Community Advisory Group Meeting

September 7, 2016
Agenda

1. Welcome, Introductions and Agenda Overview
2. Public Comment (*items not on the agenda*)
3. CAG Questions and Concerns (*items not on the agenda*)
4. Labor Issue Update
5. Update to Housing Master Plan
6. Update on UCSF’s Capital Financial Plan
7. Preview of Findings of UCSF’s Economic and Fiscal Impact Study
8. Overview of Mount Sutro Draft Vegetation Management Plan
9. Public Comment (*items on agenda – 3 minutes per speaker*)
Public Comment

- Regarding items not on the agenda
- Three minutes per speaker
- If item runs over 15 minutes, to be continued at the end of the agenda
CAG Questions and Concerns

- Regarding items not on the agenda
- If item runs over 10 minutes, to be continued at the end of the agenda
Labor Issue Update
Update: Former Impec Custodians

- UCSF was able to reach an agreement with AFSCME to hire 24 former Impec custodians; 2 additional former Impec workers were also hired when they accepted offers made earlier this summer by UCSF.

- Job offers include:
  - 100% full-time, career employment in the Facilities department
  - Senior Custodian classification—starting wage of $17.52/hour
  - Full career benefits, including health and welfare, dental, vision, retirement, disability, life, accident and standard University benefits
  - 15 vacation days per year; 12 paid sick days per year
  - 13 paid University holidays
  - Three-month probationary period

- AFSCME will withdraw the unfair labor practice charge at Public Employment Relations Board (PERB) once all 24 former Impec custodians have been hired and are working
Update to Housing Master Plan

Clare Shinnerl, Ed.D.
Associate Vice Chancellor, Campus Life Services
CAG - September 2016
Campus Housing is a Priority

- We have **high demand** for campus housing among students & trainees, given our **low rental rates & proximity** to classes, labs, hospitals and clinics.

- One-bedroom on campus rents for ≈ $2,300 per month, which is ≈ 40% **below market**.

- Shortfall for students and trainees is estimated at 1,200 – 1,400 units.

- Students & trainees who do not win the campus housing lottery tend to live in San Francisco and **compete for housing** in a constrained and expensive housing market.

- Situation is **seriously threatening** our ability to recruit and retain talent.
Campus Housing is a Priority

- We have a student and trainee campus housing plan with **four major projects** that, by 2025, will yield a unit count near demand levels.

- An important part of our campus housing plan is to rent campus housing units at levels **far below market**.

- Note: Additional supply coming on line in 2035 with Millberry Union (83 units) and UC Hall Phase 2 (61 units). Need to account for these future developments so we do not over build now.
4 Planned Projects Nearly Meet Demand by 2025

- Existing Supply (632 Units)
- Minnesota Street (610 Units)
- UC Hall Phase 1 (118 Units)
- UC Hastings Phase 1 (296 Units)
- UC Hastings Phase 2 (171 Units)
Minnesota St. Housing Project

- Located south of MB Campus (Dogpatch)
- Opening in 2019
- Up to 610 units
  - 376 efficiencies (250 sf)
  - 100 studios (375 sf)
  - 134 x 2 bedrooms (675 sf)
- Up to 137 parking spots and includes “corner market”
UC Hall Housing Project

- Located on Parnassus
- Original University Hospital (1917)
- Will be renovated and converted into housing in two phases
- Phase 1 up to **118 units** will open in 2022
  - 72 efficiencies (250 sf)
  - 41 studios (375 sf)
  - 5 x 2 bedrooms (676 sf)
- Phase 2 up to **61 units in 2035**
UC Hastings and UCSF Partner Housing Project

- Snodgrass Hall + New Annex 1 Phase 1 (2022) 592 units
- McAllister Tower 2 Phase 2 (2025) 341 units
- 50% shared between UCSF and UC Hastings; UCSF = 467 units
UC Hastings and UCSF Partner Housing Project

- Similar to other US law schools, **Hastings has downsized**.
- As a result, Hastings has **excess space** - including housing.
- Hastings needs to undertake a series of large renovations to upgrade housing, despite having downsized (code & aesthetics).
- Without a partner, Hastings cannot undertake these projects.
- We are **good partners**: both top-ranked schools, all graduate, in SF, and we already engage in several joint administrative and academic programs.
In the Meantime

- Implemented a needs-based, **cost-of-living supplement** ($200/month) to provide a **bridge solution** for students until more campus housing can be developed.
  - Getting lots of thank you notes!

- Already in place is a **cost-of-living supplement** for most medical residents/fellows ($835/month).

- We also implemented strategies to **optimize our current housing** portfolio, including two-year term limits, increasing per unit capacities, etc.
Update on UCSF’s Capital Financial Plan
The Capital Financial Plan (CFP) is:

- Reviewed and accepted annually by the Board of Regents.

- Includes projects with a budget greater than $750,000. Those budgeted for more than $5 million are listed by name.

- Describes projects that have a reasonable expectation for funding or can be budgeted during the 10-year period.

- Includes both Campus and Medical Center projects.
Capital Priorities and Drivers for the 2016-26 Capital Financial Plan

• Provide for planned expansion and development, allowing lease and site consolidation and accommodating UCSF’s growth in instruction, research, and clinical programs, and student housing.

• Allow for compliance with UC seismic regulations and policies through renovations, replacement and demolition of seismically compromised facilities.

• Acknowledge increased constraints on operating budgets, as well as stewardship and sustainability demands. UCSF must invest in its existing facilities, to address deferred maintenance and renewal needs, and optimize the use and operational efficiency of existing space. Demolition or repurposing of obsolete buildings provides opportunities to ensure UCSF’s resources are allocated efficiently.
Status on Projects Included in the 2015 Update to the CAG

• Clinical Sciences Building Seismic Retrofit and Renovation project, which commenced during the past year and is planned for completion by summer 2018.

• Demolition of the Laboratory of Radiobiology and Medical Research 4 buildings at Parnassus Heights occurred since approval of the 2015-2025 CFP.
Capital Financial Plan FY 2017 to FY 2026

Respond to the City and Community Context  $22M

• Parnassus Streetscape Phases 1 & 2  $22M
Capital Financial Plan FY 2017 to FY 2026

Accommodate UCSF’s Projected Growth $1,199M

- Mission Bay Block 23A Site Utility Loop (new) $13M
- Mission Center Building Densification (new) $100M
- Minnesota Street Student and Trainee Housing (new) $231M
- Mission Bay NW Campus Infrastructure $10M
- Medical Center Backfill Projects $42M
- Mission Bay East Campus Phase 1 (Block 33) $237M
- Precision Cancer Medicine Building at Mission Bay $250M
- Mission Bay Neurosciences Research Building (Block 23A) $316M
- Psychiatry Building / Child, Teen, and Family Center at 2130 Third Street n/a**

** Privatized development – budget to be determined
## Capital Financial Plan FY 2017 to FY 2026

Ensure UCSF’s Facilities are Seismically Safe $486M

- **Mission Center Building Seismic Life Safety (new)** $44M
- Mount Zion Hellman Building Demolition $8M
- Surge Building Decant * $11M
- Parnassus Fire Line Seismic Upgrade Phase 2 $12M
- ZSFG Academic Building Seismic Program $203M
- **UC Hall Seismic Program** * $208M

* Parnassus Heights space-ceiling-related projects
Capital Financial Plan FY 2017 to FY 2026

Promote Environmental Sustainability/Minimize Costs $1,244M

- Parnassus HSIR Life Safety Improvements (new) $13M
- Millberry Union/ACC Garage Spall Repair (new) $17M
- Emergency Power Fuel Oil Tank Upgrades $10M
- Parnassus Underground Utility Reliability Upgrades Phase 1 $16M
- Mount Zion Cancer Research Building Renewal $22M
- Parnassus Dentistry Building Renewal $26M
- Parnassus Library Renewal $37M
- Campus, Medical Center & Auxiliary Projects $750K to $5M
  - Infrastructure*** $89M
- Campus Capital Projects $750K to $5M – Renovation*** $299M
- Medical Center Capital Projects $750K to $5M – Renovation*** $104M
- Other Campus Capital Projects 2022-23 to 2025-26 $110M
- Other Medical Center Capital Projects 2017-2026 $295M

*** Multiple projects over 10 years
Examples of Projects Included in Roll-Up of Capital Projects $750K to $5M

- Proctor Building Demolition *
- Surge Building Demolition *
- Woods Building Demolition *
- Mount Sutro/Sunset Trail Improvements
- 5th & Kirkham Traffic Calming
- Faculty Alumni House: Interim Seismic Measures
- Mission Bay North Campus Surface Parking

* Parnassus Heights space-ceiling-related projects
Parnassus Heights
Campus Site
Mission Bay Campus Site
Update on UCSF’s Economic and Fiscal Impact Study
Fiscal & Economic Impacts Analysis – Preliminary Findings

presented to
UCSF Community Advisory Group

presented by
Economic & Planning Systems, Inc.

September 7, 2016
Presentation Overview

- Review of Study Scope and Objectives
- Present preliminary findings
- Discuss how results compare to 2010
- Next Steps and Q&A

Note: This is a retrospective study focusing on FY14/15 and years prior back to FY08/09. No projected growth has been considered at this time.
Secondary Economic Impacts:
- Economic Development
- Healthcare
- Other

Primary Economic Impacts:
By UCSF, its staff, students, visitors, and retirees

Fiscal Impacts:
On City General Fund Budget

UCSF Facilities & Programs

Study Overview

CAG Meeting September 7, 2016
About UCSF

- UCSF Schools:
  - Dentistry
  - Medicine
  - Nursing
  - Pharmacy

- UCSF Physical Space:
  - Over 9 million square feet of building space
  - Roughly 205 total acres
  - This includes total building space, excluding parking, at Parnassus, Mission Bay and Mount Zion, all smaller owned sites and all leased sites as of November 2015.
# UCSF Population

## UCSF Students and Residents

<table>
<thead>
<tr>
<th></th>
<th>Students Enrolled</th>
<th>% of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCSF Students</td>
<td>3,167</td>
<td>65%</td>
</tr>
<tr>
<td>Residents</td>
<td>1,680</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Total Students</strong></td>
<td><strong>4,847</strong></td>
<td><strong>155%</strong></td>
</tr>
</tbody>
</table>

## UCSF Personnel

### Full-Time Equivalents (FTE)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% of Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Management</td>
<td>1,764</td>
<td>8%</td>
</tr>
<tr>
<td>Academic Employees</td>
<td>5,923</td>
<td>28%</td>
</tr>
<tr>
<td>Professional and Support Staff</td>
<td>13,559</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Total FTE Personnel¹</strong></td>
<td>21,247</td>
<td>100%</td>
</tr>
</tbody>
</table>

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¹ [1] Total Full Time Equivalent Employment of UCSF
Top 15 Employers in San Francisco

CAG Meeting September 7, 2016
### Top 15 Employers in the Bay Area

<table>
<thead>
<tr>
<th>Employer</th>
<th>Number of SF Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser Permanente</td>
<td>30,000</td>
</tr>
<tr>
<td>City and County of SF</td>
<td>27,000</td>
</tr>
<tr>
<td>UCB</td>
<td>26,000</td>
</tr>
<tr>
<td>UCSF</td>
<td>22,000</td>
</tr>
<tr>
<td>Safeway Inc.</td>
<td>19,000</td>
</tr>
<tr>
<td>State of California</td>
<td>17,000</td>
</tr>
<tr>
<td>Wells Fargo Bank</td>
<td>12,000</td>
</tr>
<tr>
<td>U.S. Postal Service</td>
<td>11,000</td>
</tr>
<tr>
<td>Stanford University</td>
<td>8,500</td>
</tr>
<tr>
<td>United Airlines Inc.</td>
<td>8,000</td>
</tr>
<tr>
<td>PG&amp;E</td>
<td>6,500</td>
</tr>
<tr>
<td>Alameda County</td>
<td>6,000</td>
</tr>
<tr>
<td>Stanford Health Care</td>
<td>5,000</td>
</tr>
<tr>
<td>Genentech Inc.</td>
<td>5,000</td>
</tr>
<tr>
<td>Contra Costa County</td>
<td>5,000</td>
</tr>
</tbody>
</table>
Primary Economic Impacts
Primary Economic Impacts

Measured in San Francisco and the 9-County Bay Area and include:

- Direct jobs and wages (UCSF employment and payroll)
- Indirect jobs and wages (UCSF Suppliers)
- Induced jobs and wages (Jobs created by spending from direct and indirect impacts)
Primary Impacts Illustration

UCSF Faculty and Staff

UCSF purchases of goods and services

UCSF Students + Retirees

Household expenditures by UCSF employees, Suppliers' employees, students, and retirees

Direct Impact + Indirect Impact + Induced Impact = Primary Economic Impacts
About the Input-Output Model

• IMPLAN (Impact Analysis for Planning) software relies on data from Bureau of Labor Statistics (BLS) and Census Bureau

• I/O models develop economic “multipliers” that mathematically represent relationships between sectors of the economy within a defined “Study Area”

• Industries with high multiplier effects typically have:
  – Inputs which can be sourced locally
  – A high labor component
  – Above average wages
### Key Input Assumptions

<table>
<thead>
<tr>
<th>Input Category</th>
<th>Assumption / Model Input</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>UCSF Employment¹</td>
<td>20,808</td>
</tr>
<tr>
<td>Total Employee Compensation</td>
<td>$1,780,000,000</td>
</tr>
<tr>
<td>UCSF Avg. Annual Construction Spending</td>
<td>$180,000,000</td>
</tr>
<tr>
<td>UCSF Student Population</td>
<td>4,444</td>
</tr>
<tr>
<td>UCSF Retiree Population</td>
<td>6,816</td>
</tr>
</tbody>
</table>

¹ UCSF employee headcount, inclusive of full and part time positions.
## Comparative Results – Job Impacts

<table>
<thead>
<tr>
<th>Item</th>
<th>Total San Francisco Impacts</th>
<th>Total Nine-County Bay Area Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2015</td>
</tr>
<tr>
<td>I. Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCSF Operations</td>
<td>30,108</td>
<td>Increased</td>
</tr>
<tr>
<td>UCSF Construction</td>
<td>1,500</td>
<td>Increased</td>
</tr>
<tr>
<td>UCSF Student Spending</td>
<td>182</td>
<td>Increased</td>
</tr>
<tr>
<td>UCSF Retiree Spending</td>
<td>320</td>
<td>Increased</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32,110</strong></td>
<td>Increased</td>
</tr>
</tbody>
</table>

[1] Employment includes all direct, indirect, and induced jobs created by UCSF’s operations, construction spending, student spending, and retiree spending.
### Comparative Results – Employee Compensation

#### III. Employee Compensation

<table>
<thead>
<tr>
<th>Item</th>
<th>Total San Francisco Impacts</th>
<th>Total Nine-County Bay Area Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2015 % Growth</td>
</tr>
<tr>
<td>UCSF Operations</td>
<td>$2,050,000,000</td>
<td>Increased 65-70%</td>
</tr>
<tr>
<td>UCSF Construction</td>
<td>$117,000,000</td>
<td>Increased 35-40%</td>
</tr>
<tr>
<td>UCSF Student Spending</td>
<td>$9,000,000</td>
<td>Increased 55-60%</td>
</tr>
<tr>
<td>UCSF Retiree Spending</td>
<td>$20,000,000</td>
<td>Increased 15-20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,196,000,000</strong></td>
<td><strong>Increased 60-65%</strong></td>
</tr>
</tbody>
</table>
Secondary Economic Impacts
UCSF Secondary Impacts

- Research, innovation and technology transfer
- Growth of the regional Life Sciences Industry
- Support of new “spin-off” and ancillary businesses
- UCSF Uncompensated Care and Charity Care Program
- Supporting Jobs within a wide range of income levels
NIH Funding – Top 5 Recipients

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NIH Funding – Schools of Medicine (Top 5)

CAG Meeting September 7, 2016
Universities R&D $s (Top 5)

Johns Hopkins University
University of Michigan, Ann Arbor
University of Washington, Seattle
University of Wisconsin, Madison
UCSF

2014 R&D Expenditures

$0
$500,000,000
$1,000,000,000
$1,500,000,000
$2,000,000,000
$2,500,000,000

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UCSF Inventions and Patents

- Inventions and Patents are a strong indication of the level of innovation by a particular industry in a given field

<table>
<thead>
<tr>
<th>Item</th>
<th>UCSF</th>
<th>UC System</th>
<th>UCSF as % of UC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventions Disclosed</td>
<td>181</td>
<td>1,769</td>
<td>10%</td>
</tr>
<tr>
<td>Total Active Inventions</td>
<td>1,763</td>
<td>11,963</td>
<td>15%</td>
</tr>
<tr>
<td>Patents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Patents Issued 2014</td>
<td>141</td>
<td>1,175</td>
<td>12%</td>
</tr>
<tr>
<td>Total Active Patents</td>
<td>1,490</td>
<td>8,799</td>
<td>17%</td>
</tr>
</tbody>
</table>

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UCSF “Spin-Off” Firms

- Personnel and Research at UCSF has given rise to over 110 Life Sciences Companies
- UCSF provides “incubator” space at the Mission Bay Campus (QB3 Garage). In 2014 these companies:
  - Received 50 grants
  - Were awarded 14 patents
  - Generated $600 million in funding
  - Generated $161 million in revenue to the City of San Francisco
### UCSF Uncompensated Care/Charity Care

<table>
<thead>
<tr>
<th>Item</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UCSF Medical</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Charity Care</td>
<td>$8,986,294</td>
<td>$14,587,108</td>
</tr>
<tr>
<td>Cost of Uncompensated Care</td>
<td>$85,900,000</td>
<td>$98,800,000</td>
</tr>
<tr>
<td><strong>ZSFG</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Charity Care</td>
<td>$141,159,972</td>
<td>$130,271,621</td>
</tr>
<tr>
<td>Cost of Uncompensated Care</td>
<td>$102,300,000</td>
<td>$132,500,000</td>
</tr>
<tr>
<td><strong>Total Patients Receiving Care</strong></td>
<td>105,181</td>
<td>93,409</td>
</tr>
<tr>
<td><strong>Total Cost per Patient</strong></td>
<td>$3,217</td>
<td>$4,027</td>
</tr>
</tbody>
</table>
UCSF commitment to Income Equality

CAG Meeting September 7, 2016
Fiscal Impact Analysis
San Francisco FY 14/15 General Fund

SF FY 14/15 GF Revenue Components - $3.89 Billion

- Property Taxes: 32%
- Business Taxes: 15%
- Intergov't.-State: 16%
- Other Local Taxes: 23%
- Intergov't.-Federal: 6%
- Charges for Services: 5%
- All Other: 3%

SF FY 14/15 GF Expenses Components - $3.25 Billion

- Public Protection: 30%
- General City Responsibilities: 20%
- Public Works, Transportation, and Commerce: 11%
- Community Health: 19%
- General Administration and Finance: 6%
- Culture and Recreation: 5%
- Human Welfare and Neighborhood Dev.: 9%
Fiscal Impact Analysis (FIA) Overview

• Taken as a whole, all City uses have a neutral impact on the General Fund because the budget is balanced.

• Taken in parts, different land uses and activities have differential impacts on the City’s budget
  – Low/Zero tax revenue generating uses like churches or schools are “balanced out” by high tax revenue-generating uses like hotels and retail.

• UCSF has both high and low tax/cost generating elements and thus total fiscal impact requires careful analysis
Fiscal Impact Analysis (FIA) – Approach

1. **Case study.** Direct information related to UCSF revenue and service demands.

2. **Population-based estimate.** Compare UCSF’s population with San Francisco’s population and apply proportion to the applicable budget category.

3. **Negligible impact.** Assumes UCSF’s impact on budget item is minimal.
Defining the UCSF Population

Considerations

• UCSF’s population consists of students, employees, and visitors.

• Some students and employees are also on-campus residents, so avoid double-counting.

Assumptions

• Analysis assumes that activities not linked to UCSF (e.g., “off-campus life”) are revenue neutral.

• On-campus students are treated like full San Francisco residents.

• UCSF employees are treated like other San Francisco employees.
## UCSF Resident Equivalents

<table>
<thead>
<tr>
<th>Item</th>
<th>2008-09</th>
<th>2014-15</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF Resident Equivalents</td>
<td>1,109,729</td>
<td>1,112,917</td>
<td>0.3%</td>
</tr>
<tr>
<td>UCSF Resident Equivalents</td>
<td>13,995</td>
<td>15,764</td>
<td>12.6%</td>
</tr>
<tr>
<td>UCSF as % of Total</td>
<td>1.3%</td>
<td>1.4%</td>
<td></td>
</tr>
</tbody>
</table>
### Fiscal Impact Summary

<table>
<thead>
<tr>
<th>Item</th>
<th>2008/09</th>
<th>2014/15</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco General Fund Revenues</td>
<td>2.7 billion</td>
<td>3.9 billion</td>
<td>45%</td>
</tr>
<tr>
<td>San Francisco General Fund Costs</td>
<td>2.3 billion</td>
<td>3.3 billion</td>
<td>43%</td>
</tr>
<tr>
<td>UCSF General Fund Revenue Impact</td>
<td>$4,889,000</td>
<td>Increased</td>
<td>65-70%</td>
</tr>
<tr>
<td>UCSF General Fund Cost Impact</td>
<td>$4,169,000</td>
<td>Increased</td>
<td>75-80%</td>
</tr>
<tr>
<td><strong>Net Fiscal Impact</strong></td>
<td>$720,000</td>
<td>Increased</td>
<td>20-25%</td>
</tr>
</tbody>
</table>

CAG Meeting September 7, 2016
Discussion and Questions
Overview of Mount Sutro Draft Vegetation Management Plan
Process Overview/Project Timeline

- January to August 2016: Convene TAC meetings
- September 2016: Publish draft management plan
- October 4 and 15, 2016: Community meetings
- October/November 2016: Publish Initial Study for EIR
- November/December 2016: EIR Scoping Meeting
- Spring 2017: Publish draft EIR
- Spring 2017: Public hearing on recirculated draft EIR
- Spring/Summer 2017: Prepare responses to comments
- Summer 2017: Publish and certify final EIR
- **Fall 2017: Begin phased implementation (bird-nesting season from March-August)**

_Dates are approximate and subject to change._
UCSF Policies in the Reserve

- **Safety** of people and structures is top priority.

- **Herbicides are not used** in the Reserve.

- **Unnecessary tree work** in the Reserve is avoided during bird-nesting season (March to August). A survey for raptor nesting will be done before work is performed in January and February.

- **Commitment to transparency and community planning principles** is UCSF’s promise to the community.

- **Public access** to trail network is maintained and encouraged. UCSF works with the non-profit Sutro Stewards to build and maintain the trail system using volunteers.

- The **beauty of the Reserve will be preserved** and its novel ecosystem maintained as a public resource.
Goals for the Management of the Reserve

The University has four goals for the management of the Reserve and this draft plan:

1. Protect the safety of Reserve users; UCSF students, faculty, staff and patients; neighbors and adjoining campus and residential properties

2. Improve and enhance the health and stability of the ecosystem

3. Enhance the visual design and aesthetic experience

4. Maintain and ensure public access to the Reserve
Management Plan Recommendations

Legend

- Mount Sutro Reserve
- Vegetation Type

- Summit
- Type 1
- Type 2
- Type 3
- Type 4

Created by Matt Greene Forestry & Biological Consulting April 25, 2016
### Management Plan Recommendations

#### Forest Inventory

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Size (acres)</th>
<th>Trees per acre</th>
<th>Basal Area (sq. ft.)</th>
<th>DBH Range (in.)</th>
<th>Dominant Tree Species</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Live Standing dead</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>270</td>
<td>100</td>
<td>2 to &gt;36</td>
<td>Blue gum, blackwood acacia</td>
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<td>45</td>
<td>10</td>
<td>14 to 20</td>
<td>Blue gum, Monterey cypress</td>
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<td>Monterey pine, blackwood acacia, coast redwood, willow</td>
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<td>8</td>
<td>110</td>
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<td>2 to &gt;40</td>
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<td></td>
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<td>Willow, plum</td>
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<td>18</td>
<td>128</td>
<td>50</td>
<td>2 to 34</td>
<td>Blue gum</td>
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<td>Monterey cypress, cherry coast live oak, willow</td>
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**Estimated live trees in the Reserve:** 10,500
Management Plan Recommendations

Existing Conditions (key findings)

- Dominant blue gum eucalyptus tree cover is not healthy or regenerating
- Tree density is too high to support healthy canopy
- No evidence that the existing forest will recover on its own
- Tree age distribution is not appropriate
- Common understory plants are healthy
Management Plan Recommendations

Desired future conditions

- Restored eucalyptus canopy
- Healthy, diverse vegetation
- Uneven-aged stands of trees
- 2-3 snags (standing dead trees) per acre
- Inverse J-shaped curve of ideal tree size distribution
- Control of invasive understory vegetation
- Additional native plant restoration areas
Management Plan Recommendations

Plan to achieve desired conditions

- Phased-in approach
- Create growing conditions to support regeneration of the canopy
  - Control competing vegetation
  - Full sun
- Reduce number of trees per acre by removing dead and dying trees
Management Plan

Recommendations

Phase 1 (initial 5 years)

- **Remove** hazardous trees
- **Treat** four acres in Forest Type 1. Plant blue gum eucalyptus in one section, blue gum and other eucalyptus species in another section.
- **Enhance** restoration and stewardship of native plants
- **Maintain** defensible space
- **Maintain** public access
Management Plan Recommendations

Phase 2 (years 6-10)

- **Remove dead and dying trees** in Forest Types 1, 3 and 4 to desired stand densities.

- **Treat** 10 acres of Forest Type 1. Plant a mix of blue gum eucalyptus and native species.

- **Treat** two acres of Forest Types 2 and 3, and 4 acres of Forest Type 4. Plant a mix of blue gum eucalyptus and native species.
Management Plan Recommendations

Phase 3 (years 11-20)

- **Monitor and assess** success of treatments and adjust accordingly.

- **Remove dead and dying trees** in any remaining untreated acres in Forest Types 1, 3, and 4.

- **Plant** a mix of blue gum eucalyptus and native species in any remaining acres of Forest Types 2, 3, and 4.
Public Comment

Items on the agenda – 3 minutes per speaker
Next Steps