CAG Meeting Summary

Thursday, November 10, 2011
6:00 pm – 8:30 pm
North Berkeley Senior Center

CAG Members Present:
Christopher Adams, Community member
Wendy Cosin, City of Berkeley Planning Department
Marcos Gandara, Community member
Paul Licht, UC Botanical Garden
Emily Marthinsen, UC Berkeley
Mark McLeod, Buy Local Berkeley
Dean Metzger, Berkeleyans for a Livable University Environment (BLUE)
Phil Price, LBNL employee
Phila Rogers, Community member
Carole Schemmerling, Strawberry Creek Watershed Council
Rich Sextro, Community member
Elizabeth Stage, Lawrence Hall of Science

CAG Members Absent:
LeRoy Blea, Berkeley Community Health Commission
Andreas Cluver, Building & Construction Trades Council of California
Rebecca Daly, UC Berkeley student
John DeClercq, Berkeley Chamber of Commerce
Whitney Dotson, Community member
Anne Wagley, Community member

Welcome and Introductions

Daniel Iacofano of MIG welcomed Community Advisory Group (CAG) members, community members and staff, and invited CAG members to introduce themselves. The evening's agenda included the on-going update on proposed and possible future capital construction projects, as well as an update on the Second Campus selection process and a presentation of the Lab's surface water program.

Update on Capital Construction Projects

Jerry O'Hearn presented an overview of the status of the following planned LBNL capital improvement projects recently proposed or underway:

Project	Status
BELLA	Construction should be complete in a month. The laser expected to arrive in 2012.
Bevatron Demolition	Demolition is on-going. After careful testing, soil and concrete from other sites on the Lab is being re-used as backfill for Bevatron demolition.

Computational Research and Theory facility (CRT)	In design and will go out to bid pending a Federal court decision.
Seismic Phase 2	In construction. General Purpose Laboratory (GPL) construction and Building 74 renovation are underway. Below-grade work is being done on Building 85. All demolition activities have been completed.
Seismic Phase 3	Approval pending. Depending on funding, conceptual design planning may begin in early 2013.
Solar Energy Research Center (SERC)	In design. Expected to go to bid around Christmas, with construction starting in Spring 2012. Buildings 25 and 25a have been demolished.
User Test Bed Facility	In final design. Construction expected to start in early 2012.

CAG Member Questions and Comments

The following is a summary of CAG member requests and concerns related to Lab capital projects recently proposed or underway:

- The Lab should fully understand the impact of new buildings, especially the SERC facility, on the flight paths of birds in the area. The City of San Francisco recently passed a bird-safe building ordinance which the Lab should incorporate in its design and construction process.
- *Lab Comment:* In terms of the SERC facility, birds should be deterred by the louvers that will be installed on the exterior of the building. Jerry said he would report back to the CAG regarding the Lab's policies related to bird-safe construction practices.
- Are there site plans for the Bevatron?
- *Lab Comment:* The only approved plan for that site is for the parking lot.
- The headwaters of the north branch of Strawberry Creek may be under the Bevatron site. If that is accurate, the site should not be built upon.

Second Campus Update

Sam Chapman provided an update on the Second Campus site selection process. The Lab is still in its deliberation phase and hopes to announce its decision at the end of November. As there was no other news on the site selection process, Sam welcomed CAG comments.

CAG Member Questions and Comments:

The following is a summary of CAG member requests and concerns related to the Second Campus site selection process:

- The Richmond site seems to be the only feasible option.
- The Golden Gate Audubon Board submitted a letter to the Lab listing both site-specific and general comments which they hope the Lab will take into consideration.
- Given that all potential sites are near the water, the Lab should work with local environmental and community organizations to ensure that they minimize environmental impacts and the development footprint.
- Sites such as the "Berkeley Bowl" and Emeryville locations may not be large enough to accommodate the Lab's future needs. The Lab should consider future expansion needs, so that the community will not have to revisit this issue again in 10 or 20 years.
- *Lab Comment:* Meeting future expansion needs is an essential part of the selection process and the Lab is looking for a site that can accommodate growth for the next few decades.
- One of the Lab's RFQ selection criteria was connectivity between the current and future Lab facilities. Two of the potential sites could be eliminated due to the fact that they will not meet this criterion.
- *Lab Comment:* None of the six finalists meet all the criteria from the RFQ. They were selected because they best met many of the criteria. The Lab is now in the process of comparing the various sites, but with the understanding that no single site will be able to offer everything listed in the RFQ.
- Has anything happened since the September CAG meeting that could affect the site selection outcome?
- *Lab Comment:* Nothing has arisen that is likely to change the decision-making process. The Lab continues to compare how the selected sites meet the various criteria, recognizing that each site will have different strengths.
- There are concerns about both potential West Berkeley sites. A site that close to the Bay is not a good location for large buildings given seismic concerns and potential horizontal shifting.
- The location of the Second Campus within or outside the city limits of Berkeley is not likely to make a difference in terms of economic development for the City of Berkeley. The economic development impacts from the Lab are primarily regional in nature, and each of the remaining sites would have very similar effects on the local economy of Berkeley.
- *Lab Comment:* There is information on local purchasing and procurement policies that the Lab would be happy to share at a future meeting.

- One CAG member evaluated the sites against the RFQ criteria using a positive, neutral or negative system. Site scores from that exercise are as follows, with the highest numbers indicating the closest alignment with RFP criteria:
    - Alameda – 5
    - Brooklyn Basin/Oakland - 2
    - Emeryville/Berkeley - 3
    - Aquatic Park – 2
    - Richmond Field Station – 6
    - Golden Gate – 8

Surface Water and Creeks Presentation

Dr. Tim Bauters from the Lab's Environmental Services Group gave a presentation on surface water and creeks found on Lab properties. The Lab site consists of approximately 200 acres and 80 buildings on the hillside and is located within the Strawberry Creek Watershed. There are perennial, intermittent and ephemeral creeks located on the site. Many of the creek forks are culverted and buried due to development. Due to the hill location, the site has significant elevation change, and surface water moves very quickly over impervious surfaces. About one-third of the Lab site is developed, and the remainder (65 percent) is pervious, open space.

The Lab monitors perennial creeks on site, which include Winter Creek and the North Fork of Strawberry Creek. The following parameters are measured:

- Total Recoverable Metals
- Dissolved Metals
- pH
- Electrical Conductivity
- Total Suspended Solids
- Nitrate and Nitrite
- Chemical Oxygen Demand
- Volatile Organic Compounds
- Tritium
- Gross Alpha and Beta
- Gamma Spec

Sampling results are compared against the Water Quality Objectives established in the San Francisco Bay Basin Plan, as well as against the EPA's Multi-Sector General Permit (MSGP) Stormwater Benchmark and EPA's Drinking Water Guidelines. Within these comparisons, aluminum, magnesium and conductivity are typically found to be elevated in some of the monitored perennial creeks.

Stormwater discharges from the lab site are regulated by the Industrial General Permit, which includes a Stormwater Pollution Prevention Plan and an Alternative Stormwater Monitoring

Program. Lab staff monitor industrial sites and conduct regular inspections and visual observations which are summarized in the annual report. Over 350 Lab staff has also been given trainings regarding stormwater pollution prevention. Industrial locations currently being sampled include:

- Blackberry Parking Lot (former bus parking)
- Building 76, Vehicle Fueling
- Building 77-79, Metal Fabrication, Storage and Recycling
- Building 85, Hazardous Waste Handling Facility
- Building 64, Bus Parking and Bio-diesel Fueling

The Industrial General Permit determines what is sampled at each site based on the applicable Standard Industry Code (SIC) for each location. The Lab monitors the following parameters in the stormwater run-off from the industrial locations:

- pH
- Conductivity
- TSS
- Oil & Grease
- NO3+NO2 (as N)
- Aluminum
- Iron
- Zinc
- Copper
- Lead
- Chemical Oxygen Demand
- Ammonia (NH3)
- Arsenic
- Cadmium
- Cyanide
- Magnesium
- Mercury
- Selenium
- Silver

The Lab has implemented Best Management Practices (BMP) to address those parameters which exceed the benchmark goals in the permit. As part of the iterative BMP implementation approach, the Lab monitors industrial sites two times each wet season during storm events in an effort to understand the effectiveness of the implemented BMPs..

At the Metal Fabrication Storage and Recycling Facility, the Lab discovered that zinc levels were not improving over time and initiated a source determination study. The Lab learned that the zinc was coming from the solid tires of the forklifts used. The Lab will purchase zinc-free tires and will monitor zinc levels and address this issue further in the upcoming months.
At the Hazardous Waste Handling Facility magnesium levels are elevated throughout the entire sampling program. The Lab did a study which showed that aerial deposition of soil particles onto

the yard is the main cause of magnesium in the stormwater runoff from the Hazardous Waste Handling Facility.

Construction projects currently requiring a stormwater permit are Building 51 and the Bevatron Demolition Project, Seismic Phase II, and Old Town Demolition and Environmental Restoration. The Lab expects to have Stormwater permits in the future for the Computational Research & Theory (CRT) Facility, as well as the Solar Energy Research Center (SERC).

In terms of low impact development, the Lab adheres to guidelines from the Energy Independence and Security Act (EISA) of 2007. Effective September 2012, the post-construction requirement under the Construction General Permit will require that the Lab replicate the pre-project water balance at all construction sites larger than one acre. This will be especially challenging in any green field construction.

The presentation concluded with information regarding some of the of low impact development projects already constructed on the Lab site, highlighting the UC Winter Creek Stabilization and Enhancement Project which was completed in partnership with UC Berkeley.

Water monitoring data mentioned in the presentation is recorded in reports, which are available online at http://www.lbl.gov/ehs/esg/Reports/tableforreports.shtml

CAG Member Questions and Comments:

The following is a summary of CAG member requests and concerns related to the Surface Water and Creek Program:

- Why are the storm drain pipes that run under the Lab site not mapped? It is very important that these are delineated in order to show where surface water goes underground.
- *Lab Comment:* The Lab has that information and can share it at the next CAG.
- The East Bay Municipal Utility District (EBMUD) drinking water standards are very different than EPA guidelines.
- *Lab Comment:* Yes they are different, although the range of standards is expanding for both the industrial and multi-sector permitting.
- When sampling for magnesium, do surrounding properties get sampled and do they have the same high magnesium level as at the Hazardous Waste Handling Facilities?
- *Lab Comment:* Yes, soil properties are sampled nearby and also show high magnesium content.
- Serpentine could likely be part of the reason such high magnesium levels are found in the soil.
- *Lab Comment:* The soil nearby shows very high magnesium content.
- Aluminum is also abundant in the soil. Why is there no data regarding aluminum levels at the Hazardous Waste Handling Facility?

- *Lab Comment:* Per the Standard Industry Classification (SIC) code, aluminum monitoring is not required at Hazardous Waste Handling Facilities.
- Is asbestos monitored at these sites?
- *Lab Comment:* Asbestos is removed during demolition and disposed of properly and therefore would not go to the Hazardous Waste Facility on site.
- The Shively Well is located near the Lab property above the terraced parking lot. There may be a large quantity of high quality water from the well that is being piped through the Lab property. The Lab should harvest the Shively Well water rather than divert it into creeks. The Lab should do more to conserve and reuse water available on site, especially considering that the future CRT facility will need water for cooling.
- *Lab Comment:* To the best of their knowledge, the Lab does not have water from the Shively Well piped through their property, but they will investigate this further and provide more information at the next CAG meeting
- The Winter Creek project should have used creek restoration specialists.
- What kind of monitoring is done in relation to nanotechnology? There could be pollutants that we don't even know of yet.
- *Lab comment:* The Lab is conducting nanotechnology research in Building 67, which is designed to keep everything inside the building. The only place of concern is the venthoods on the building. In response to this concern the Lab will investigate future monitoring needs for nanoparticles that may leave the building through the venthoods.(A future CAG meeting will focus specifically on nano research and Building 67)
- When CRT development is complete, what kind of metals come out of the cooling towers?
- *Lab Comment:* The water used to cool is a closed-loop system and will be reused as long as possible and then discarded through the sanitary sewer system.
- It is not sustainable for EBMUD to accommodate the Lab's water needs, especially if the Lab continues to expand. The Lab should examine its access to water from the Shively Well and Strawberry Creek watershed, as well as consider focusing on more sustainable water usage practices.
- *Lab Comment:* The Lab will be looking into these options more, particularly with the construction of the CRT. Re-vamping existing buildings is more challenging, but the Lab will consider water sustainability in planning all future construction projects.

Public Comment

- There is a lack of concern about pollutants associated with technology, especially nanotechnology. The community doesn't need any research facilities near the Bay; it needs to clean up what already exists. Let the Second Campus and new research focus on cleaning up the environment.

- The Fifth Street and Channing Neighborhood Association is opposed to the West Berkeley Second Campus site and large-scale development at/near Aquatic Park. The group supports the setback and height limit requirements proposed by Sierra Club. It has concerns about heat and glare, noise, and loss of light on the park.
- The Lab expansion is concerning. The word "campus" is misleading, when the development will be more like an industrial site. The nature of the research seems like a likely source of trouble. The Lab should list the proposed uses for the site to identify the risks. Is BP or the oil industry involved in any way?
- The hard copy presentation material provided was very helpful. It was difficult to read the presentation screen which makes the information effectively not available. It was difficult to understand Tim's presentation. Using building numbers is meaningless to the public. Some of the simulated images don't accurately reflect the site topography.
- The Shively Well water is not well understood. Suggestions to drill for the well in the 1970's went nowhere. The 1875 map justified establishment of the UC site because of year-round water. Think about the Lab site as more than an industrial site – it is also a natural resource site, a risk zone.
- Regarding the Second Campus site, don't bring industrial development to Berkeley or West Berkeley. That site would obliterate the West Berkeley Plan which has been adopted by City.
- The Fifth and Channing neighborhood group co-founder echoed several concerns voiced by the public. The neighborhood association has a great number of concerns about the West Berkeley site.
- What does "ND" mean in the sampling results?
- *Lab Comment:* No Detection.
- Has LBNL developed a watershed management plan?
- *Lab Comment:* Not yet, but this will likely be part of future efforts.
- How can you get a tour of the campus?
- *Lab Comment:* Lab staff members Sam Chapman and Ross Lyon can arrange public tours.

Next Steps

The next meeting is January 9th, 2012. The CAG will hear more information on the Second Campus and education and outreach programs, as well as discuss future CAG meetings and potential agenda items. All presentations from this and previous meetings are available within the Meeting Calendar section of LBNL CAG website: http://www.lbnl-cag.org