

Study of Neighborhood Air near Petroleum Sources (SNAPS) Baldwin Hills Site Selection Process

Comments on the Baldwin Hills Site Selection Process will be accepted through May 31, 2020 via the contact information below.

Background

The California Air Resources Board (CARB) selected Baldwin Hills and communities surrounding the Inglewood Oil Field for intensive air quality monitoring under the SNAPS program. The primary purpose of SNAPS monitoring is to assess community air quality to better understand potential community exposure to all nearby pollution sources, including emissions from oil and gas infrastructure, mobile sources, consumer products, residential activities, and waste management, among others. Monitoring is currently anticipated to begin near the Inglewood Oil Field in 2020.

CARB staff will locate two stationary trailers equipped with air monitoring instrumentation for up to one year to characterize air quality in these communities. The air monitoring trailers are capable of measuring over 200 compounds, including toxic air contaminants (TACs), volatile organic compounds (VOCs), particulate matter (PM), metals, and criteria pollutants.

This document presents the process by which CARB staff are analyzing proposed sites near the Inglewood Oil Field, including a discussion of the site selection approach, a list of proposed monitoring sites, and a proposed short-list of sites.

Site Selection Approach

Figure 1 provides an overview of the site selection approach.

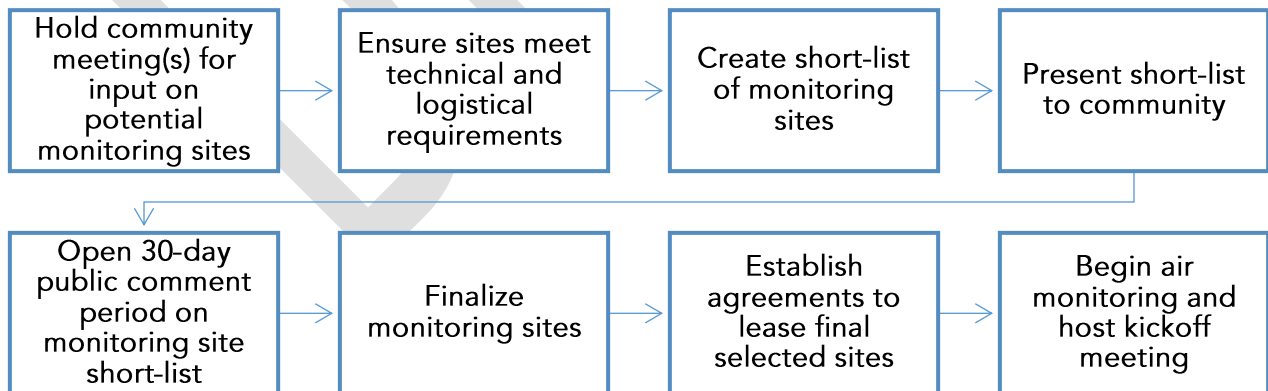


Figure 1. Site Selection Approach Overview

Community input is critical to the SNAPS site selection process, and in July 2019 CARB hosted community meetings in Culver City and Ladera Heights to engage community members, hold a general discussion about the SNAPS program, and to launch the site selection process by gathering site recommendations.

Following the July community meetings, CARB staff developed a list of basic technical and logistical requirements for each monitoring site. These minimum requirements are as follows:

- Provides a safe working environment for CARB staff
- Positioned relative to the Inglewood Oil Field to provide representative and meaningful air monitoring results
 - Prefer predominately downwind or upwind of the Inglewood Oil Field
 - Prefer at an elevation similar to the Inglewood Oil Field
 - Prefer in close proximity to potential Inglewood Oil Field sources, including the processing plant and storage tanks
- Provides adequate power
 - Dedicated 220 v/50 Amp circuit
 - Dedicated 120v/20 Amp circuits
 - If both are not currently available, the site must be upgraded to provide this capability.
- Provides adequate security, as appropriate to the specific site
 - Built-in fencing
 - Security cameras
 - On-site security staff
 - Locked gate
- Provides adequate space
 - Flat accommodation of trailer footprint 24' x 36'
 - Accommodation of meteorological equipment mast up to 30' in height
 - Potential accommodation of guy wires for mast, increasing the total flat footprint area
- Allows site access
 - Regular access during business hours for maintenance and operations

To determine whether sites identified by CARB staff or recommended by the community meet technical and logistical requirements, CARB staff contacted representatives of potential monitoring sites and, where possible, evaluated locations in person to assess each one's feasibility to accommodate monitoring equipment. Staff

also conducted a mapping analysis of local odor complaints¹ and completed meteorological modeling to further inform site selection.

In all, CARB considered 20 sites for SNAPS air quality monitoring near Baldwin Hills. Four sites fulfilled the minimum technical and logistical requirements. The remaining sites are considered suboptimal for SNAPS monitoring. Some of the reasons for a site to be considered suboptimal are:

- Technical and logistical limitations
 - Availability of power supply (upgrades required, lack of infrastructure)
 - Security concerns, including lack of fencing
 - Limited site access during and outside of business hours, or requires onsite escort
 - Difficult to transport equipment to/from site
 - Space available too small for trailer and associated equipment
 - Numerous physical obstructions and barriers on site property that could impact CARB staff's safety
- Non-ideal location relative to the Inglewood Oil Field, preventing the acquisition of accurate, representative information on the impact of oilfield emissions due to possible pollutant dispersion
 - Neither in the predominate downwind or upwind direction of the oilfield
 - Numerous physical obstructions and barriers on site property that could impact airflow to the sensor inlets
 - Sufficiently far from the oilfield
- Lack of interest in hosting a site

Table 1 lists the 16 proposed monitoring sites that were not selected for the short list and includes detailed reasons why they were not selected. The four short-list sites are discussed in further detail on pages 6-8.

¹ Baldwin Hills Community Standards District (2020). "Complaint Logs by Quarter."
http://planning.lacounty.gov/view/baldwin_hills_csd_archived_complaint_logs_by_quarter

Site Name	Approximate Distance from Oilfield	Location Relative to Center of Oilfield	Elevation	Community Suggestion	Meets Minimum Technical and Logistical Requirements	Reasons for Not Making the SNAPS Baldwin Hills Short-List
SoCal Edison La Cienega Substation	200 ft	West	340 ft	X	X	difficult to transport equipment to/from site, additional clearances and safety requirements could delay monitoring start date, safety concerns from close proximity to high voltage electricity, site is not permanently staffed (escort is required)
Windsor Hills Elementary School	800 ft	Southeast	460 ft	X	X	lack of interest in hosting site, in neither predominate upwind or downwind direction of oil field
Baldwin Hills Elementary School	4400 ft	North	110 ft	X	X	large difference in elevation between oilfield and site, in neither predominate upwind or downwind direction of oil field
Jim Gilliam Recreation Center	4600 ft	Northeast	190 ft	X	X	obstructions could impact data representativeness, large difference in elevation between oilfield and site
Susan Miller Dorsey Senior High School	7400 ft	Northeast	110 ft	X	X	substantial distance from oil field, large difference in elevation between oilfield and site
Kenneth Hahn State Recreation Area	200 ft	East	300 ft (lower park) 480 ft (upper park)	X		security concerns, availability of power supply
Kenneth Hahn State Recreation Area-Soccer Fields	200 ft	South	320 ft	X		security concerns, availability of power supply, in neither predominate upwind or downwind direction of oil field
Stoneview Nature Center	400 ft	North-northwest	240 ft	X		security concerns, availability of power supply, in neither predominate upwind or downwind direction of oil field

Table 1. Potential SNAPS Baldwin Hills monitoring sites that were not selected for the short-list

Site Name	Approximate Distance from Oilfield	Location Relative to Center of Oilfield	Elevation	Community Suggestion	Meets Minimum Technical and Logistical Requirements	Reasons for Not Making the SNAPS Baldwin Hills Short-List
West LA College	700 ft	West	110 ft	X		security concerns, obstructions could impact data representativeness, large difference in elevation between oilfield and site
Park Hills Community Church	800 ft	Southeast	430 ft	X		obstructions require taller inlets and significant related safety concerns for staff, availability of power supply, minimal space,
Holy Cross Cemetery	2000 ft	Southwest	180 ft	X		security concerns, availability of power supply, concerns about site access, large difference in elevation between oilfield and site
Village Green Neighborhood	3700 ft	North-northeast	110 ft	X		security concerns, availability of power supply, in neither predominate upwind or downwind direction of oil field, large difference in elevation between oilfield and site
Culver City Police Department	3900 ft	Northwest	110 ft	X		minimal space, obstructions could impact data representativeness, large difference in elevation between oilfield and site
El Rincon Elementary School	4000 ft	Southwest	40 ft	X		lack of interest in hosting site, minimal space
Culver City City Hall	4100 ft	Northwest	130 ft	X		minimal space, obstructions could impact data representativeness, large difference in elevation between oilfield and site
Los Angeles Speech & Language Therapy Center, Inc.	3900 ft	Southwest	200 ft			minimal space, obstructions could impact data representativeness

Table 1. Potential SNAPS Baldwin Hills monitoring sites that were not selected for the short-list (continued from page 4)

Selection of Potential Sites on the Short-List

Staff carefully evaluated the full list of potential sites, and after extensive consideration developed the short-list of four sites that might be used to acquire SNAPS monitoring data. All sites on this list have been visited by CARB staff:

- Sentinel Peak Resources (Two potential sites, both located on the edge of the Inglewood Oil Field)
- Hillcrest Drive Elementary School
- Marycrest Manor

Figure 2 shows the location of the short-list sites including wind direction(s) and general locations where odor complaints have originated since Sentinel Peak Resources began operating the Inglewood Oil Field. The following discussion details CARB staff's reasoning in selecting the four potential monitoring sites, including their limitations.

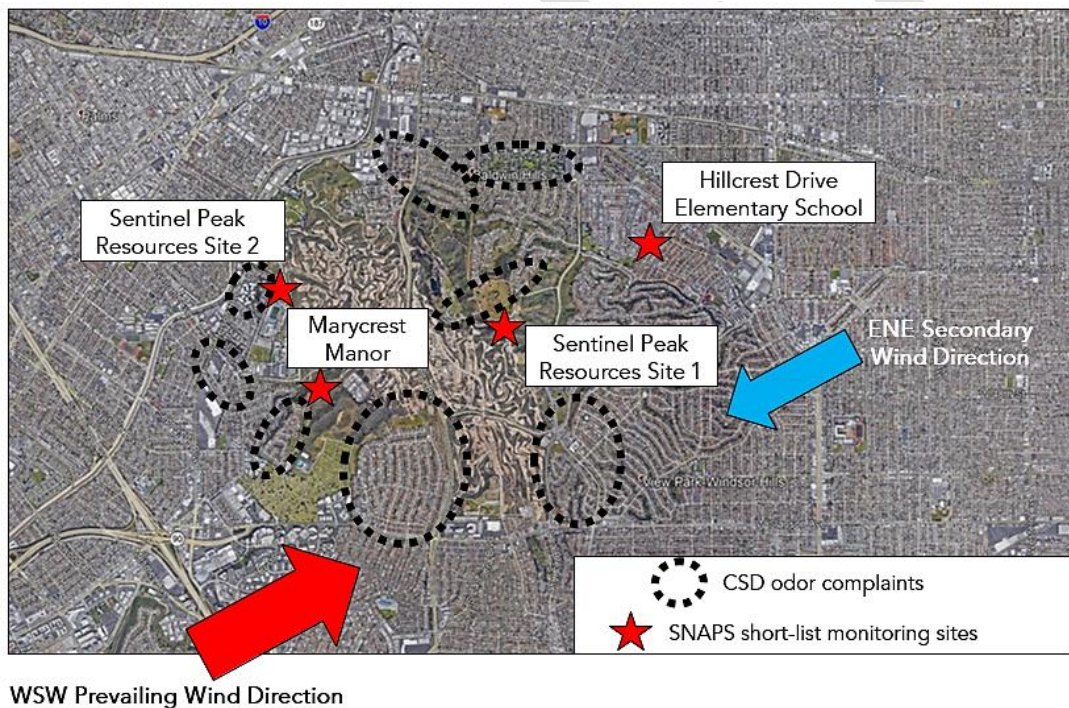


Figure 2. SNAPS Baldwin Hills short-list monitoring sites (red stars) and clusters of Baldwin Hills Community Standards District (CSD) odor complaints from the 2017-2019 CSD quarterly complaint logs (dotted ovals)

Sentinel Peak Resources Site 1

Sentinel Peak Resources Site 1 is on the eastern edge of the Inglewood Oil Field at an elevation of approximately 500 feet, adjacent to the most elevated portion of Kenneth Hahn State Recreation Area, and approximately 500 feet from the nearest active oil

well. With built-in fencing surrounding the oilfield, an extensive power supply, and plentiful space, this site meets the logistical requirements for SNAPS monitoring equipment. With the prevailing wind direction being west-southwesterly, this site is downwind of the oilfield's gas processing plant and several concentrated areas of storage tanks. At this location, SNAPS monitoring equipment would have the capability of gathering air quality data near these potential oil and gas pollution sources, as well as from potential mobile sources, particularly from La Cienega Blvd. Sentinel Peak Resources Site 1 is in close proximity to the "East Site" of the 2015 Sonoma Technology, Inc. Baldwin Hills Air Quality Study², where black carbon, metals, and speciated VOCs were measured, allowing for a potential data comparison between studies. This potential SNAPS monitoring site is near a cluster of community odor complaints in Kenneth Hahn State Recreation Area and residential communities adjacent to the north. This site is located close to Kenneth Hahn State Recreation Area, and could potentially assess community exposure at the park.

Marycrest Manor

Marycrest Manor is a skilled nursing home west of the Inglewood Oil Field at an elevation of roughly 325 feet, approximately 1500 feet from the nearest active oil well. This site is secure, has adequate space, and meets the minimum electrical requirements for SNAPS monitoring equipment. Located adjacent to a residential community that has reported odor complaints in recent years, this site could capture community-level data near potential pollution sources. During offshore wind events, including Santa Ana winds, Marycrest Manor is downwind of the gas processing plant and several areas concentrated with storage tanks. When combined with Sentinel Peak Resources Site 1, a transect for upwind/downwind measurements of the oil field could be created.

Hillcrest Drive Elementary School

Hillcrest Drive Elementary School is located approximately 5500 feet from the nearest active well on the Inglewood Oil Field, at an elevation of roughly 130 feet. With built-in security and adequate space and power, this site meets the SNAPS monitoring equipment technical and logistical requirements. The air quality at Hillcrest Drive Elementary School has the potential to be impacted by numerous sources, including the oilfield (being in the predominant downwind direction), but also by mobile sources from local traffic, and residential activities. This site is located within a densely populated community, which makes it an ideal location for assessing community exposure. However, Hillcrest Drive Elementary School is located further from odor

² Sonoma Technology, Inc. (2015). "Baldwin Hills Air Quality Study."
http://planning.lacounty.gov/assets/upl/project/bh_air-quality-study.pdf

complaints than the other three short-list sites and has the potential to be a neighborhood nuisance given the sound created by the monitoring equipment.

Sentinel Peak Resources Site 2

Sentinel Peak Resources Site 2 is on the northwestern edge of the Inglewood Oil Field, approximately 800 feet from the nearest active oil well, at an elevation of approximately 110 feet, adjacent to West Los Angeles College and the Raintree neighborhood of Culver City. This site has a more than adequate power supply and built-in security, meeting the required technical and logistical requirements. When the wind direction is from the east-northeast, Sentinel Peak Resources Site 2 is downwind of several storage tanks. This site's proximity to residences could enable SNAPS monitoring equipment to capture near-source as well as community-level exposure data. Several clusters of odor complaints having been reported nearby. However, this site is located near a storm water drainage station (a potential source of odors) and is further from the gas processing plant and the most concentrated areas of storage tanks. Sentinel Peak Resources Site 2 is also not in the ideal location given the prevailing west-southwest and secondary east-northeast wind directions.

Mobile Monitoring

While CARB currently anticipates locating monitoring equipment at two sites, mobile monitoring will complement stationary air quality monitoring. Locations for mobile monitoring can include areas near sites not selected for stationary monitoring, including near clusters of reported odor complaints. CARB will determine mobile monitoring routes based on community suggestions and will respond to community input as much as possible.

Next Steps

CARB is soliciting input for the next 30 days, through May 31, 2020, and we want to hear from you.

For questions or comments on the SNAPS Baldwin Hills site selection process, please send an email to snaps@arb.ca.gov or call Kathleen Kozawa at 916-327-5599.

At the end of the 30 days, all comments and criteria will be reconsidered, and the final two sites will be selected. The final selections will be posted on the SNAPS website.