

Maintenance Staffing

An Overview and Plan for Proper
Maintenance Staffing at Victor Valley
College from 2006 to 2010

Topics & Issues

- ❖ Factors That Drive Staffing Levels
- ❖ Staffing Models Based On Performance
- ❖ Future Growth And The Staffing Model

Driving Factors

- ❖ Accepted Industry Standards:
 - California Association of School Business Officials
 - International Facility Manager's Association
 - Association of Higher Education Facilities Officers (APPA)
- ❖ Perception of Faculty, Staff, Students, and Visitors

Staffing Models

- ❖ Maintenance Technicians
- ❖ Grounds Workers
- ❖ Custodians
- ❖ Management

Maintenance Technicians

The Association of Higher Education Facilities Officers (APFA) defines facilities maintenance into 5 levels. These levels are:

- ❖ Level 1 – Showpiece Facility (highest)
- ❖ Level 2 – Comprehensive Stewardship (Recommended)
- ❖ Level 3 – Managed Care
- ❖ Level 4 – Reactive Management
- ❖ Level 5 – Crisis Response

Definition of Levels

Showpiece Facility

- ❖ Maintenance activities appear highly focused. Typically, equipment and building components are fully functional and in excellent operating condition. Service and maintenance calls are responded to immediately. Buildings and equipment are regularly upgraded, keeping them current with modern standards and usage.

Comprehensive Stewardship (recommended)

- ❖ Maintenance activities appear organized with direction. Equipment and building components are usually functional and in operating condition. Service and maintenance calls are responded to in a timely manner. Buildings and equipment are regularly upgraded, keeping them current with modern standards and usage.

Managed Care

- ❖ Maintenance activities appear to be somewhat organized, but they remain people dependant. Equipment and building components are mostly functional, but they suffer occasional breakdowns. Service and maintenance call response times are variable and sporadic without apparent cause. Buildings and equipment are periodically upgraded to current standards and usage, but not enough to control the effects of normal usage and deterioration.

Reactive Management

- ❖ Maintenance activities appear to be somewhat chaotic and people-dependant. Equipment and building components are frequently broken and inoperative. Service and maintenance calls are typically not responded to in a timely manner. Normal usage and deterioration continues unabated, making buildings and equipment inadequate to meet present usage needs.

Crisis Response

- ❖ Maintenance activities appear chaotic and without direction. Equipment and building components are routinely broken and inoperative. Service and maintenance calls are never responded to in a timely manner. Normal usage and deterioration continues unabated, making buildings and equipment inadequate to meet present usage needs.

Determining Maintenance Staffing

- ❖ Maintainable Square Footage (MSF) is divided into four categories. These categories combine a multitude of different types of use to simplify the method of determining staff. The categories are:
 1. Classroom
 2. Laboratory
 3. Office
 4. Residence Hall

At Victor Valley College the MSF for each category is:

Classroom – 108,548 square feet

Laboratory – 101,080 square feet

Office – 221,540 square feet

Residence Hall – 41,027 square feet

Total MSF is 472,195 square feet

The formulas for maintenance staffing, as indicated in the references, based upon our MSF per category, would require the following number of maintenance technicians:

Level 1 – 10

Level 2 – 7

Level 3 – 5

Level 4 – 4

Level 5 – 2

Numbers are rounded to the nearest whole number

Grounds Workers

The Association of Higher Educational Facilities Officers (APPA) defines grounds maintenance into 5 levels. These levels are:

- ❖ Level 1 – State of the Art Maintenance.
- ❖ Level 2 – High Level Maintenance (Recommended).
- ❖ Level 3 – Moderate Level Maintenance
- ❖ Level 4 – Moderately Low Level Maintenance
- ❖ Level 5 – Minimal Level Maintenance

A separate handout is provided with a detailed description of each level.

Determining Grounds Staffing

- ❖ The APPA guideline divides the Grounds Worker's responsibilities into six distinct areas. Due to the nature of our campus an additional area has been added. These areas are:
 - ❖ Flower Beds
 - ❖ Baseball/Softball Fields
 - ❖ Football/Soccer Fields
 - ❖ Shrub Areas
 - ❖ Turf Maintenance – Open Area
 - ❖ Turf Maintenance – Main Grounds
 - ❖ Maintained But Not Landscaped*

At Victor Valley College the square footage for each category is:

Flower Beds – 9,452

Baseball/Softball Fields – 509,357

Football/Soccer Fields – 481,925

Shrub Areas – 332,982

Turf Area/Open – 734,128

Turf Area/Main – 297,131

Maintained But Not Landscaped -

The formulas for grounds staffing, as indicated in the references, based upon the square footage per category, would require the following number of grounds workers:

Level 1 – 27

Level 2 – 16

Level 3 – 12

Level 4 – 8

Level 5 – 2

Number are rounded to the nearest whole number

Custodians

The Association of Higher Education Facilities Officers (APPA) defines the cleanliness of a campus into 5 levels. These levels are:

- ❖ Level 1 – Orderly Spotlessness
- ❖ Level 2 – Ordinary Tidiness
- ❖ Level 3 – Casual Inattention
- ❖ Level 4 – Moderate Dinginess
- ❖ Level 5 – Unkempt Neglect

Definition of Levels

Orderly Spotlessness

- ❖ Floors and base moldings shine and/or are bright and clean; colors are fresh. There is no build up in corners or along walls.
- ❖ All vertical and horizontal surfaces have a freshly cleaned or polished appearance and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints. Lights all work and fixtures are clean.
- ❖ Washroom and shower fixtures and tile gleam and are odor free. Supplies are adequate.
- ❖ Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Ordinary Tidiness (recommended)

- ❖ Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days worth of dust, dirt, stains, or streaks.
- ❖ All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable upon close observation. Lights all work and fixtures are clean.
- ❖ Washroom and shower fixtures and tile gleam and are odor free. Supplies are adequate.
- ❖ Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Casual Inattention

- ❖ Floors are swept or vacuumed clean, but upon close observation there can be stains. A buildup of dirt and/or floor finish in corners and along walls can be seen.
- ❖ There are dull spots and/or matted carpet in walking lanes. There are streaks or splashes on base moldings.
- ❖ All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints. Lamps all work and fixtures are clean.
- ❖ Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

Moderate Dinginess

- ❖ Floors are swept or vacuumed clean, but are dull, dingy, and stained. There is a noticeable buildup of dirt and/or floor finish in corners and along walls.
- ❖ There is a dull path and/or obviously matted carpet in the walking lanes. Base molding is dull and dingy with streaks and splashes.
- ❖ All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks. Lamp fixtures are dirty and some lamps (up to 5 percent) are burned out.
- ❖ Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked. Trash containers smell sour.

Unkempt Neglect

- ❖ Floors and carpets are dull, dirty, dingy, scuffed, and/or matted. There is a conspicuous buildup of old dirt and/or floor finish in corners and along walls. Base molding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.
- ❖ All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, all of which will be difficult to remove. Lack of attention is obvious.
- ❖ Light fixtures are dirty with dust balls and flies. Many lamps (more than 5 percent) are burned out.
- ❖ Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour.

Determining Custodial Staffing

❖ Cleanable Square Footage (CSF) is divided into thirty-three distinct space categories. Victor Valley College uses twenty-seven of those space categories. They are:

- * 1-Classroom with Hard Floor
- * 2-Entranceway
- * 3-Locker/Changing Room w/o Shower
- * 4-Office w/ Carpeted Floor
- * 5-Public Area w/ Hard Floors
- * 6-Research Lab w/ Haz. Waste
- * 7-Research Lab w/o Haz. Waste
- * 8-Stairwell
- * 9-Storeroom
- * 10-Washroom
- * 11-Shower Room
- * 12-Public Area w/ Carpeted Floor
- * 13-Office w/ Hard Floors
- * 14-Classroom w/ Carpeted Floor
- * 15-Classroom w/ Carpeted Floors – Heavy
- * 16-Classroom w/ Hard Floors – Heavy
- * 17-Washroom – Heavy
- * 18-Utility
- * 19-Vending
- * 21-Cafeteria w/ Carpet
- * 22-Cafeteria w/ Hard Floor
- * 23-Library w/ Carpet
- * 25-Auditorium Seating and Foyer
- * 26-Auditorium Stage and Wings
- * 27-Gymnasium – Wood Floor
- * 30-Patient Conference Room
- * 33-Nursing Station

CSF By Category

■ Routine Activities

| ■ | CSF | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|------|-------|---------|---------|---------|---------|---------|
| ■ 1 | 9659 | 0.61 | 0.46 | 0.3 | 0.22 | 0.21 |
| ■ 2 | 6224 | 1.3 | 0.79 | 0.47 | 0.27 | 0.17 |
| ■ 3 | 8275 | 0.67 | 0.67 | X | X | X |
| ■ 4 | 61166 | 5.7 | 2.75 | 1.5 | 1 | 0.7 |
| ■ 5 | 40128 | 4.9 | 1.69 | 1.06 | 0.93 | 0.88 |
| ■ 6 | 2545 | 0.43 | 0.33 | 0.29 | 0.21 | 0.09 |
| ■ 7 | 20300 | 2.53 | 1.72 | 1.35 | 0.76 | 0.23 |
| ■ 8 | 1172 | 0.14 | 0.06 | 0.05 | 0.03 | 0.01 |
| ■ 9 | 11910 | 0.15 | 0.05 | 0.03 | X | X |
| ■ 10 | 6534 | 3.27 | 2.52 | X | X | X |
| ■ 11 | 2298 | 0.44 | 0.44 | X | X | X |
| ■ 12 | 24607 | 1.21 | 0.5 | 0.36 | 0.26 | 0.26 |
| ■ 13 | 8038 | 0.78 | 0.43 | 0.27 | 0.19 | 0.16 |

CSF By Category

| | | | | | | | |
|---|----|---------------|--------------|--------------|--------------|--------------|-------------|
| ■ | 14 | 22692 | 2.12 | 0.93 | 0.83 | 0.63 | 0.6 |
| ■ | 15 | 69191 | 12.96 | 5.12 | 4.82 | 3.8 | 3.68 |
| ■ | 16 | 53364 | 6.75 | 4.96 | 4.91 | 2.41 | 2.31 |
| ■ | 17 | 6687 | 6.7 | 4.96 | X | X | X |
| ■ | 18 | 12811 | 2.7 | 2.08 | 1.19 | 0.66 | 0.23 |
| ■ | 19 | 392 | 0.07 | 0.03 | 0.02 | 0.02 | 0.02 |
| ■ | 21 | 1284 | 0.09 | 0.07 | X | X | X |
| ■ | 22 | 9158 | 0.69 | 0.5 | X | X | X |
| ■ | 23 | 22245 | 1.13 | 0.52 | 0.24 | 0.19 | 0.16 |
| ■ | 25 | 6844 | 1.12 | 0.46 | 0.18 | 0.09 | 0.01 |
| ■ | 26 | 3611 | 0.18 | 0.12 | 0.03 | 0.009 | X |
| ■ | 27 | 13946 | 0.55 | 0.29 | 0.13 | 0.05 | 0.01 |
| ■ | 30 | 544 | 0.06 | 0.06 | X | X | X |
| ■ | 33 | 104 | 0.01 | 0.01 | X | X | X |
| ■ | | 425729 | 57.26 | 32.52 | 18.03 | 11.72 | 9.73 |

The formulas for custodial staffing, as indicated in the references, based upon our CSF per category, would require the following number of custodians:

Level 1 – 57

Level 2 – 33

Level 3 – 18

Level 4 – 12

Level 5 – 10

Numbers are rounded to the nearest whole number

Future Growth

Within the next four years the College will build an additional 98,000 square feet of classroom and athletic space. Additional infrastructure will also be added if the Chevron energy improvements take place. More personnel will be required to maintain these improvements and expansion. To meet the demand, the following personnel will have to be hired:

Maintenance Technicians – 2

Grounds Workers – N/A

Custodians - 5

Hiring Recommendations

If the campus is to be maintained at the recommended Level 2 threshold, the following recommendations are made to get us to that level:

Maintenance Technicians

Immediately fill the Locksmith and HVAC Technician positions.

Hire 1 additional Maintenance Technician in FY 06-07

Hire 1 additional Maintenance Technician in FY 07-08

Grounds Workers

Immediately fill the 4 open Grounds positions

Hire 2 additional Grounds positions in FY 06-07

Hire 2 additional Grounds positions in FY 08-09

Custodians

Immediately fill the 2 open positions

Hire 4 additional Custodians in FY 06-07

Hire 6 additional Custodians in FY 07-08

Hire 5 additional Custodians in FY 08-09

Management

Many issues affect the requirement for additional management staff within the M & O department.

- ❖ The number of current and future employees in the department.
- ❖ The work cycle of the department.
- ❖ The work area that employees service.
- ❖ Administrative requirements placed on the department director.
- ❖ Recommendations

Number of Employees

- ❖ The department currently has 35 positions. Nine of those positions are open, and are included in the recommendation to increase by the end of FY 06-07.
- ❖ By the end of FY 08-09 there will be an additional 21 maintenance employees, 15 of which will be graveyard shift custodians.

Department Work Cycle

- ❖ The department currently has a day shift which runs from 7:00 am to 3:30 pm, and a graveyard shift that runs from 10:00 pm to 6:30 am, Monday thru Friday
- ❖ The custodian in the SAC works Tuesday-Saturday from 9:00 am to 6:30 pm
- ❖ The plan would be to develop and staff a custodial swing shift position that would work Monday-Friday from 2:00 pm to 10:30 pm. This would cover the gap between the day and graveyard shifts.
- ❖ In FY 07-08, a swing shift Maintenance Technician position, working the same swing schedule, would be created.

Assigned Work Areas

- ❖ As previously indicated, the campus will have over 523,000 CSF and 573,000 MSF within the next 4 years.
- ❖ Each Custodian will be responsible for over 17,000 CSF.
- ❖ Each Maintenance Technician will be responsible for over 63,000 MSF.
- ❖ Each Grounds Worker will be responsible for 21 acres of landscaping.

Administrative Requirements

- ❖ The Director is the only member of management in the department. The position is responsible for the day to day activities of the 3 trades, with the assistance of 3 Lead workers. The Lead workers cannot conduct evaluations, perform discipline, or assign work to other members of the bargaining unit (CSEA).
- ❖ The Director is also responsible for a number of compliance programs, attending committee meetings, and assisting in the formulation of policy.
- ❖ All of this leaves very little time to directly supervise the members of the department.

Management Recommendations

- ❖ When the two open custodial positions are filled, recruit and fill the Custodial Supervisor position. This position is already authorized by the Board of Directors. The position would work the same shift as the graveyard custodians. This individual would have a key role in determining new routes as additional custodians are hired. The position would also fill a “leadership vacuum” that exists during the graveyard shift.
- ❖ Hire a Maintenance Supervisor in FY 07-08 to provide better daytime supervision and support of the Maintenance Technicians and Grounds Workers. This position would have alternate start times to accommodate the swing shift workers and trouble calls.

Questions?