be stepped in height so that a wall of development does not obstruct views and access of the shoreline and wind flow to the Resource. This is a practice adopted along many of the most successful waterfronts in the largest cities. Parts of San Francisco's Embarcadero district provides an example of such stepped massing.



Figure 27: Litter from Industrial Operations

5.4 Use Limitations



Figure 28: Discharge of Dust and Particles

High winds carry pollutants throughout the air, water, and land downwind in the vicinity of the Project.

The steady strong winds in this site mean that air quality is particularly sensitive. Hundreds of complaints have been registered against odor and litter created by the existing Recology facility in this vicinity (Figures 33, 29, 27, and 30). This odor is created by transportation and processing of waste material (Figure 32). Litter is created as bits of waste are discharged onto roads and open space and carried by the wind ultimately to the Bay. The “dirt mounds” on this site that process and recycle dirt and construction material create an incredible dust discharge if uncontrolled (cf. Figures 31 and 28). This use also demonstrates the sensitivity of air quality given the high winds.

Users such as Recology have made promises in this and other jurisdictions but have failed to live up to promises. Part of this is due to the limited ability to monitor and enforce such vague but damaging concepts as “odor.” See, for example, [32] and [23], which discuss the high expectations and grandiose promises that have led to disgust, anger, and disappointment among the public.

The vast quantities of litter, dust, and incredibly frequency of wide-ranging noxious odor indicate that monitoring and enforcement is simply not working. The existing users have demonstrated how easy it is to circumvent the numerous layers of regulations designed to prevent just these types of abuses. For this reason, it is strongly recommended that these uses not be promoted in this area. Such polluting users are incompatible with the ecologically sensitive and residential surroundings.



Figure 29: Litter from Industrial Operations

As demonstrated by the discussion above, because of the high winds and proximity to the ecologically sensitive resource, the following restrictions are recommended:

- Uses that have will create odor, litter, dust, gas, fumes, irritants, particles, or exhaust either into the air or Bay should be prohibited
- Any such use that has the potential for such pollution should require a separate EIR process with a qualified expert to review the specific potential impact
- This also includes air turbines or other power generation facilities that could create additional wind turbulence or substantially alter the thermal dynamics of the Project area
- Existing violators should be brought into compliance before any further facility is considered
- Any use with the potential to generate long-ranging exceptional pollution of the sort discussed above should have specific monitoring provisions, budgets, thresholds, enforcement resources, penalties, and condition for use permit revocation and renewal



Figure 30: Litter from Industrial Operations

5.5 Funding for Monitoring, Testing, and Enforcement

Due to the proximity of possible intense industrial and commercial uses to existing and proposed residential and the San Francisco Bay, it is urged that special separately funded locally-administered monitoring, testing, and enforcement programs be established. The on-going funding for these should come from part of the revenue that the City of Brisbane and others will gain from the additional taxes and fees. It is anticipated that the proposed Recology expansion alone could generate hundreds of thousands or even millions of dollars in revenue for the City of Brisbane.

Locally Funded and Administered Monitoring, Testing, and Enforcement



Figure 31: Discharge of Dust and Particles

High winds carry pollutants throughout the air, water, and land downwind in the vicinity of the Project.

The City has recently experienced difficulties enforcing air quality problems with existing industrial users operating currently on the Baylands. Dust and particulates have been discharged regularly over and into the Bay for years in violation of air quality ordinances (see Figure 31). Numerous citations have been issued by authorities but the problem has continued unabated.

A recent thorough examination by the City of the circumstances that led to this situation revealed that a history of non-enforcement and lax specificity in permits were to blame [11]. Brisbane is a small city without the resources of its larger neighbors. It should take special measures to learn from this recent experience to ensure that future generations will not face similar aggravation, hazards, and difficulties.

Other regional enforcement agencies such as the Bay Area Air Quality Management District should not be expected to fill this responsibility. Those agencies are sorely overtaxed and do not have the resources or specific technology needed to institute monitoring systems. They also do not have the fine-grained enforcement authority needed to apply specific penalties to specific infractions.

In conversations with BAAQMD, it was revealed that they have no specific criteria to apply in determining when enforcement becomes an issue for things such as dust discharge or odor. They stated that they only take action “when the violation becomes a public nuisance.” “Public nuisance” is not defined and is generally based on “how many people file complaints.” At the time of this writing and to the best of our knowledge, there is one single BAAQMD field agent responsible for the entire San Francisco County.

Specific Difficulties with Existing Odor



Figure 32: Discharge of Odor

The Recology processing facility creates incredible noxious odor. Hundreds of complaints have been registered with the Bay Area Air Quality Management District regarding this use. The high winds create an ideal situation for the propagation of noxious discharge through the downwind area. Trucks, open doors, and exhaust make it virtually impossible to contain such a use. These upwind uses are repeatedly cited but continue to pollute as it is virtually impossible to cost-effectively monitor and enforce ongoing compliance.

The existing Recology facility adjacent to the Project is one of the most noxious facilities in San Francisco. The high winds cause the odor to spread over many square miles almost every day in the Summer and Fall if not other times as well. This odor envelopes CPSRA (the land and water), adjacent highways and trails, the Candlestick Point stadium area slated for redevelopment, and even on some days as far as Sierra Point.

Commuters on Highway 101 who have the misfortune of having their windows down when passing by the Candlestick Park exit traveling South may notice an unfortunate coincidence: a sign that designates the Brisbane City limits and an overpowering nauseating odor of untreated garbage or the cloying revolting stench of perfume applied to the same. Users of the Bay Trail in this vicinity are also very familiar with this odor as well as the prolific litter that flies off of covered garbage trucks, snags in vegetation, and ultimately blows and washes over the Bay Trail (see Figure 33) and into the Bay.

The Internet forum iWindsurf.com provides a historical account of conditions at various windsurfing sites in the Bay Area from as early as 2008. Posts on this forum from as far back as Summer of 2009 discuss the garbage stench being produced at the current Recology facility. There is apparently no means or no will to hold violators of air quality standards to account in all cases.



Figure 33: Litter along the Bay Trail

Litter and discharge from industrial operations is carried by runoff, wind, or stormwater to the Bay. Uses that contribute such pollution should not be permitted to continue operating in violation.

While the existing Recology treatment facility is outside of the City of Brisbane, recent proposals submitted to the City indicate development on the order of an additional 750,000 square feet in Brisbane City limits. As far as we know, this would quadruple the size of the treatment plant and likely include other types of refuse such as biomass (compost). Biomass processing is notoriously the most noxious type of processing. Compost is literally “rotting garbage.”



Figure 34: Recology Facility Receiving Compost Garbage for Processing
124 acre existing Recology facility in the Central Valley receives municipal compost waste from Berkeley, Livermore, San Francisco, and other parts of Alameda County [31].

In conversations with current and former City of Brisbane officials, we were told that this facility would be “ultra-clean” and the “first of its kind.” We were told of assurances that there would be “no odor.” We are unsure how this is possible. If garbage is transported, there must be at some point where it is exposed to the air to be offloaded through doors, from trucks, and loaded into treatment systems and vice versa (see Figure 32).

The very idea that 1,000,000 square feet of garbage and compost processing would produce no odor would be mostly quite bizarre if it was not so especially sad that this is actually being seriously considered in exchange for huge potential revenues.

Current Composting Facilities

In Berkeley, municipal compost was processed in the landfill area that is now Cesar Chavez Park. For comparison, this park is 90 acres, substantially larger than the total area available to Recology (including existing facilities). This compost for Berkeley is now handled in the Central Valley in a 124 acre tract of land surrounded by farms. Material is processed in an open-air manner handling roughly 23 tons per day [31].

In order to encourage decomposition, heat, oxygen, and water is required. 540' long rows up to six feet in height are exposed to sunlight and air and are turned and watered constantly.



Figure 35: Central Valley Recology Facility Processing Compost Material

When done incorrectly, the decomposition produces methane in addition to other byproducts of processing and sorting the raw waste that comes in to the facility. Even in a transfer station, it is clear that substantial odor and pollution can result as witnessed by the current Recology facility on the Baylands.

At this industrial scale in the Central Valley location, composting is economical and is efficient since the end product is largely used by the immediately surrounding farms. The idea that transport costs are saved by waste being processed close to where it is generated does not include all the facts. Portions of the waste still needs to be transported to landfills and the finished product still needs to be transported to end users.



Figure 36: Central Valley Recology Facility Processing Compost Material

While there is the presumption that this expanded facility would handle municipal compost biomass, many of these lessons and issues would apply equally to the current facility and expansion to other types of waste processing.



Figure 37: Central Valley Recology Facility Processing Compost Material

How to Enforce No-Odor Obligations

Setting aside the frustration of dealing with apparent short-sidedness, the practicality of ensuring such claims is daunting. We are sure that Brisbane would not simply take Recology at its word. We are sure that Brisbane would be very careful not to quadruple the size of an already incredibly and demonstrably noxious use presently at their doorstep.

Many other jurisdictions dealing specifically with Recology have received similar assurances only to find “nightmare” situations (cf. [32], [23]). The loophole that Recology and similar users seems to exploit is that there are no practical ways to monitor odor and there are no good laws that establish thresholds for odor violations. For example, Brisbane does not physically have the jurisdiction to install odor monitoring facilities and sensors downwind in the vicinity of the facility.

Furthermore, what possible monitoring technology could even be used and what are even acceptable odor limits? Odor is something that is carried by the wind and concentrations can be vastly different just a few meters away.

Notwithstanding the difficulty in even assessing compliance, what kind of penalties would be fair to offset possible odor? Why should the public suffer any odor at all, especially considering that the public most likely impacted will be to the East and South, outside of Brisbane, and not be receiving any stream of revenue?

Though we could not find specific records of requirements and assurances regarding odor during permitting, we were told by residents of the area that when the present Recology facility was first constructed, there were similar promises made that there would be no odor. One cannot imagine that the facility received a permit for operation that specific indicated it was permissible to create the level of pollution that it presently does. We were told there was in fact little or no odor during initial periods of operation. However over time, for

whatever reasons, the condition has obviously worsened to the present state.

There is also the issue that the present facility that currently produces incredible odor pollution is outside of the City of Brisbane jurisdiction, being located in the City of San Francisco. Brisbane has therefore no direct authority over those portions of the combined facilities. How can Brisbane require that Recology or its affiliates expend potentially huge sums to tear down or retrofit that facility to create a new supposedly “clean” comprehensive facility? What about the business interruption that would accompany such a modification?

On the other hand, is Brisbane willing to overlook the current noxious polluter at its border while it approves a massive new expansion for the same? What assurance could Brisbane receive that Recology won't simply transfer its “cleaner” processing to the Brisbane facilities while simultaneously taking on the dirtier processing in the adjacent facilities within the City of San Francisco?

We have registered our concern with this garbage treatment proposal on other occasions. In addition to the aforementioned assurances and despite no realistic plan or specificity for guaranteeing the same, we were given the final consolation that “garbage has to be processed somewhere.” In the face of such apparently dedicated apologists for what would no doubt amount to a substantial future stream of revenue for Brisbane, we expect to have no productive discussion. Hence, we appeal for rational and objective consideration to the public, stakeholders, and those other officials who might read these Comments.