

# **ATTACHMENT 4**

## **Additional Responses to Questions and Data Request**

*Additional Responses to Information Requests from Councilmember Davis*

8/7/17

**3. How will 20 years of pile driving affect those already leaking pipelines?**

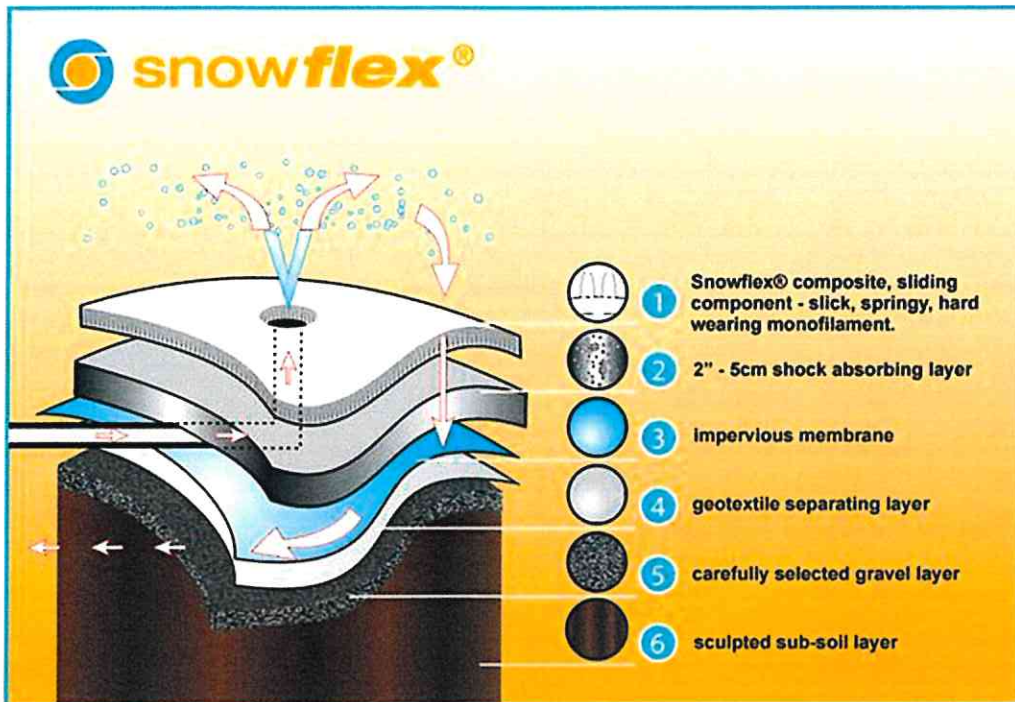
While pile driving may be necessary for the construction of high-rise office or hotel structures, it would not be a constant presence over the life of Baylands development since not all structures would require pile driving, and pile driving where necessary, would occur only for a portion of building construction. Pile driving activities should be far enough from Kinder Morgan pipelines so as not to affect their structural integrity.

Mitigation Measure 4.J-2b currently requires any development within 85 feet of the Roundhouse that would require pile driving to engage a qualified geotechnical engineer subject to City approval and conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of the nearby historic structures subject to pile-driving or other vibration-inducing activity before a building permit. Such study must demonstrate that the proposed construction activities would not result in vibration-induced damage to the Roundhouse building. This mitigation measure could also be expanded to address potential impacts to existing Kinder Morgan pipelines.

**25.I want more information about private recreation, specifically related to year round snow board/snow ski parks *clarification requested at July 24, 2017 City Council meeting.***

An outdoor, dry slope park is intended to provide participants with a safe and accessible skiing and snowboarding experience throughout all four seasons. Dry slope parks have been in existence for more than 25 years and the operators report that synthetic design technology has improved substantially over time. Dry slope parks are commonplace in areas such as England and the Netherlands, which do not have easy access to snow skiing, and are beginning to emerge in the United States.

The two companies which design and manufacture the majority of the synthetic material for dry slope areas are Briton Engineering Developments Ltd. and Neveplast USA LC. Both companies currently have one USA flagship project each. Briton Engineering Developments Ltd., based in England, has their flagship dry slope park at Liberty University in Lynchburg, VA. Neveplast, based in Italy, has their dry slope park at Buck Hill Ski Area in Burnsville, MN. Both companies have also built areas for American Olympic athletes to train as well. Neveplast and SnowFlex use a concentric arrangement of conical stems of strong, round section, extruded monofilament plastic. The technological design for the SnowFlex product can be seen **below**.



SnowFlex design technology -- Source: SnowFlex

Dry slope parks are intended to be accessible for users of all skill levels and to accommodate a wide variety of activities, most commonly skiing and snowboarding, with the terrain of a typical park being suitable for beginners and experts alike. The portion of the park's terrain geared toward intermediate and expert skiers and snowboarders is "freestyle" terrain, which is characterized by jumps, moguls, boxes and rails. The portion of the park's terrain geared toward beginners, is characterized by a gently sloped gradient with no difficult features. Other activities for dry slope parks may include tubing, cross-country skiing, and go-kart racing. Dry slope parks generally have similar facilities as a traditional ski resort, such as ski lifts, and ski lodge with equipment rental, food, concessions and other related services.

The business model typically involves (e.g. developers, landowners, municipalities) paying for the synthetic product (i.e. SnowFlex, Neveplast), as well as shipping and installation costs. The investor also pays for an architect and designer, as well as the total operational and maintenance costs. Investors for outdoor, dry slope recreation areas range from mountain ski resorts, theme parks, family entertainment centers, shopping centers, fitness operators, local municipalities, clubs and universities.

The following pricing chart is from Briton Engineering Developments Ltd, the producer of SnowFlex:

## US Dollars \$

snowsports area (ft2)	30,000	60,000	100,000	160,000
lodge area (ft2) floor area	5,000-12,000	15,000	21,000	31,000
car parking (no. of cars)	200	480	800	1280
total cost (\$)	2-5 million	6-10 million	8-17 million	13-27 million
average slope capacity	100-120 people	200-250 people	400+ people	600+ people

Neveplast does not provide readily accessible pricing information. Buck Hill Inc. the owner and operator of the Buck Hill Ski Area in Burnsville, MN recently invested in a Neveplast dry slope area, comprising of 4 acres or 174,240 ft<sup>2</sup> of their mountain. This project was constructed in two phases and completed in approximately a year. Buck Hill's dry slope area is the largest in the world.



Buck Hill Dry Slope Area -- Source: Buck Hill

To run the park, the investor must assemble a team to oversee day-to-day operations and maintenance of these parks. So far, in the United States these parks have been managed by organizations which have access to adequate staffing and resources (e.g. Liberty University, Buck Hill Ski Area). Operational costs include salaries and wages, marketing, fuel, power, maintenance, local office expenses, I.T., insurance, audit and professional fees, rent (if leasing), and water (if implementing a SnowFlex system).

Typically, no mats need replacement for the first 2-3 years of operation. Beyond this time frame, high use areas such as the jump landing area, will likely need replacement. Other low to medium

impact areas have a lifespan of 5-10 years before needing replacement. The SnowFlex mats must be watered twice every two minutes with the built in BritonMist system, in order to allow for maximum speed and response. A SnowFlex dry slope area of 100,000 sq. ft. requires 300 liters of water per minute. Usually 70% of the water gets recycled in a dry, windy area. The Neveplast mats do not require water.

The primary revenue generator for dry slope parks is the return customer. Given that snowsports, such as skiing and snowboarding, are skills that are continually developing; these parks operate under a different business philosophy than a theme park. Dry slope parks target customers who return once or twice a week, rather than once or twice a year. Therefore, the operators depend on lift ticket sales, whether it be for a single day or for a season. Dry slope parks, such as Liberty Mountain Snowflex Center, also offer week long summer camps (day and overnight) for children. Additionally, these parks provide a space for corporate outings, birthday parties, or other events. The ski lodge is also a revenue generator, allowing a space for concessions, retail sales, and equipment rentals. Additional revenue may also be generated by corporate sponsors.

*Additional Responses to Information Requests from Councilmember Lentz*

8/7/17

**14. Can we achieve a zero carbon development that includes residential and commercial uses? Please show examples.**

Several case studies of low carbon jurisdictions are described below. None purport to achieve zero carbon status.

**Portland, Oregon**

Portland, Oregon, with a population of 639,000, is considered a leading example of a low-carbon city in the United States. Components Portland has incorporated that help reduce its carbon footprint include sustainable transportation infrastructure, energy efficiency mandates and programs, public-private partnerships, and planning for complete neighborhoods.

The City has a robust program of investing in sustainable transportation infrastructure. Since 1990, the Portland region has added and expanded four major light rail lines and the Portland Streetcar. This has led to transit ridership nearly doubling over the past 20 years with TriMet (the region's transportation authority) providing 100 million rides in 2016. Furthermore, Portland facilitates safe and convenient biking, with over 260 miles of bikeways rto , making it easy, accessible and safe to bike. Another example of the City's investment in sustainable transportation infrastructure is the Tilikum Crossing, the nation's first non-car transportation bridge which serves Portland's Orange Line light rail, City busses, and the Portland streetcar, as well as pedestrians, cyclists and emergency vehicles.

Portland also has focused on energy efficient buildings and private partnerships. In 2005, Portland mandated that all new city buildings are to meet LEED Gold requirements. In 2009, the City of Portland Bureau of Planning and Sustainability helped to create Clean Energy Works Portland, a first in the nation pilot program designed to help homeowners save energy through long-term low interest financing of home energy efficiency remodels. The program has retrofitted over 4,000 homes, providing employment for 400 workers, and this program was ultimately expanded statewide in Oregon. Several businesses and organizations, such as Portland General Electric, Pacific Power and the Home Performance Contractors Guild serve on the steering committee for Clean Energy Works Portland, enabling collaboration with private partners to decrease carbon emissions in other ways.

The Portland Streetcar is another public-private partnership, with nearly 20% of the project cost (\$19.4 million out of \$103.15 million) funded by private developers. In order to secure this funding, the City utilized the Local Improvement District tool, thereby taxing surrounding landowners to provide for a proportion of capital costs. They were able to do so by convincing property owners of the long-term benefits of public transit, specifically citing the economic and social benefits that the Streetcar would provide to their area. Thus far it has paid off, as accessibility to the streetcar has resulted in higher housing costs and a total private investment of \$3.5 billion in the surrounding area.



Portland Streetcar -- Source: Steve Morgan

A third example of public-private collaboration regarding sustainability is the Sustainability at Work Program. Through this program, the City of Portland matches participating businesses with a sustainability advisor at no cost. The sustainability advisor helps businesses to conserve resources, improve efficiency, save money and provide an overall healthy and quality workspace for employees.

Lastly, through its Healthy Connected Neighborhood Strategy, Portland has been able to facilitate implementation of several “complete” neighborhoods incorporating housing with a half-mile of transit, a park, a supermarket, and commercial services, and within a mile of an elementary school, served by a street network with sidewalks that allows for safe and convenient pedestrian access to neighborhood destinations. The Bureau of Planning and Sustainability estimates that approximately 50% of Portlanders live in a healthy, complete neighborhood.



Tilikum Crossing -- Source: Steve Morgan Photography

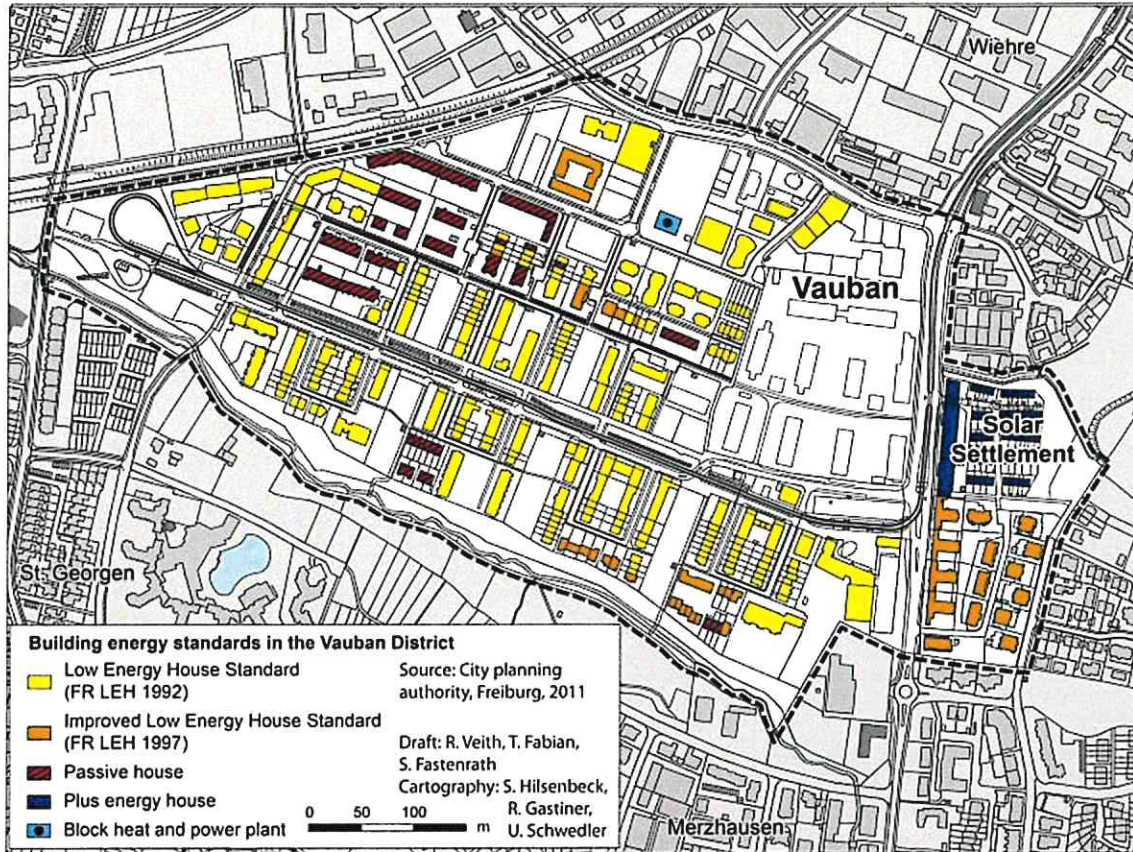
### **Vauban, Freiburg, Germany**

Vauban is a brownfield development consisting of 5,500 residents in Freiburg, Germany. Aside from being car free, it is known for being an energy efficient and low carbon community. Sustainability across the key areas of energy supply, energy efficient design, and transportation has led to Vauban's success.

Two-thirds of Vauban's energy supply derives from a combined heat and power plant that burns wood chips and natural gas. The other third is sourced from solar hot water panels on several of Vauban's buildings, many of which are considered to be "plus energy homes" because they produce more energy than they consume.

Additionally, all homes and apartment buildings in Vauban were designed with energy efficiency as a top priority. Many individual developers implementing standards in accordance with PassivHaus, the European equivalent of zero net energy buildings. The map below shows the scale and variety of energy efficient buildings within the development.





Building energy standards in Vauban -- Source: vauban.de

The driving force behind this development was a non-governmental organization called Vauban Forum, which was primarily made up of future residents of the development. Vauban Forum worked with local planners, administrators and architects (both governmental and non-governmental) to facilitate the planning and designing of this development. This bottom-up approach to planning has led Vauban to be one of the most successful low-carbon communities in the world.



Vauban, Freiburg, Germany -- Source: Making Lewes

### **Sino-Singapore Tianjin Eco-City**

The Sino-Singapore Tianjin Eco-City is an eco-city in China designed to accommodate a population of 350,000, resulting from a collaboration between the Chinese and Singaporean governments. The city is built on top of a former brownfield site, with remediation taking a total of three years. As a top-down experiment in low-carbon urban planning, it has been designed with sustainable features that were built in from the start. While the city is still largely under construction, the plans indicate it will achieve a low carbon footprint through mixed land use, a sustainable transportation system, efficient waste and water management, stringent building restrictions and renewable energy supply.

The eco city's planning documents indicate that the city will largely consist of mixed land use parcels, influenced by principles of Transit-Oriented Development. By implementing mixed land use throughout the development, the planners are attempting to create an environment in which most amenities and access to transit are within walking distance to residents, intended to reduce the need to own a private vehicle. In order to increase transportation efficiency and enhance safety, the motorized and non-motorized networks of the city are completely separate.



Eco-City Land Use Map -- Source: [http://www.tianjinecocity.gov.sg/bg\\_masterplan.htm](http://www.tianjinecocity.gov.sg/bg_masterplan.htm)

The primary mode of transportation through the eco-city is light rail, which is supplemented by trams and busses. Additionally, electric car charging stations are to be installed at every major intersection, while driverless cars designed by Google are planned to be deployed as well.

An underground, vacuum-driven waste disposal system (a world first) will make up the waste management system. In doing so, the eco-city is striving to recycle 60% of its solid waste. However, a concern of some is that the waste management system will be prone to human error, which may disrupt the technology if refuse is disposed of improperly. The eco-city is also striving to recycle 100% of its water, through its state-of-the-art water reclamation centers.

Renewable energy from wind, solar, and ground source heat pumps will comprise nearly a fifth of the eco-city's energy source. Ground source heating creates energy from temperature differences in the ground. All buildings are to be designed and retrofitted with energy efficiency as a top priority to streamline energy consumption. The minimum "green buildings" standard for all buildings within the Eco-City includes: water-saving sanitary fittings, insulated walls, double-glazed windows, and a south-facing orientation to trap passive heat.

From a social perspective, "Social Harmony" is an overarching theme of the city. To achieve this, subsidized government housing will be dispersed throughout the eco-city, so that residents of all socioeconomic levels will be able to reside there.



Sino-Singapore Tianjin Eco-City -- Source: UK Telegraph

In addition to the case studies referenced above, zero carbon development is a goal being pursued in many other venues. Two of the largest zero carbon developments are new cities being constructed in Abu Dhabi (Masdar City), which is planned for 50,000 people at buildout, and Dongtan, China, which is planned for 80,000 people. The Canadian Green Building Council has developed a “zero carbon building standard, similar to its Leadership in Energy and Environmental Design™ (LEED®) certification.

A two-year pilot program of CaGBC’s Zero Carbon Building Standard, consisting of 16 projects is underway to represent how a zero-carbon standard can be broadly applicable. These projects include institutional buildings, offices, multi-unit residential and commercial warehouses, range in size from 20,000 to 1.3 million square feet, and include both new construction and existing buildings.

**Resources:**

<https://www.vauban.de/en/topics/history/276-an-introduction-to-vauban-district>

<https://www.portlandoregon.gov/bps/article/431322>

<https://www.portlandoregon.gov/sustainabilityatwork/>

Shurtz, Nancy. Eco-Friendly Building from the Ground Up: Environmental Initiatives and the Case of Portland, Oregon. Journal of Environmental Law and Litigation.

<http://www.sustainability.vic.gov.au/publications-and-research/knowledge-archive/business-models-for-sustainable-precincts>

<http://www.bbc.com/future/story/20120503-sustainable-cities-on-the-rise>

Dhakar, Shobhakar, Matthias Ruth. Creating Low Carbon Cities. 2017.

**39. Can we treat Brisbane’s water at the Baylands? If so, how would that affect how much water would be needed at the Baylands?**

The Water Supply Assessment and EIR for the Brisbane Baylands both include construction of a recycled water plant within the Baylands. Recycled water would be used for landscape irrigation. The feasibility of a recycled water plant and the amount of water savings that could be achieved is dependent on the amount of wastewater available for treatment and recycling (which is in turn dependent on the types and amount of development generating wastewater for recycled water plant), and seasonal demands for recycled water supplies<sup>1</sup>.

**41. Can we require that the Baylands be a zero-wastewater development?**

See Response Lentz-39.

**42. With law makers in San Francisco advocating for housing on the Baylands, how can we get assurances from SFPUC that a reliable source of water will be allocated for the site?**

Whether SFPUC might provide assurance of a reliable source of water for the Baylands separate from OID water supplies as an inducement for housing within the Baylands is a matter for discussion with the SFPUC, if the City Council land use policy direction for the Baylands is to allow housing.

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<sup>1</sup> Demand for recycled water for irrigation purposes is substantially greater during the summer than winter.

**48. Explore the possibilities of building an urban bio-mass facility, so that all green waste is turned into energy and compost. Since Recology processes San Francisco's (and possibly other cities) green waste, could we require that a certain % of this waste is processed at the urban bio-mass facility to provide energy for the Baylands development?**

The feasibility of an urban biomass facility for the Baylands is dependent on the types and amount of development that would occur within the Baylands, as well as the availability and amount of waste available for processing at such a plant. Using a portion of green waste produced outside of Brisbane for processing at an urban biomass facility rather than at Recology's composting facilities could be achievable, but would require discussion with Recology, as well as environmental review for the specific urban biomass facility that might be proposed.

**50. Could the City require Title 24 requirements regarding zero net energy for homes by 2020 and commercial by 2030 be implemented now?**

Application of Title 24 requirements to the Baylands prior to the time they are required statewide could be negotiated as part of a development agreement for the Baylands.

The other option would be for the City to obtain California Energy Commission (CEC) approval of local modifications to Title 24 Building Energy Efficiency Standards, The process is described on the following webpage: <http://www.energy.ca.gov/title24/2016standards/ordinances/#process>

In brief, the City would submit an application to the CEC with the following:

1. Proposed energy standards
2. City Council's findings and supporting analyses on the energy savings and cost effectiveness of the proposed energy standards
3. Statement or finding by the City that the local standards will require buildings to use no more energy than the current statewide standards and supporting documentation.

After CEC staff review and verification, the application is scheduled for hearing with the CEC.

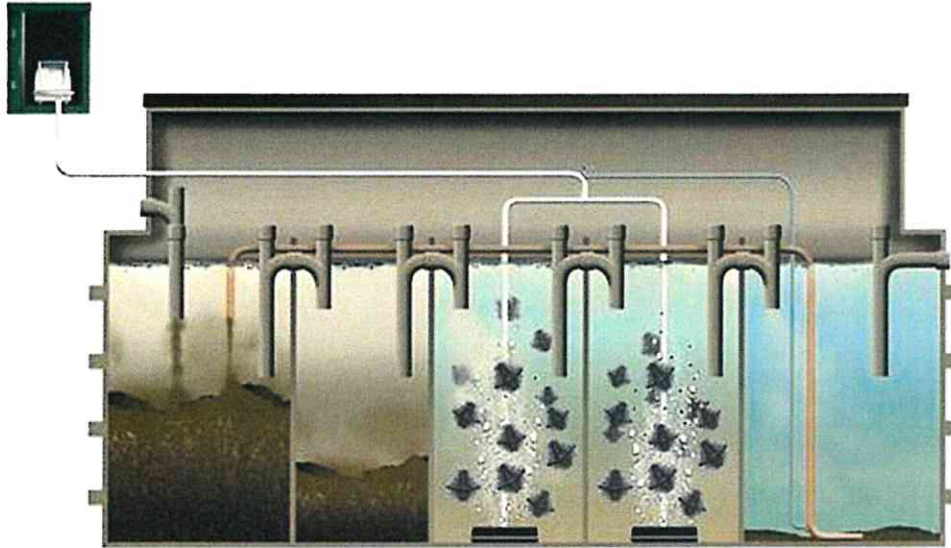
As of the writing of this response, staff has been unable to verify with CEC staff if the City could craft a local modification applicable only to the Baylands, or whether such an amendment would need to apply on a citywide basis.

**51. Explore sewage treatment facilities that turn non-water elements into energy and compost.**

The feasibility of a wastewater plant that process solids and generate energy and compost is dependent on the amount of wastewater available for such treatment.

On the small scale there are many examples of personal or neighborhood wide septic and water treatment systems. For example, WTE Ltd, a company based in the UK has been developing systems for 3-300 people. These systems perform similarly to septic tanks, but are able to filter clean water and save sludge

for pick-up. This sludge can then be transported to larger facilities to be turned into methane gas or biosolids, which is refined, treated and dried sewage sludge. WTE Ltd also offers systems which contain anaerobic biodigesters, and maintain bacteria life so that waste can be treated. Treated water is then discharged onto the land where it can return to the water table.



Example of WTE Ltd's "Falcon" system which is a five step water treatment process and can be installed at the household to business level.

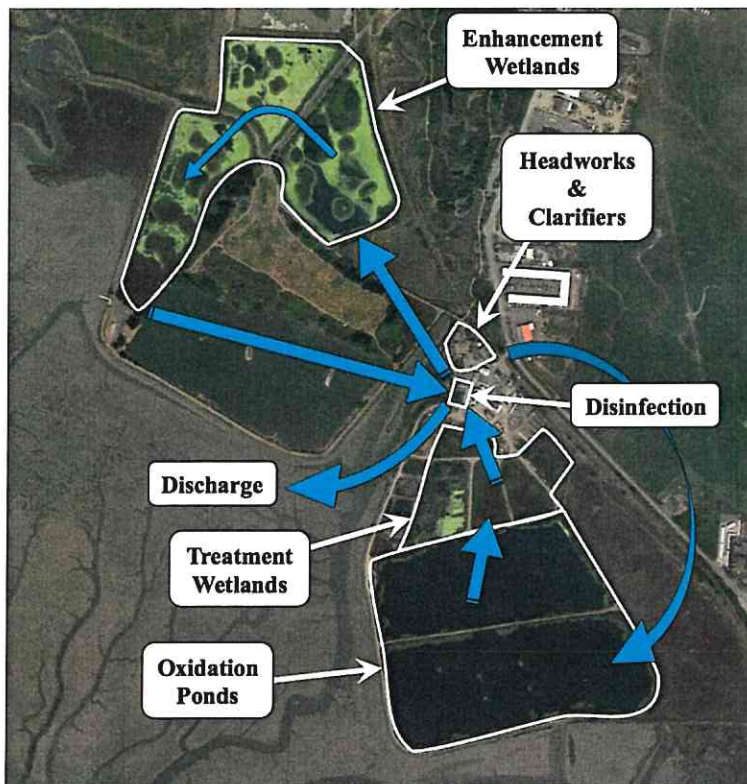
Capturing methane gas from wastewater systems is increasing in popularity. Anaerobic digesters are used to capture the gasses from the sludge thereby creating nutrient rich sludge which can be further used as fertilizer after further treatment. This process takes place by preventing oxygen from reaching the slurry (untreated wastewater) and capturing the methane and CO<sub>2</sub> produced. Methane gas capture chambers look similar to the tanks at the Kinder Morgan tank farm. Captured methane can be used, as natural gas, as vehicle fuel, to generate electricity, or to generate heat through combined heat and power. Capturing and treating this methane mitigates the amount of methane released into the atmosphere, reducing harmful GHGs.

Janesville, Wisconsin has a facility serving the town of 63,000 which turns wastewater biogas into clean natural gas for vehicles. On a larger scale, Santiago, Chile has begun converting its wastewater methane into natural gas which can be used by the city.

Some technologies like dewatering centrifuges are typically only economically feasible on the large scale (plants operating at greater than 4 million gallons per day). For small scale needs it often is more feasible to haul liquid waste to a larger plant for dewatering. Once wastewater has been treated and separated, it can be turned into biosolids, and from these biosolids compost and methane gas can be harvested. This separation and harvesting process, as well as biosolid treatment is more efficient on the large scale, as the economies of scale favor large facilities capable of treating larger volumes of sludge and biosolids.

East Bay Municipal Utility District is a large scale operation that has invested in biosolid collection and use. Through the water filtration process, the settled solids are collected, treated and turned into Class B biosolids. Class B biosolids can be used on non-edible agriculture, as landfill cover, or as soil to control fires. While Class B biosolids may have detectable levels of pathogens, they can be safely used by certified individuals and have negligible effects on groundwater, especially when compared to the use of pesticides. Class A biosolids have stricter standards and can be used in edible agriculture and sold to home gardens as fertilizer. EBMUD is currently looking into ways to create Class A biosolids.

Recycling water and returning it to the system has been proven feasible. Examples include reusing recycled greywater to water golf courses, re-fill aquifers, fill manmade lakes, etc. Constructed wetlands are another approach which is intended to effectively clean water via a natural filtration process and use the nutrients in the water to support wildlife. Examples of constructed wetlands can be seen on the large scale in Humboldt County, CA, and on the small scale in Incline Village, Nevada.



Arcata's wastewater treatment marsh (Arcata, CA)

Additional Information:

[https://www.wte-ltd.co.uk/pureflo\\_sewage\\_plant.html](https://www.wte-ltd.co.uk/pureflo_sewage_plant.html)

<http://engineering.dartmouth.edu/~d30345d/courses/engs37/AnaerobicDigestion.pdf>

<https://www.ebmud.com/wastewater/collection-treatment/wastewater-treatment/biosolids>

<https://www.epa.gov/biosolids/frequent-questions-about-biosolids>

<http://www.deq.idaho.gov/water-quality/wastewater/sludge-biosolids/>



<https://nepis.epa.gov/Exe/ZyNET.exe/901U0S00.txt?ZyActionD=ZyDocument&Client=EPA&Index=2000%20Thru%202005&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C00THRU05%5CTX T%5C00000011%5C901U0S00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C = &MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=2>  
<https://www3.epa.gov/region9/water/recycling/>

**55. Is it possible to make the NREL Feasibility Study more complete, so that it addresses land cost, Title 27 landfill closure costs, and impacts on development for other areas of the Baylands?**

While it is theoretically possible to expand the NREL feasibility study to address costs for land acquisition and Title 27 landfill closure, the results of such analysis would be dependent upon making an assumption as to what land value might ultimately be negotiated between the landowner and a potential buyer might be. The results would also be dependent on an assumption as to what the cost of Title 27 landfill closure might ultimately be.

*Additional Responses to Information Requests from Councilmember O'Connell*

8/7/17

2. **Cal Train is determined to have 10,000 new riders boarding at the Bayshore Station, is there capacity on Cal Train currently and is there commitment to rolling stock and electrification? Will there be adequate capacity with electrification, does that ridership include the additional residential units planned in South San Francisco, and that this ridership will be boarding prior to Bayshore Station, will the trains be able to absorb this capacity and bike storage?**

**Is there capacity on Caltrain currently?**

- Caltrain is currently overburdened during the peak hours of 4:30 A.M.-9:00 A.M. and 2:59 P.M.-7 P.M. Impacted peak-hour trains largely consist of the northbound morning and southbound evening routes, but also some of the southbound morning and northbound evening routes. In 2016, 21 out of 92 weekday trains operated at or above 95 percent capacity during the survey period of January 19-March 19. This data can be seen below in **Table 8 and Table 9**. This survey was taken in winter & early spring, whereas ridership in the peak summer months is approximately 15 to 16 percent higher. It is anticipated that during the peak months, more trains would be expected to be operating at levels reaching or exceeding capacity

**Table 8: FULLEST TRAINS IN EACH DIRECTION (AT 95% SEATED CAPACITY OR ABOVE)**

(Average seated capacity: 650 passengers per train, 5-car Gallery train)  
 (Average seated capacity: 762 passengers per train, 6-car Bombardier train)

Northbound				
Train No.	Depart SJ	Max Load	Train Seating Capacity (Post 4/4/16)	Percent of Seated Capacity
319	7:03 AM	951	762	125%
323	7:45 AM	950	762	125%
329	8:03 AM	882	762	116%
375	5:23 PM	841	762	110%
217	6:57 AM	818	650	126%
225	7:50 AM	764	762	100%
269	4:39 PM	756	762	99%
313	6:45 AM	747	762	98%
233	8:40 AM	722	650	111%
215	6:50 AM	719	650	111%
227	7:55 AM	705	650	108%
365	4:23 PM	636	650	98%

**Table 9: FULLEST TRAINS IN EACH DIRECTION (AT 95% SEATED CAPACITY OR ABOVE)**

(Average seated capacity: 650 passengers per train, 5-car Gallery train)  
 (Average seated capacity: 762 passengers per train, 6-car Bombardier train)

Southbound				
Train No.	Depart SF	Max Load	Train Seating Capacity (Post 4/4/16)	Percent of Seated Capacity
366	4:33 PM	950	762	125%
376	5:33 PM	927	762	122%
370	5:14 PM	829	762	109%
278	5:56 PM	814	650	125%
268	4:56 PM	740	650	114%
272	5:20 PM	727	650	112%
380	6:14 PM	705	650	108%
220	7:44 AM	694	650	107%
322	7:57 AM	663	650	102%

Source: Caltrain 2016 Annual Passenger Count

**How many bikes were denied boarding during the 2016 survey season?**

- There were a total of 118 bikes denied boarding on 31 northbound trains and 13 southbound trains. Based on the 2016 Average Weekday Bike Ridership data, 99.6 percent of weekday bikes were accommodated with only 0.4 percent of bikes denied boarding.

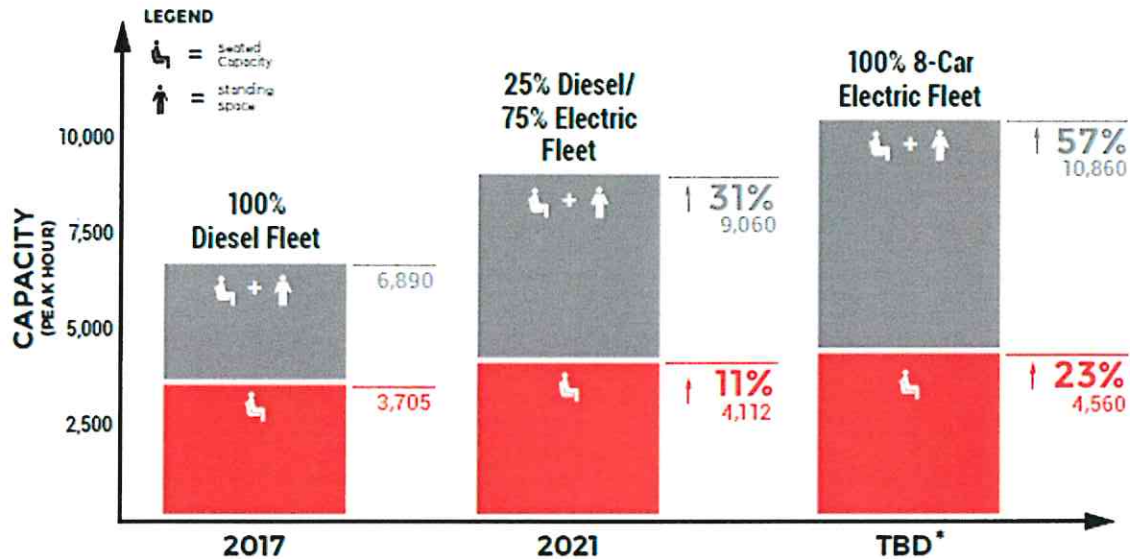
**Is there commitment to rolling stock and electrification?**

- On September 6, 2016, Caltrain granted contracts to Balfour Beatty to build the electrification infrastructure and Stadler to manufacture the electric trains (i.e. rolling stock). The first electric trains are anticipated to be in service at the end of 2020 or early 2021.
- On May 22nd, 2017, the Federal Transit Administration approved a \$647 million grant to electrify Caltrain, comprising a key component of funding for the \$2 billion electrification project.

**Will electrification accommodate the 10,000 new riders at Bayshore Station?**

- Electrification will result in faster and more reliable trains, offering more than 110,000 rides per day once completed, up from 60,000 in 2017. However, there is expected to be an intermediary period starting in 2021 with the release of the new trains, in which 75% of the Caltrain fleet will be electric while 25% is diesel.
- The increase in capacity due to electrification can be seen **below**.
- As cited in the Bayshore Intermodal Station Access Study, with electrification, it is expected that Bayshore Station could receive more service than it does currently, especially during peak commute periods. No commitments have been made on the part of Caltrain regarding a specific number of additional riders that can be served at the Bayshore Station upon electrification

# CAPACITY INCREASE



*\*The CalMod program lays the foundation for continued capacity growth on the corridor. Unlike diesel trains, electric trains can maintain performance while expanding to 8-cars. Eight car expansion is dependent on additional funding. Figures and percentages subject to changes as EMU design elements and new service schedules are finalized.*

Source: Caltrain

<http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/Capacity.html>

## Will electrification accommodate the capacity and bike storage resulting from the additional residential units planned in South San Francisco?

- Electrification is projected to increase the capacity of rides, from 60,000 to 110,000 and therefore should be able to accommodate the increased capacity resulting from residential units planned in South San Francisco. However, there was no specific mention of planned residential units in South San Francisco in Caltrain planning documents.
- With the new electric fleet of rolling stock, there will be two “bike cars” per 8 car train, which will be clearly marked from the outside. The bottom carriage of these cars will be outfitted with bike racks. Each bike car will have two levels, with bike storage on the lower level and seating on the upper level.
- Within the last year, Caltrain has been developing a Bike Parking Management Plan. Although this plan has not yet been finalized, there are indications that Caltrain is committed to increased bike parking at stations. However, it is unclear whether they are going to implement the centralized, decentralized or privatized approach in addressing the issue of bike parking. In the centralized approach, Caltrain would hire new staff to acquire, implement, and manage all improvements to bike parking infrastructure as well as manage existing facilities. In the decentralized approach, cities and counties would preside over bike facilities improvements at stations, and Caltrain’s current management and administration of existing bike parking facilities

would be maintained. In the privatized approach, Caltrain would contract with third party vendors to acquire, implement, and manage improvements to bike parking infrastructure as well as manage existing facilities. This approach would be similar to SF Bike Valet Station.

**10. Can the removal of the soils be a requirement that can be written into any land use approved by the City, or is it discretion of the County Health and Water Resource Board?**

Whether soils are removed from the site or capped in place to prevent human contact would be determined as part of the regulatory review process undertaken by DTSC and the Regional Board. The determination would be made based on human health risk assessment. The City, as part of its participation in the regulatory review process could weigh in on its preferred method(s) of site remediation.

**21. Did the San Mateo County infrastructure vulnerability study look at moving 101 inland to protect the transportation corridor? Followup question from July 24, 2017 meeting- provide copy of Draft Sea Level Rise Vulnerability Assessment Report dated April 2017.**

The draft document can be found at the following webpage: <http://seachangesmc.com/current-efforts/vulnerability-assessment/> . Specific excerpts from the document pertaining to Brisbane are included as Attachment 4-A.

**25. UPC has stated that they will use Union Trade Workers to build out their project, can that be written into any specific plan, and is there any prohibition from those Union Trade Workers building commercial, as they have stated that the Union wants to build housing only? Were members of the Building Trade paid or compensated for attending our City Council meetings? And if paid, by whom?**

Many cities enter into agreements with developers by which the developers agree to use only "building trade workers" on a project and incorporating such a requirement into a development agreement. There are numerous building trade organizations who furnish labor and materials for commercial and residential developments and staff does not know the specifics regarding any agreements UPC may currently have in place. It is unknown to staff whether the representatives from the trade organizations were paid to attend City Council meetings.

**27. Will any of the living species currently in the Baylands wetlands survive, or will they be displaced and/or replaced when the grading is done?**

The EIR is based on the presumption that site remediation, grading, and installation of infrastructure will result in the loss of all habitat other than in areas where habitat is required to be preserved (e.g., Icehouse Hill, Brisbane Lagoon). Thus, the EIR requires mitigation for the loss of all biological resources within the onsite grading/remediation area.

**28. Is UPC responsible for costs of closure of the landfill and remediation of the site under their purchase agreement with former owners? If so, what mechanism short of granting development up zone can Brisbane use to incentivize or require cleanup? Are clean up requirements only based on change of use or can other government leverage be used?**

The City is not privy to the provisions of UPC's purchase agreement with the previous landowner. Generally, the requirement to remediate a site is triggered by an imminent threat to public health as determined by the regulatory agency, or by a change in land use. In the absence of a threat to public health for which the regulatory authority would require remediation activities to be undertaken, the most effective method to move site remediation forward is to provide sufficient incentive for the landowner to pursue development of new uses on the site.

**39. How do we keep our EIR current throughout the buildout/each phase?**

As discussed throughout this process, all subsequent site-specific development, any future amendments to General Plan policy, as well as adoption and amendments of a specific plan will be subject to additional environmental review, which provides opportunity for updating baseline studies and keeping them current.

The City's participation in the regulatory review process for site remediation and Title 27 landfill closure based on the City's General Plan-level land use and development policies will provide yet more detailed information and health risk assessments to supplement existing environmental analyses and assist the City in applying the existing General Plan and additional policies established during the City's current land use review process to site-specific development within the Baylands.

As planning for the Baylands development moves from the existing programmatic (General Plan) level to project-level development plans, including preparation of final engineering plans for infrastructure, site plans defining precise locations for future buildings, design-level geotechnical studies, financing plans for project development and maintenance, and other plans required by EIR mitigation measures (e.g., habitat restoration plans) will be prepared. These more detailed studies addressing site-specific development proposals along with the environmental reviews required for such proposals provide the basis for reviewing and updating the original EIR's conclusions as needed to reflect ongoing development within the Baylands and changing conditions over time.

**40. Provide information regarding limits of waste in proximity to Brisbane Lagoon. *New question from 7/24 meeting***

See Attachment 4E.

## 8/7/17 Responses to Other Questions

### ***Other-1 Provide visual representation of a vapor barrier system***

See Attachment 4-B. This is provided for informational purposes only, and should not be construed as proposed vapor system that will be utilized for the Baylands.

### ***Other-2 Describe statutory performance standards/ design requirements for a Title 27-compliant landfill closure***

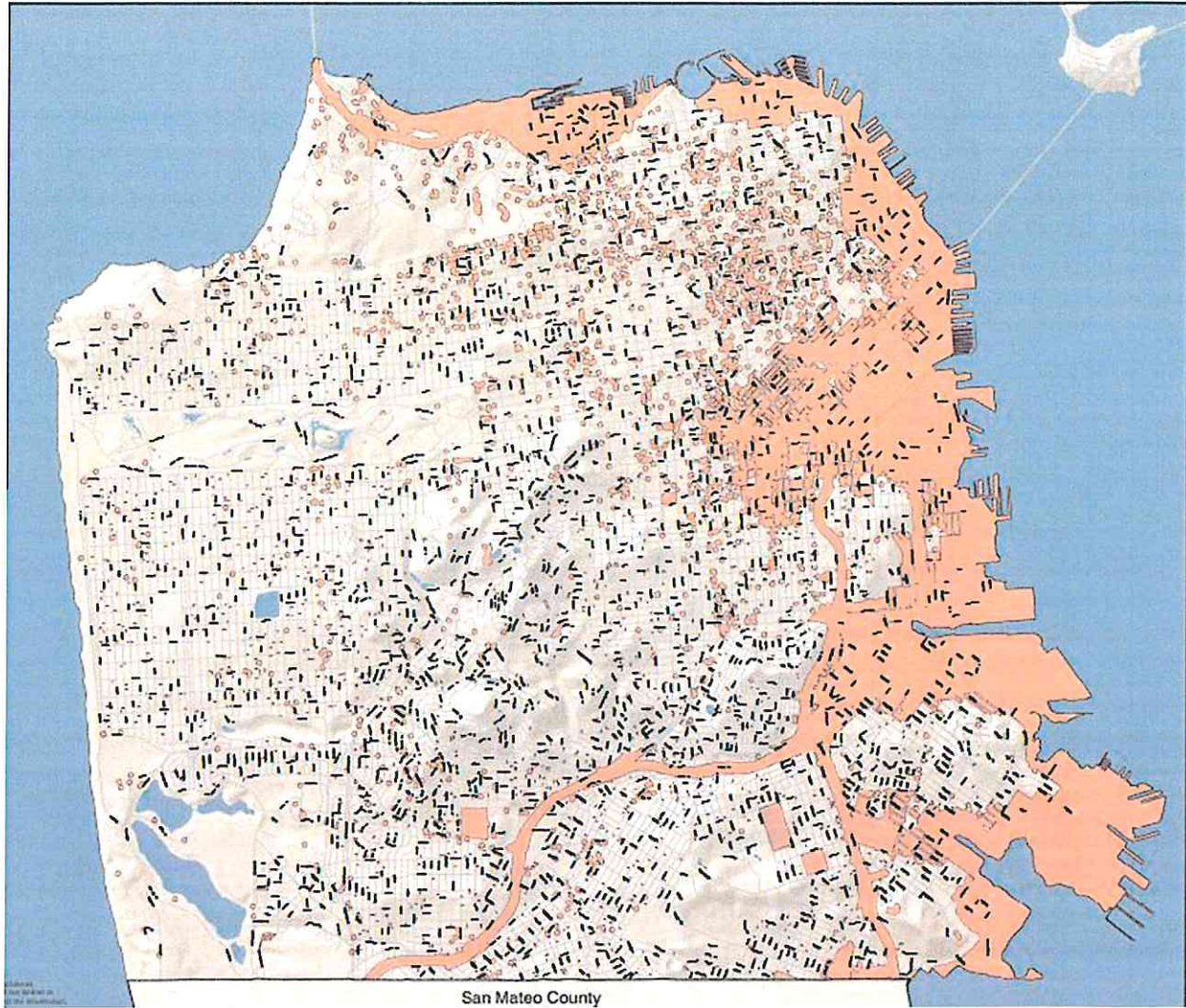
See Attachment 4-C, which describes Disposal Site Postclosure requirements from Title 27.

### ***Other-3 Provide examples of successful long term remediation monitoring.***

See Attachment 4-D.

### ***Other-4 Provide Information on San Francisco Maher Ordinance Requirements***

The Maher Ordinance is a section of the San Francisco Health Code which establishes a process for identifying, investigating, analyzing and, when deemed necessary, remediating or mitigating hazardous substances in soils within specified areas of the City and County of San Francisco prior to the issuance of a building or grading permit. This process occurs when an applicant in a specifically defined geographic area in San Francisco as defined in the Maher Ordinance applies for a grading or building permit involving more than 50 cubic yards of earthwork. The geographic area defined within the ordinance includes areas with current or historic industrial uses or zoning, areas within 100 feet of current or historic underground tanks, filled former Bay, marsh or creek areas and areas within 150 feet of a current or former elevated highway. Below is a map of the areas as shown in orange.



### **Maher Ordinance Implementation**

Upon an initial environmental review or permit review conducted by the Planning Department and/or the Department of Building Inspection, a project applicant is directed to contact the Department of Public Health and enter in the Maher Ordinance Program if the proposed development is within the geographic limits subject to the Maher Ordinance and meets the criteria triggering compliance with the ordinance as described above.

Projects subject to the ordinance are required to provide a site history (Phase I Environmental Site Assessment) to the Director of the Department of Public Health, prepared by a qualified person. The applicant is also required to submit a work plan to the Director of the Department of Public Health regarding necessary soil and/or groundwater analysis. The applicant shall demonstrate in the work plan how the sampling and testing requirements will be satisfied, including the sampling locations, sampling protocol, laboratory analyses to be conducted on the samples, and any other information required by the



Director to provide an accurate assessment of hazardous substances present at the site that may be disturbed, or may cause a public health or safety hazard given the intended use.

If the soil or groundwater pollutant concentrations exceed the Department of Toxic Substances Control's or Regional Water Quality Control Board's health risk levels, given the intended use of that site, the applicant is required to develop a site mitigation plan. The site mitigation plan contains a determination by a professional geologist, licensed civil engineer, or engineering geologist regarding whether soil and/or toxicity levels will cause a significant health and safety risk given the intended land use. If the toxicity levels are determined to be a significant health and safety risk, the applicant is required to follow through with site mitigation measures as recommended by the professional geologist, licensed civil engineer, or engineering geologist. These measures may entail removal, treatment, installation of vapor barriers, or covers, or by placing restrictions on uses or activities on the site to protect the environment or public health. The applicant must complete these site mitigation measures, and if applicable, any follow-up groundwater or soil analysis and then submit a final report and certification to the Department of Public Health stating under penalty of perjury that they have completed all required site mitigation measures.

**State/Federal Regulatory Oversight & the Maher Ordinance**

At the request of an applicant, the Director of Public Health may determine that one or more of the requirements of the Maher Ordinance have been met if the applicant provides proof that they have engaged in a process similar to the one outlined in this Ordinance under the oversight of a relevant state or federal agency (i.e. State Water Quality Control Board, Department of Toxic Substances Control, etc..)