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July 18, 2014

VIA E-MAIL AND OVERNIGHT DELIVERY

Honorable Mayor David Glass
and City Councilmembers
c/o City Clerk
City of Petaluma
11 English Street
Petaluma, CA 94952

Re: Comments on the Staff Report and Final Environmental Impact Report for the Riverfront Mixed-Use Project

Dear Mayor Glass and Council Members:

We are writing on behalf of Petaluma Residents for Responsible Development ("Petaluma Residents") regarding the Final Environmental Impact Report ("FEIR") prepared by the City of Petaluma ("City") for the Riverfront Mixed Use Project ("Project") proposed by Basin Street Properties, LLC ("Applicant"). The Project requires a Tentative Subdivision Map and Zoning Map Amendment for the development of a new mixed-use community on 39.4 acres of riverfront land. The Project includes 273 residential units (single-family homes, apartments, and townhomes), a 120-room hotel, 60,000 square feet of office space, 30,000 square feet of retail space, and 4 acres of parks. It also includes an emergency access route along Old Lakeville Street, a 3.65-acre riverfront park on state-owned property, and the dedication of land for a community boathouse and boat launch.

The City prepared an environmental impact report ("EIR") for the Project after receiving comments from Petaluma Residents and others, which raised concerns about the impacts associated with the Project. The City's FEIR, however, does not adequately address the concerns raised in prior comments, and does not commit the Applicant to mitigation measures that would reduce environmental impacts to less than significant levels.

Since publication of the FEIR, additional soil contamination testing that had long been requested by Petaluma Residents was finally conducted. This testing evaluated contamination levels in the near surface area in the portion of the Project site that was identified as having been a hazardous material storage site in the past and that had been identified in prior tests as having levels of lead contamination near thresholds of significance. The additional testing again found lead contamination near thresholds of significance, but did not identify any lead contamination that exceeded these thresholds.

The new testing, however, did identify other significance contamination in the area of past hazardous material storage. The further soil testing found previously undisclosed arsenic contamination that exceeds worker safety levels and that is significantly higher than the background levels of arsenic found in the rest of the Project site. This contamination may pose a health risk to construction workers and to future inhabitants. This is a new impact that is not disclosed or evaluated in the FEIR.

For this and the other reasons addressed below, the FEIR is significantly flawed and does not comply with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000 *et seq*. We urge the Council to reject approval of the Project until these environmental and public health concerns are addressed and the deficiencies in the FEIR are remedied.

I. INTRODUCTION

A. Interest of Commenters

Petaluma Residents for Responsible Development is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The association includes Mitch Clarey, Frank Cuneo, Richard Kenney, Roger Burk, the Sonoma, Mendocino, and Lake Counties Building and Construction Trades Council, its affiliated local unions, and their members and their families who live and/or work in the City of Petaluma and Sonoma County.

Individual members of Petaluma Residents and its affiliated organizations live, work, recreate, and raise their families in Sonoma County, including the City

of Petaluma. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist onsite. Petaluma Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there.

B. Summary of Comments

As explained below and described in detail in prior comment letters, the Project will generate a multitude of impacts in a number of impact areas, including air quality, greenhouse gas emissions, hazardous materials, and geologic hazards. The FEIR either mis-characterizes, mis-analyzes, underestimates or fails to identify many of these impacts. Furthermore, many of the mitigation measures described in the FEIR will not in fact mitigate impacts to the extent claimed. The EIR must be revised to resolve its inadequacies and must be recirculated for public review and comment.

1. <u>Additional Testing Has Revealed Previously Undisclosed Arsenic Contamination</u>

- New soil contamination tests conducted after the issuance of the FEIR have found a spike in levels of arsenic that exceeds worker safety levels in the area of the Project that was formally a hazardous material storage site. The intrusive construction worker safety threshold of significance for arsenic is 10 mg/kg, but the additional testing found an area with arsenic contamination of over 14 mg/kg.

- The staff report's claim that this contaminated sample is due to naturally occurring arsenic is inconsistent with the other test results on the Project site, which showed an average of less than 5 mg/kg of naturally occurring arsenic in this area.

- The Project soil arsenic levels also greatly exceed the Tier-I screening level of 0.39 mg/kg. While Cal EPA does not generally require cleanup of naturally

occurring levels of arsenic, that does not mean that naturally occurring arsenic is risk free and does not require mitigation for certain uses.

- Even if the arsenic were naturally occurring, it still poses a significant risk to workers if disturbed through construction activities and requires the imposition of worker safety mitigation measures.

- In addition, the proposed construction of baseball fields should be mitigated to ensure that kids are not kicking up and breathing arsenic contaminated dust.

2. Inadequate Analysis of Air Quality Impacts During Construction

- The FEIR relies on two contradictory air quality analyses. The first one looks at the whole project and adds over 700 working days to the construction schedule for projects of similar size. This includes over 400 days of building and almost 300 days of painting. Even though the air quality model encourages agencies to "overlap" construction phases such as building and painting, the FEIR explains that the stand-alone painting schedule was extended to accommodate for interior building. (The painting phase produces much lower air pollution emissions than the building phase.)

- The second analysis looks at all construction except the single-family homes, and does not extend the construction schedule at all. The FEIR unsuccessfully tries to explain why both of these analyses were proper, even though they are contradictory.

- In the first analysis, the effect of extending the construction schedule, particularly the painting phase, is to reduce the "average daily emissions," which allows the Applicant to avoid construction-related air quality mitigation (cleaner burning engines, greater dust control measures, etc.)

- The effect of *not* extending the construction schedule in the second analysis is to reduce the reported health risks to nearby residents from construction-related diesel fumes and other pollution, which also allows the Applicant to avoid mitigation that would otherwise be required to protect human health.

- The air quality analyses are not supported by substantial evidence. Both analyses must be revised to reflect a realistic and consistent construction schedule.

- The condition of approval requiring submittal of an annual report on the actual and assumed construction schedule does not remedy the flaws in the CEQA document. The impact analysis is still based on an inconsistent and contradictory Project description. Moreover, the condition of approval provides no requirement to update the air quality analysis based on these reports and no remedy should actual emissions be higher than assumed.

3. Persistent Failure to Address Geotechnical Problems Like Sinking Bay Mud, and a New Mitigation Measure that Itself Would Cause Impacts

- Six successive geotechnical reports were prepared for the Project. Each one identifies issues with sinking bay mud as a result of increased weight from the Project buildings and infrastructure.

- Most of the proposed measures to mitigate for sinking bay mud have already been expressly rejected as too time consuming, costly, or infeasible. This includes the use of deep foundations, pre-loading of the soil before construction, and rammed aggregate piers.

- New mitigation was added to the FEIR that requires a *further* (seventh) geotechnical study and the development of mitigation later in time. Not only is this deferral of mitigation improper under CEQA, but one potential proposed measure would require the removal of existing fill and replacement with lightweight fill, which is an action that itself would have air quality and traffic impacts not analyzed in the FEIR.

4. Greenhouse Gas Analysis Relies on Speculative Guesses to Avoid Mitigation

- Even though the City Council has conditioned the Project's exemption from the 2013 SmartCode on obtaining a certificate of occupancy by 2019, the greenhouse gas ("GHG") emissions analysis in the FEIR relies on an occupancy date of 2020. This is inconsistent—the GHG analysis should be based on occupancy no later than 2019.

- The FEIR also uses speculative 2020 GHG emissions estimates from a document published by PG&E "for informational purposes," which is "not to be used" for regulatory compliance. The estimates in that document have not been accurate in recent years, as they do not take into account the very real effects of California's drought on PG&E's GHG emissions. The FEIR cannot rely on this speculative informational estimate, and must be revised.

- The FEIR was manipulated so that the Applicant could avoid the need to use sustainable green building features and techniques. At the Planning Commission hearing, the Applicant was asked repeatedly by the Chairman what sustainable green features it planned to include in its Project, and why these features were not addressed in the EIR. The Applicant had no response.

5. <u>The FEIR Fails to Evaluate Feasibility Issues Regarding the Proposed Location of the Community Boathouse</u>

- The Applicant has designated a small area on the southeast Project site for a potential future community boathouse. The Draft EIR said that although the boathouse was not part of the Project, "the City has included it in this environmental analysis to help facilitate future development." The Final EIR, however, retreats from this statement and notes that the boathouse is not evaluated in the EIR.

- The boathouse site has a number of challenges to development: (1) a portion of the site will likely be inundated by sea level rise; (2) development of the site may impact the "fully protected" salt marsh harvest mouse; and (3) the site is within the 100-foot buffer area that is susceptible to soil lurching, and therefore a future boathouse would require a very deep foundation beneath the bay mud to bedrock, which is a costly endeavor.

- In sum, it now appears that the designated boathouse site may be too close to the Petaluma River, and should be set back a reasonable distance to accommodate for future sea level rise, soil instability, and habitat impacts. The City should require the Applicant to dedicate a site free from such substantial problems before it approves the Project.

- The Applicant has not followed through with its promise to provide meaningful community benefits as part of the development of the City's riverfront. At the Planning Commission hearing, upon being asked whether the boathouse site could be moved a bit further inland, the Applicant repeated that the boathouse is "not part of the Project" and that there is no other location that the Applicant is willing to provide for this community facility.

6. New "Voluntary" Biological Mitigation Measures Must Be Mandatory, Enforceable, and Specific

- The California Department of Fish and Wildlife ("CDFW") has requested mitigation measures in the EIR for development adjacent to salt marsh vegetation, which is known to support the protected salt marsh harvest mouse.

- The FEIR states that the requested measures will be "implemented voluntarily by the applicant," and does not incorporate them as binding mitigation measures.

- CEQA requires that mitigation measures be mandatory, enforceable, and specific, and the proposed "voluntary" measures are not. The measures are clearly mitigation measures agreed to by the Applicant in response to concerns about potential impacts by CDFW. Courts will not hesitate to find that if something walks like a mitigation measure and talks like a mitigation measure, it is a mitigation measure. The FEIR should be revised to include these measures as mandatory and enforceable mitigation.

C. Request for Recirculation

CEQA requires recirculation of an EIR for public review and comment when significant new information must be added to the EIR following public review, but before certification.[1] The CEQA Guidelines clarify that new information is significant if the EIR "is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the

[1] CEQA, Pub. Resources Code § 21092.1.

Project or a feasible way to mitigate or avoid such an effect."[2] The purpose of recirculation is to give the public and other agencies an opportunity to evaluate the new data and the validity of conclusions drawn from it.[3] As discussed below, the EIR does not adequately analyze the Project's impacts, the Project will result in significant environmental impacts that are not analyzed in the EIR, and there are feasible mitigation measures available to reduce significant impacts that have not been required in the EIR. These changes must be addressed in a revised EIR that is circulated for public review and comment.

II. THE CITY LACKS SUBSTANTIAL EVIDENCE TO SUPPORT ITS CONCLUSIONS REGARDING THE PROJECT'S SIGNIFICANT IMPACTS; THE FEIR FAILS TO INCORPORATE ALL FEASIBLE MITIGATION MEASURES NECESSARY TO REDUCE SUCH IMPACTS TO A LEVEL OF INSIGNIFICANCE

A. Additional Testing Has Revealed Previously Undisclosed Arsenic Contamination

Subsequent to the issuance of the FEIR, additional soil contamination testing was conducted in the area that was identified in photos as possibly having been a hazardous material storage site and that had been identified in prior tests as having levels of lead contamination near thresholds of significance. The additional testing found an area of previously undisclosed arsenic contamination that exceeds worker safety levels and is significantly higher than the background levels of arsenic found in the rest of the Project site. In his attached comments, hazards expert Matt Hagemann testifies that this contamination may pose a health risk to construction workers if sufficient worker safety measures are not implemented. In addition, the additional testing confirmed that the rest of the Project area has background levels of arsenic that exceed the Tier-I screening level of 0.39 mg/kg for residential uses.

The July 10, 2014 Iris Environmental Subsurface Site Investigation Report for the Petaluma Riverfront Project states that 27 new soil samples were taken in the area of the Project that Mr. Hagemann's previous comments identified as having a history of potential hazardous material storage and that prior sampling

[2] CEQA "Guidelines," 14 Cal. Code Regs. § 15088.5.
[3] *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (1981) 122 Cal.App.3d 813, 822.

found to have levels of lead nearing the 80 mg/kg Tier-1 soil screening level. The prior sampling only tested soil in this area below four feet from the surface. Mr. Hagemann testified that the prior test results indicated that lead levels were increasing as they came closer to the surface. As a result, he concluded that soils between four feet and the surface could have lead concentrations exceeding the 80 mg/kg Tier-1 soil screening level and that further testing was needed in this near-surface area.

The new testing took samples from this near-surface area and found lead concentrations ranging from 1.2 to 68 mg/kg. Accordingly, lead concentrations, while elevated in this area, appear to remain below the 80 mg/kg Tier-1 soil screening level.

The additional testing, however, found a spike in levels of arsenic that exceeds worker safety levels in the area of the Project that previously may have been a hazardous material storage site. These levels substantially exceed what other samples show to be the naturally occurring background level of arsenic on the Project property. In 25 of the 27 new samples, arsenic was present at concentrations between 2.3 and 5.9 mg/kg. Two samples, however, showed spikes in arsenic concentrations, one with arsenic levels of 7.4 mg/kg and one with arsenic concentrations of 14 mg/kg.

The staff report's claim that the 14 mg/kg arsenic concentrations is consistent with background conditions is not supported by these findings. First, recent studies have shown that the "upper estimate" (99th percentile) for background arsenic in the Bay Area within undifferentiated urbanized flatland soils is 11 mg/kg. The 14 mg/kg finding exceeds even this upper estimate and thus is unlikely to be due to naturally occurring background levels of arsenic.

Second, the California EPA states that background concentration of arsenic or other metals of potential concern at a site should be determined from analysis of site-specific samples in uncontaminated areas using guidance published by Cal/EPA and/or reference to published data for nearby sites. Furthermore, background data for nearby sites may only be used as a surrogate for uncontaminated site data if those data are obtained from soil of the same lithology as that found on-site.[4] Here,

[4] California Environmental Protection Agency, Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (2005) p. 2-10.

the other soil samples taken on the Project property provide the best evidence of the naturally occurring background level of arsenic in this soil. When compared with these other samples and looked at in context with the high lead concentrations and past use of this area of the property, the evidence does not support a finding that the arsenic levels of 7.4 mg/kg and 14 mg/kg are naturally occurring.

Moreover, Mr. Hagemann testifies that even if the arsenic on this site were naturally occurring, that does not mean it does not pose a risk to workers and the general public. While the San Francisco Bay Regional Water Quality Board has stated that "cleanup of naturally-occurring chemicals to less than background concentrations is not *generally* required," the use of the word "generally" means that there are times and situations where cleanup is appropriate.[5] Mr. Hagemann cautions that whether or not cleanup or other mitigation measures are appropriate should be determined on a case by case basis looking at the proposed use or disturbance of the soils.

Furthermore, the statement by the San Francisco Bay Regional Water Quality Board that cleanup of naturally occurring arsenic is generally not required is a policy statement and is not a finding under CEQA that naturally occurring arsenic at concentrations above the screening levels poses a less than significant health risk to construction workers or the general public. The risk from arsenic contamination from background levels is no different from the risk of arsenic contamination that is not naturally occurring. The only difference is the origin of the contamination. CEQA's requirement for disclosure and mitigation of potential Project impacts is separate and independent from other agency requirements. An agency's policy decision not to require cleanup of certain types of contamination does not exempt the City from independently evaluating that contamination in an EIR and determining if the risks to workers or the public from the Project's disturbance of contaminated soil require mitigation.

Mr. Hagemann testifies that, in this case, the Project would result in grading and other ground disturbing construction activities that could put construction workers at risk for inhaling soil that is contaminated with arsenic at levels above the "Construction/Trench Worker" safety thresholds. Accordingly, appropriate

[5] San Francisco Bay Regional Water Quality Board, *User's Guide: Derivation and Application of Environmental Screening Levels* (2013) p. 9-2 (emphasis provided).

worker safety mitigation measures should be imposed to reduce the health risks to workers below a level of significance.

In addition, this Project proposes construction of baseball fields and other areas of intensive recreation. Soil throughout the Project site greatly exceeds the Tier-I screening level of 0.39 mg/kg. The potential for kids to kick up and inhale arsenic contaminated soil should be evaluated to determine if this particular use requires additional cleanup or other mitigation even where the arsenic contamination is naturally occurring.

These risks to workers and future inhabitants are risks that would not occur if the Project did not proceed and these contaminants remained in place. Because the Project itself is increasing the risk of exposure to arsenic-contaminated soils, this risk must be evaluated and mitigated in the FEIR.

Because this is a new impact that was not evaluated in the FEIR, the EIR must be revised and recirculated for public comment. A revised EIR must not only disclose the existence of the contaminated soil as part of the Project setting, it must also describe and evaluate the potential environmental and human health impacts that may result from the disturbance of the contaminated soil due to Project construction and operational activities.

Mere acknowledgment of the existence of contaminated soil is not sufficient to meet CEQA's legal requirement to disclose and evaluate a project's potential "impacts." CEQA requires an EIR to do more than describe the project and the project setting. It also requires describing and evaluating the potential impacts that may result from the project. Under CEQA Guidelines, § 15126.2, such an evaluation of impacts must include a description of any health and safety or environmental problems that may be caused by the physical changes that the proposed project will precipitate.[6] Because the FEIR fails to disclose, evaluate or describe the potential health and safety risks to construction workers and future occupants from the Project's disturbance of arsenic-contaminated soil, the FEIR fails to comply with the requirements of CEQA.

In summary, the levels of arsenic found in the additional testing are at concentrations that exceed health-based screening levels for construction workers,

[6] CEQA Guidelines, § 15126.2, subd. (a).

the general public and future occupants of the property. The proposed grading and construction activities may disturb and expose this contaminated soil, increasing the likelihood that workers or neighbors will breathe in contaminated dust or otherwise be exposed to contaminated soil that would previously have been encased underground. In addition, the Project may increase the health risks posed by this contaminated soil by inviting children and other members of the public to play in the contaminated dirt through construction of parks, residential yards, and baseball fields. These risks must be disclosed, evaluated and mitigated in a revised EIR.

B. The FEIR Fails to Adequately Disclose, Analyze and Mitigate Significant Air Quality Impacts

The air pollution analysis was improperly manipulated to avoid mitigation. The FEIR estimates that the Project will be constructed over a period of five years, and will be in *active* construction for more than 1,300 workdays. The FEIR relies on two analyses of construction-related air pollution generated by the Project. The first reviews construction of the entire Project, and assumes that it will take twice as long to construct the Project buildings, and ten times as long to paint the buildings, compared to similarly sized projects. The analysis adds 440 building construction days and 290 painting days to the Project construction schedule, for a total schedule of 1,320 construction days. As a result, the Project's construction emissions are spread over a longer period, with fewer "average daily emissions." Based on these low average daily emissions, the Project does not exceed the CEQA threshold of significance and does not require mitigation.

The FEIR explains that the reason for adding more than 730 workdays to the construction schedule is that "the various components of the project (single-family homes, town homes, mixed use building, hotel and office building) will be built at different times given the proposed phasing," which "will increase the overall period of construction of the project compared to constructing all five components of the project at the same time."[7]

The second analysis reviews construction of all Project components except the single-family homes. The purpose of the second analysis is to analyze the health risks of diesel fumes and other air pollution if the single-family homes are constructed and occupied before the remaining Project components. The second

[7] FEIR p. 4-108.

analysis does not add any building construction or painting days to the construction schedule, and the total schedule for constructing the hotel, townhomes, apartments, and office and commercial buildings is 520 construction days. As a result, the calculated amount of toxic air contaminants that will adversely affect human health is lower than it would be if the construction schedule was extended. The second analysis concludes that no thresholds of significance are exceeded and no mitigation is required.

The FEIR explains that 520 construction days is a reasonable schedule for constructing four of the five Project components, and 800 construction days is a reasonable schedule for site preparation, grading, and construction of the single-family homes, because "the single family homes are by far the largest single portion of the project."[8]

Each of the two air quality analyses uses different assumptions about the construction schedule in order to avoid a finding of significant impacts. The FEIR provides inconsistent justifications for these differing approaches: first, the FEIR states that the construction schedule was extended by more than 730 days because the Project involves five components and will be built in phases, and second, the FEIR states that four of the Project components will not be built on an extended schedule and only one component, the single-family homes, requires the 730-day extension.[9] These inconsistencies cannot be reconciled. As a result, the FEIR violates CEQA's requirement to provide an accurate and consistent project description. The FEIR must be revised to accurately reflect air quality impacts and health risks during construction.

The FEIR is incorrect when it states that "[e]xtending the length of the construction period for the project does not necessarily result in a reduction in daily emissions."[10] First, as the FEIR acknowledges, an increased construction period results in lower estimated emissions and associated impacts because emission rates for construction equipment are assumed to decrease over time.[11] The more the schedule is extended, the fewer total emission are estimated.

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[8] FEIR p. 4-109.
[9] FEIR pp. 4-108 to 4-109.
[10] FEIR p. 4-108.
[11] *Ibid.*

Second, the painting phase has much lower daily emissions than any other phase, and therefore adding 290 days to the painting phase results in a much lower average daily emissions rate. The Draft EIR ("DEIR") estimated that emissions during the painting (or "architectural coatings") phase total 0.65 unmitigated tons of Nitrogen Oxides ("NOx") over 325 construction days, an average of 0.002 tons per day.[12] In comparison, unmitigated emissions of NOx during the building construction phase average 0.02 tons per day, which is 10 times higher than the painting phase.[13] Unmitigated emissions of NOx during the site preparation phase average 0.03 tons per day, 15 times higher than the painting phase. Unmitigated emissions of NOx during the grading phase average 0.04 tons per day, 20 times higher than the painting phase.

By calculating the Project's construction emissions under an assumption that the painting phase will take up 25% of the total construction schedule (this phase normally takes only 3% of a construction schedule), the average daily emissions are greatly reduced, which allows the City to avoid a finding of significant impacts, and allows the Applicant to avoid air quality mitigation measures during construction.

The FEIR states that the painting phase was extended because the Applicant suggested to staff that painting buildings and striping roads and parking lots for this Project would take much longer than predicted, and because interior construction work would overlap with the painting phase.[14] There is no substantial evidence supporting the claim that painting the Project buildings and parking lots will take ten times longer than a similarly sized project. Moreover, it is perfectly fine to overlap phases of construction when modeling air quality impacts, such as the building phase and the architectural coatings phase.[15] It is unacceptable and inaccurate, however, to not overlap these phases and instead extend the painting phase by ten times its anticipated length, simply because that work will overlap with interior building construction. The CalEEMod model is the computer program used to calculate air quality impacts. It specifically defines the building construction phase and architectural coatings phase.[16] The City lacks substantial

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[12] DEIR, Appendix C-1, Attachment 1, pp. 10, 27, and 29.
[13] DEIR, Appendix C-1, Attachment 1, pp. 10, 17, 19, 21, and 23.
[14] FEIR p. 4-110.
[15] BAAQMD's 2011 CEQA Guidance, pp. 8-2, 8-5, *available at*: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en
[16] CalEEMod User's Guide, p. 25, *available at* www.caleemod.com.

evidence for its presumption that the architectural coatings phase for the Project will take 290 working days longer than predicted by the CalEEMod model.

Because the air quality model was improperly manipulated, the FEIR concludes that the Project will not exceed thresholds of significance for construction air quality, and does not require mitigation for criteria air pollutants or for fugitive dust during and after mass grading of the Project site, which the BAAQMD would otherwise require. Thus, the Applicant gets a double windfall—avoiding full mitigating for equipment exhaust, and for dust generation. The result is a cost savings for the Applicant, but an undue threat to the health and air quality of the City's residents and workers. This section of the EIR must be revised and recirculated to provide an analysis based upon substantial evidence and a clear and consistent Project description.

The City is now attempting to remedy this issue outside of the CEQA process by proposing a new condition of approval that requires the applicant to submit an annual report on the actual and assumed construction schedule. This condition is insufficient to remedy the flaws in the CEQA document. The FEIR impact analysis is still based on an inconsistent and contradictory project description that is not supported by substantial evidence. Moreover, the condition of approval provides no requirement to update the air quality analysis based on these reports and no remedy should actual emissions be higher than assumed.

C. The FEIR Fails to Adequately Disclose, Analyze and Mitigate Significant Impacts Regarding Geotechnical Problems on the Site

Six successive geotechnical reports were prepared for the Project between 2006 and 2014, and the Applicant still cannot provide the City with a concrete plan for avoiding the problem of sinking bay muds on the Project site.[17] In the southern portion of the Project site where bay muds are thickest, the Applicant and its consultants have rejected the three main recommended measures from the geotechnical reports: preloading the soil (too time consuming), using deep foundations (too deep), and using rammed aggregate piers (not feasible). The most

[17] FEIR, Appendix B, Geotechnical Peer Review, and Appendix C-4 (note that the most recent Geotechnical Peer Review in Appendix B mainly focused on the *first* geotechnical study, and did not address the fact that most of the identified mitigation measures in that study were subsequently rejected).

recent geotechnical report predicts that the greatest potential problem with sinking bay muds will be in the areas that require the most soil fill, particularly around the future Caulfield Lane Extension Bridge.

The only solution suggested in the FEIR is a new mitigation measure, which would require a *further* geotechnical report to verify what measures are available to address this impact.[18] Under CEQA, however, deferral of the formulation of mitigation measures to post-approval studies is generally impermissible.[19] A lead agency cannot defer to a later date its responsibility for developing feasible mitigation measures, with measurable standards for compliance. This must be done *in the EIR itself*, not after Project approval. An agency may not call for an unspecified mitigation plan to be devised based on future studies,[20] or rely on mitigation measures of uncertain efficacy or feasibility.[21] The proposed mitigation in the geotechnical studies is acknowledged to be of uncertain efficacy and feasibility, and the City cannot put off a full assessment until a later review.

Furthermore, revised Mitigation Measure GEO-3 suggests that up to ten feet of lightweight fill may be required around the future Caulfield Lane Extension Bridge, instead of redistributing existing soils from the north of the Project site to the south.[22] The FEIR also suggests that soils may need to be excavated from this area and replaced with lightweight fill.[23] This mitigation measure would itself create impacts that are not analyzed in the FEIR, including air quality and traffic impacts associated with importing lightweight fill and exporting existing soils from the north of the Project site if they cannot be redistributed on site. The FEIR must be revised to analyze these potential impacts.

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[18] FEIR p. 2-9, Mitigation Measure GEO-3.
[19] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309; *see also* CEQA Guidelines § 15126.4(a)(1)(B).
[20] *City of Long Beach v. Los Angeles School Dist.* (2009) 179 Cal.App.4th 889, 915; *Communities for a Better Env't v. City of Richmond* (2010) 184 Cal.App.4th 70, 95; *San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149 Cal.App.4th 645, 669.
[21] *Kings County Farm Bur. v. County of Hanford* (1990) 221 Cal.App.3d 692, 727-28.
[22] FEIR p. 2-9.
[23] FEIR p. 4-170.

D. The FEIR Contradicts Itself Because It Acknowledges that the Project Must Be Occupied by 2019, but Analyzes Greenhouse Gas Impacts Using a 2020 Occupancy Date

In Section 2 of the City's recently adopted 2013 SmartCode, the City granted a specific exemption for the Project. One of the limitations on this exemption is that the Project must be built and ready for occupancy by 2019, within six years of the 2013 SmartCode adoption. As stated in the FEIR, "[e]ssentially, certificates of occupancy would need to be obtained by July 2019 in order to strictly comply with Section 2 of the Amended SmartCode."[24] If the Project is not constructed and ready for occupancy by that time, the site will need to be redesigned.[25] This inconsistency between the Project's claim to be exempt from the 2013 SmartCode and the FEIR's claim that occupancy will not occur before 2020 is a violation of CEQA's requirement to provide an accurate, consistent and stable Project description.

Despite this clear inconsistency, the FEIR continues to rely on a 2020 occupancy date. Moreover, the FEIR compounds this error by then relying on speculative, unofficial and no longer accurate figures for electricity-related GHG emissions in 2020. The use of these figures is not supported by substantial evidence. The FEIR relies on a PG&E guidance document from April 2013, which is based on a GHG "calculator" developed in 2010. The guidance document specifically states that it is "for informational purposes only" and is "not to be used" for regulatory compliance.[26] It estimates that by 2020, PG&E's GHG emissions factor will drop to 290. As discussed in Petaluma Residents' prior comments, the use of PG&E's speculative future GHG emission factor for 2020 is not appropriate under CEQA and is inconsistent with the Bay Area Air Quality Management District's ("BAAQMD") approved value of 641 pounds for the GHG emissions factor associated with PG&E's electric energy. By relying on this unofficial "informational" estimate, the EIR reduces the GHG emission factor by 55% compared to the BAAQMD approved value.

This informational document that the FEIR relies upon not only states that it should not be used for regulatory compliance, it also goes on to caution repeatedly

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[24] FEIR p. 4-181.
[25] *Ibid.*
[26] http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

about the "third party verification" process that PG&E goes through in order to verify its GHG emissions factor each year. In addition, the guidance document explains that the GHG emissions factor will vary from year to year depending on how much precipitation falls in California, which is directly correlated with the availability of clean hydro power.

The currently approved PG&E emissions factor of 641 is the most accurate, verified, and up-to-date number that has been reported to the BAAQMD by PG&E, and it is the number that is used and recommended in the most recent 2013 CalEEMod program.[27] As described in the CalEEMod User's Guide, this emissions factor is "based on Table G6 of the California Air Resources Board (ARB) Local Government Operation Protocol version 1.1 or the latest public utilities inventory reports," and "is consistent with recommendations in the California Air Pollution Control Officer Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures document."[28]

The BAAQMD has endorsed the use of a PG&E intensity factor of 641 pounds. PG&E's estimate of 290 pounds by 2020 is not a verified estimate and it is unlikely to be accurate given the extreme drought conditions that California has faced in recent years. For example, PG&E's lowest verified GHG intensity factor was 393 pounds in 2011, due to extremely wet conditions that allowed for significant hydropower generation.[29] That intensity factor rose 12% in 2012, to 451, due to a drop in hydroelectric output and an increase in gas-fueled power generation.[30] This year, that number will undoubtedly rise again. The California Independent System Operator recently released a report stating that the "main impact from the drought during the 2014 summer will be an increase in natural gas generation, which could result in an increase in energy prices, and increased greenhouse gas emissions."[31]

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[27] *See* CalEEMod User's Guide, Appendix D, Default Data Tables, Table 1.2, *available at*: http://www.caleemod.com/

[28] *Ibid.*, Appendix A, Calculation Details, p. 2.

[29] http://op.bna.com/env.nsf/id/avio-9k2tuk/$File/PGE%20comment.pdf, p. 1, fn. 4 ("The GHG intensity of California's electricity correlates strongly with the amount of hydropower used by the state …. The GHG intensity of California electricity peaked in 2001 and reached a low point in 2011, a particularly wet year.")

[30] http://www.pgecurrents.com/2014/02/06/new-numbers-confirm-pge%E2%80%99s-energy-among-the-cleanest-in-nation/

[31] http://www.naturalgasintel.com/articles/98351-with-less-hydro-california-to-lean-more-heavily-on-gas-fueled-power

This shows that the estimates in PG&E's guidance document are not accurate and should not be relied upon when performing a significance analysis under CEQA. Although the FEIR is correct that the GHG emissions calculator can be used to predict future GHG emissions factors for utility companies, there is nothing to suggest that the calculator predicted the current severe drought when it was released in 2010. There is no evidence to support the use of a GHG intensity factor of 290 for the Project, particularly because it is so much lower than PGE's lowest verified intensity factor, which was 393 in 2011, and because drought conditions have become much more severe since that time. The City's calculations of the GHG emissions that will be associated with the Project's energy consumption are thus not supported by substantial evidence.

E. The FEIR Ignores the Insufficiency of the Proposed Community Boathouse Site

To provide community benefits anticipated by the City's General Plan, the Applicant has designated a small parcel in the southeast corner of Project site ("Parcel D") for dedication to the City as the potential site for a future community boathouse. The DEIR stated that although the boathouse is not part of the Project, "the City has included it in this environmental analysis to help facilitate future development."[32] The FEIR, however, retreats from this position and now states that the boathouse is "not included as part of the proposed Riverfront project *or* evaluated in the DEIR."[33] As a result of this confusion, the FEIR improperly piecemeals the boathouse project from the rest of the Project and violates CEQA by failing to provide an accurate and stable project description.

A number of potential barriers to development of the boathouse parcel have arisen during the course of environmental review of the Project. First, new analysis in the FEIR shows that a portion of Parcel D will very likely be inundated by sea level rise.[34] Second, Parcel D is adjacent to a brackish marsh area that the California Department of Fish and Wildlife believes may support the protected salt marsh harvest mouse. The development of Parcel D may have significant impacts on this fully protected species.[35] Third, Parcel D is within the 100-foot buffer from

[32] DEIR p. 3-8.
[33] FEIR p. 4-21 (emphasis added).
[34] FEIR p. 3-19, Figure 4.6-1; FEIR p. 4-163.
[35] *See* FEIR p. 4-27.

the Petaluma River and its associated banks, which is susceptible to soil lurching. A future boathouse would therefore require a deep foundation that extends over 30 feet into the bay mud to reach the bedrock, which is a costly endeavor.[36]

These concerns are shared by Petaluma Water Ways in their attached letter. Petaluma Water Ways urges the City to resolve the issues related to the development feasibility of the boathouse before the Project's site plans are finalized, since the boathouse footprint may have to be changed. As Petaluma Water Ways states:

> It would be a tragedy to proceed with this project on this unique property only to later find the boathouse can't be built where today's drawings show it. To put it mildly, not getting the boathouse because of previously known problems would be a tremendous disappointment and irreplaceable loss to the community.

Petaluma Water Ways also notes that compatibility issues between the boathouse use and the Project development have not been addressed in the EIR. Parking availability for recreational users will need to be addressed to encourage day use parking along the Riverfront shoreline greenway and discourage long-term parking that could interfere with access. In addition, the FEIR fails to address potential noise and traffic impacts on the Project's residents that may occur upon construction and operation of the boathouse. The City should require as mitigation, that sellers of homes across the street from the park and boathouse obtain buyer's agreement to a "right to recreation" disclosure of these possible noise and traffic impacts.

The community benefits proposed by the Applicant included the dedication of a viable site for a potential community boathouse. It now appears that the designated site may be too close to the Petaluma River, and should be set back by a reasonable distance to accommodate for future sea level rise, soil instability, and potential habitat impacts. The City should require the Applicant to dedicate a site free from such substantial problems before it approves the Project and should impose mitigation to address potential land use conflicts between the boathouse and the Project residences.

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[36] FEIR pp. 4-138 to 4-139.

F. The FEIR Introduces New Biological Mitigation Measures in the Form of "Voluntary" Measures, but Does Not Make Them Mandatory, Enforceable, and Specific

In response to the DEIR, the California Department of Fish and Wildlife ("CDFW") submitted comments requesting that avoidance measures be required for those portions of the Project that are developed adjacent to salt marsh vegetation.[37] Salt marsh vegetation supports the salt marsh harvest mouse, which is a fully protected species under the California Endangered Species Act. CDFW believes that the mouse may occur in the marshland adjacent to the Project site, which is why CDFW requested mitigation.

The FEIR disagrees that there will be any impact on the mouse, even though some development will occur adjacent to marshland habitat. The FEIR's position that the Project does not have the potential to impact the salt marsh harvest mouse is not supported by substantial evidence. CEQA requires an EIR to disclose all potentially significant impacts of a project to the public and the decisionmakers. The failure to disclose this as a potential impact thus violates CEQA.

Despite refusing to acknowledge that this might be a potential impact, the FEIR states that the measures suggested by CDFW "such as wildlife fencing and construction personnel training about sensitive wildlife will be implemented voluntarily by the applicant."[38] CEQA, however, requires that mitigation measures be mandatory, enforceable, and specific, which the proposed "voluntary" measures are not. Also, the measures are clearly mitigation measures agreed to by the Applicant in response to concerns about potential impacts by CDFW. Courts will not hesitate to find that if something walks like a mitigation measure and talks like a mitigation measure, it is a mitigation measure.[39]

Having failed to address this issue in the FEIR, staff is now attempting to address the issue after the fact by recommending a new condition of approval that requires "[c]onstruction best management practices including exclusionary fencing for wildlife barrier fencing, avoidance buffers, and personnel training [that will be] implemented during construction in proximity to the Coastal brackish marsh habitat." This condition is insufficient to remedy the flaws in the CEQA document.

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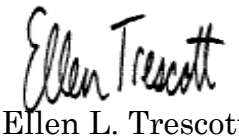
[37] FEIR p. 4-25.
[38] FEIR p. 4-28.
[39] *Lotus v. Dep't. of Transportation* (2014) 223 Cal.App.4th 645.

Even with the new condition of approval, the FEIR still fails to perform its informational role of disclosing all Project impacts to the public and the decisionmakers and no opportunity is provided for review or comment on the sufficiency of the proposed mitigation. Here, the proposed mitigation is insufficient on its face. It fails to identify the standards or protocols that will be followed to determine the appropriate type and location of fencing and avoidance buffers and fails to provide for any oversight on these measures by CDFW.

III. CONCLUSION

While Petaluma Residents commend the City for finally performing the necessary additional soil contamination testing, this testing has raised new issues and has not resolved the numerous other significant environmental issues that remain inadequately addressed in the EIR. The EIR must be revised to adequately evaluate and mitigate all of the Project's potential impacts based upon substantial evidence and a clear and consistent Project description. The EIR for the Project must be revised and recirculated.

Sincerely,



Ellen L. Trescott

ELT:ljl

Attachments: (A) Matt Hagemann, SWAPE Comment Letter (July 18, 2014)
(B) Susan Starbird, Petaluma Water Ways Letter (July 18, 2014)

* Internet links to all other references are provided herein. Paper copies of these documents will be promptly provided to the City upon request.

cc: Olivia Ervin (oervin@ci.petaluma.ca.us)
Claire Cooper, City Clerk (cityclerk@ci.petaluma.ca.us)

ATTACHMENT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2503 Eastbluff Dr., Suite 206
Newport Beach, California 92660
Matt Hagemann
Tel: (949) 887-9013
Email: mhagemann@swape.com

July 18, 2014

Thomas A. Enslow
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Subject: Comments on the Petaluma Riverfront Project Final Environmental Impact Report

Dear Mr. Enslow:

You have asked me to review the additional soil contamination testing that was performed on the Petaluma Riverfront Project site in response to my earlier comments. In summary, the new tests provided additional near surface soil sampling data from an area that was identified in photos as possibly having been a hazardous material storage site in the past and that had been identified in prior tests as having levels of lead contamination near thresholds of significance. The additional testing again found lead contamination near thresholds of significance, but did not identify any lead contamination that exceeded these thresholds.

However, the additional testing found an area of previously undisclosed arsenic contamination that exceeds worker safety levels and is significantly higher than the background levels of arsenic found in the rest of the project site. This contamination may pose a health risk to construction workers if sufficient worker safety measures are not implemented. In addition, the additional testing confirmed that the rest of the project area has background levels of arsenic that exceed the Tier-I screening level of 0.39 g/kg for residential uses. While Cal EPA does not generally require cleanup of naturally occurring levels of arsenic, that does not mean that naturally occurring arsenic is risk free and does not require mitigation for certain uses. Proposed project site uses that are likely to result in inhalation or arsenic-contaminated dust should be evaluated to determine if mitigation is appropriate. For example, the construction of baseball fields on the property could result in kids kicking up and breathing arsenic-contaminated dust.

Evaluation of New Test Results

The July 10, 2014 Iris Environmental Subsurface Site Investigation Report for the Petaluma Riverfront Project states that 27 new soil samples were taken in the area of the project that my previous comments identified as having a history of potential hazardous material storage and that prior sampling found to have levels of lead nearing the 80 mg/kg Tier-1 soil screening level. The prior sampling only

tested soil in this area below four feet from the surface. The prior test results suggested that lead levels were increasing as they came closer to the surface, indicating a potential that soils between four feet and the surface could have lead concentrations exceeding the 80 mg/kg Tier-1 soil screening level.

The new testing took soil samples from this near-surface area and found lead concentrations ranging from 1.2 to 68 mg/kg. Accordingly, lead concentrations, while elevated in this area, appear to remain below the 80 mg/kg Tier-1 soil screening level.

However, the additional soil sampling found a spike in levels of arsenic that exceeds worker safety levels in the area of the project that may have formally been a hazardous material storage site. These levels exceed what appears to be the naturally occurring background level of arsenic on the project property. 25 of the 27 new samples contained arsenic at concentrations between 2.3 and 5.9 mg/kg. One sample, however, showed a significant spike in arsenic concentrations, one with arsenic at a level of 14 mg/kg.

The staff report's claim that these arsenic concentrations are consistent with background conditions is not supported by these findings. First, recent studies have shown that the "upper estimate" (99th percentile) for background arsenic in the Bay Area within undifferentiated urbanized flatland soils is 11 mg/kg. 14 mg/kg exceeds even this upper estimate and thus is unlikely to be due to naturally occurring background levels of arsenic.

Second, the California EPA states that background concentration of arsenic or other metals of potential concern at a site should be determined from analysis of site-specific samples in uncontaminated areas using guidance published by Cal/EPA and/or reference to published data for nearby sites. Furthermore, background data for nearby sites may only be used as a surrogate for uncontaminated site data if those data are obtained from soil of the same lithology as that found on-site. (California Environmental Protection Agency, Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties (2005) p. 2-10.) Here, the other soil samples taken on the project property provide the best evidence of the naturally occurring background level of arsenic in this soil. When compared with these other samples and looked at in context with the high lead concentrations and past use of this area of the property, the evidence does not support a finding that the arsenic level of 14 mg/kg is naturally occurring.

Moreover, even if the arsenic on this site were naturally occurring, that does not mean it does not pose a risk to workers and the general public. While the San Francisco Bay Regional Water Quality Board has stated that "cleanup of naturally-occurring chemicals to less than background concentrations is not *generally* required," this does not mean that naturally occurring arsenic does not pose a health risk or that certain uses or disturbances of soils contaminated with naturally occurring arsenic shouldn't be evaluated and mitigated. (San Francisco Bay Regional Water Quality Board, *User's Guide: Derivation and Application of Environmental Screening Levels* (2013) p. 9-2 (emphasis provided).) Whether or not cleanup or other mitigation measures are appropriate should be determined on a case by case basis looking at the proposed use or disturbance of the soils.

Furthermore, the statement by the San Francisco Bay Regional Water Quality Board that cleanup of naturally occurring arsenic is generally not required is a policy statement and is not a finding that naturally occurring arsenic at concentrations above the screening levels does not pose any risk to human health. The risk from arsenic contamination from background levels is no different from the risk of arsenic contamination that is not naturally occurring. The only difference is the origin of the contamination.

In this case, the project would result in grading and other ground disturbing construction activities that could put construction workers at risk for inhaling dust from soil that is contaminated with arsenic at levels above the "Construction/Trench Worker" safety thresholds. Accordingly, appropriate worker safety mitigation measures should be imposed to reduce the health risks to workers below a level of significance.

In addition, this project proposes construction of baseball fields and other areas of intensive recreation. Soil throughout the project site greatly exceeds the Tier-I screening level of 0.39 mg/kg. The potential for kids to kick up and inhale dust from arsenic contaminated soil should be evaluated to determine if this particular use requires additional cleanup or other mitigation even where the arsenic contamination is naturally occurring.

In summary, the levels of arsenic found in the additional soils testing are at concentrations that exceed health-based screening levels for construction workers, the general public and future occupants of the property. The proposed grading and construction activities may disturb and expose this contaminated soil, increasing the likelihood that workers or neighbors will breathe in contaminated dust or otherwise be exposed to contaminated soil that would previously have been encased underground. In addition, the project may increase the health risks posed by this contaminated soil by inviting children and other members of the public to play in the contaminated dirt through construction of parks, residential yards, and baseball fields. These risks should be evaluated and mitigated.

Sincerely,

Matt Hagemann, P.G., C.Hg.

ATTACHMENT B

PETALUMA
WATER WAYS

July 18, 2014

City Council
City of Petaluma
c/o Heather Hines

Council and staff;

The Riverfront project affects or is affected by Petaluma Water Ways projects #25 and 25A (the waterfront greenway and community boathouse) and #27 and 28 (Southern Crossing and railroad bridge undercrossing, nearby connectors).

Members of the Petaluma River Access Partnership found Riverfront's shoreline greenway and the Community Boathouse site congruent with the 1996 River Access Plan and therefore with Petaluma Water Ways. Both the boathouse and the greenway are critical features of the overall interconnected water- and land-trail network, so we look forward to seeing completion of these "landmark" community assets.

Below are some comments regarding the EIR scheduled to be presented to Council 7/21/14, plus some other thoughts I urge the City to consider as the project continues through the development process.

PARK: We understand that the developers, through a homeowners association or other structure, will maintain improvements to the Riverfront shoreline greenway after development as described in staff's project overview (7/21/14 agenda item 6C; Att. 15 includes conceptual design of the park). We appreciate the private sector's willingness to undertake this service to the public commons.

BOATHOUSE: We share the concerns about boathouse siting raised by Petaluma Residents for Responsible Development in its critique of the EIR (Att. 10). Issues related to development feasibility should be resolved *before* Riverfront site plans are finalized, as the boathouse footprint shown on present documents may change in the process. It would be a tragedy to proceed with this project on this unique property only to later find the boathouse can't be built where today's drawings show it. To put it mildly, not getting the boathouse because of previously known problems would be a tremendous disappointment and irreplaceable loss to the community.

PARKING: The boathouse and the waterfront park require adequate visitor parking (see Attachment 13 to 7/21/14 presentation). Along the Riverfront shoreline greenway, street parking should be limited in duration to encourage day use and discourage long-term parking or

car camping. The city should require sellers of homes across the street from the park and boathouse to obtain buyers' agreement to a pre-emptive "right to recreation" disclosure of possible noise and traffic impacts accompanying the benefits of being situated near a park.

ACCESS: We understand that the City is actively pursuing easements, rights of way, or other arrangements to codify the waterside connection between this property and the Marina downstream. We also understand that the right-of-way shown for a future Southern Crossing meets the City's standards for a multimodal (automobile, bicycle, pedestrian, baby stroller, etc.) overcrossing.

Regrettably, I cannot appear in person at the 7/21 Council meeting to express our excitement and concerns. Please include P-RAP in future announcements regarding progress on Riverfront because we will continue to take intense interest in this new public access to the river.

Sincerely,

Susan Starbird
Volunteer

Cc: Bill White
Vin Smith
Greg Sabourin & PSCC Board
Ellen Trescott