



# Total Cost of Ownership Assessment

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Developed by:



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## Background

Napa Valley Community College District's Facilities Services provides maintenance and safe operations of the college's physical properties, custodial services, and grounds maintenance. The District maintains 64 buildings on two sites, totaling 510,316 gross square feet, including multiple athletic fields, and an Olympic-size swimming pool.

In support of the Napa Valley Community College District's mission, the custodial, maintenance, and grounds staff provide services to support the physical and natural environment of the college. Their services support more than 9,000 students at the main campus in Napa and the campus in St. Helena. The goal is to ensure that buildings and grounds are maintained in the best possible condition to enhance the teaching and learning environment. Services and support are offered through construction trades, buildings and grounds maintenance, energy management, mail service, setups, deliveries, and various related endeavors.

The District is performing a Total Cost of Ownership assessment to streamline the planning and management of development and long-term operating costs for its physical assets. A comprehensive Total Cost of Ownership process includes the cost of a facility from initial planning and construction, through operation and refurbishment to final replacement or disposal. The findings of this TCO Report inform resource needs and allocations for long-term facilities planning.

The District anticipates revising its Facilities Master Plan beginning Spring 2025, for which the 2024 Accreditation Standards of the Accrediting Commission for Community and Junior Colleges (ACCJC) will be the basis for comprehensive reviews beginning in fall 2025. This Total Cost of Ownership Assessment aligns with the current 2016/17 Facilities Master Plan for Napa Valley College and allows the District to meet the 2014 Accreditation Standards of the ACCJC, which instituted accreditation standards for development and long-term management of a college's physical assets. The relevant standards are included here for reference:

### **Standard III: Resources**

The institution effectively uses its human, physical, technology, and financial resources to achieve its mission and to improve academic quality and institutional effectiveness. Accredited colleges in multi-college systems may be organized so that responsibility for resources, allocation of resources, and planning rests with the district/system. In such cases, the district/system is responsible for meeting the Standards, and an evaluation of its performance is reflected in the accredited status of the institution(s).

#### **B. Physical Resources**

1. The institution assures safe and sufficient physical resources at all locations where it offers courses, programs, and learning support services. They are constructed and maintained to assure access, safety, security, and a healthful learning and working environment.
2. The institution plans, acquires or builds, maintains, and upgrades or replaces its physical resources, including facilities, equipment, land, and other assets, in a

manner that assures effective utilization and the continuing quality necessary to support its programs and services and achieve its mission.

3. To assure the feasibility and effectiveness of physical resources in supporting institutional programs and services, the institution plans and evaluates its facilities and equipment on a regular basis, taking utilization and other relevant data into account.
4. Long-range capital plans support institutional improvement goals and reflect projections of the total cost of ownership of new facilities and equipment.

# Definitions

Some of the key terms as defined by [APPA](#) and [Foundation for California Community Colleges](#) are:

## **Total Cost of Ownership (TCO)/Life-cycle Cost Management**

*A holistic approach to maximizing return on investment of managed physical assets that includes the summation of all known and estimated costs to include first, recurring, renewal / replacement, and end-of-useful life costs revised at critical decision points to aid in life-cycle asset management decisions.*

A dollar per square foot value associated with a facility. It is a calculation of all facility-specific costs (not including furnishings or nonfacility-specific equipment) divided by estimated life span of the building (30 or 50 years) and the total gross area. Facility-specific costs include all construction, preservation, maintenance, and operations costs. A strategic asset management practice considers all costs of operations and maintenance in addition to acquisition costs. TCO, therefore, includes the sum total of the present value of all direct, indirect, recurring, and nonrecurring costs incurred or estimated to be incurred in the design, development, production, operation, maintenance, and renewal of a facility, structure, or asset over its anticipated life span. (This total is inclusive of site/utilities, new construction, deferred maintenance, preventive/routine maintenance, renovation, compliance, capital renewal, and occupancy costs. Land values are specifically excluded.)

## **Adaptation/Renovation/Modernization**

The improvement, addition, or expansion of facilities by work performed to change the interior alignment of space or the physical characteristics of an existing facility so it can be used more effectively, be adapted for new use, or comply with existing codes. Includes the total expenditures required to meet evolving technological, programmatic, or regulatory demands.

## **APPA Maintenance, Custodial, and Grounds Level of Care Standards**

The APPA defined standards for five levels of care for the maintenance of facilities and grounds in conjunction with their Key Performance Indicators. The standards can be used by institutions to develop staffing levels based on the institution’s desired level of care for each of the three areas of maintenance. The standards are described as follows:

Element	Level 1	Level 2	Level 3	Level 4	Level 5
Maintenance	Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management	Crisis Response
Custodial	Orderly Spotlessness	Ordinary Tidiness	Casual Inattention	Moderate Dinginess	Unkempt Neglect
Grounds	Well-Manicured Landscape	High Level of Maintenance	Moderate Level of Maintenance	Moderately Low Level of Maintenance	Minimum Level of Maintenance

## **Current Replacement Value (CRV)**

The total expenditure in current dollars required to replace any facility at the institution, inclusive of construction costs, design costs, project management costs, and project administrative costs. Construction costs are calculated as replacement in function vs. in-kind. The value of design (6%), project management (10% to 12%), and administrative costs (4%) can be estimated at 20% of the construction cost. The value of property/land, however, is excluded, and insurance replacement values or book values should not be used to define the current replacement value. Costs for the replacement value are typically generated using a cost model based upon the use of reference cost databases using the building construction type, user and use categories, quality level, building systems and/or subsystems/components/units, and local experience. The property owner/manager may decide, for internal purposes, to base the CRV on a replacement in kind (e.g., duplicate constructions techniques), vs. a replacement in function, (e.g., six-story office space). The CRVs for associated infrastructure, such as utility systems, and generating plants, roadways, and nonbuilding structures (e.g., dams, bridges) are developed in a similar manner. Insurance replacement values or book values should not be used to define current replacement value.

## **Deferred Maintenance**

Maintenance or capital projects that have gone unfunded in previous budget cycles.

## **Facility Condition Assessment (FCA)**

California Community Colleges benefit from the Facility Condition Assessment (FCA) program. FCAs identify problems, develop cost estimates, and create plans for repairs by analyzing a facility's key components and systems.

There are two levels of FCA—a life cycle systems assessment (Level 1) and a comprehensive assessment (Level 2).

A Level 2 (L-2) assessment is a detailed physical inspection of existing facilities, during which assessors document hundreds or thousands of deficiencies. The deficiencies are added to the L-1 component building system life cycle to determine both current deficiencies and future costs. For facility managers, it identifies specific items that are deferred maintenance and capital renewal.

Comprehensive Assessments provide data-driven planning and construction programs. This leads to better repair and correction work procurement.

A team of architects and engineers gathers data for FCA. As needed, these teams may be augmented with building-type or system-specific specialists. We analyze the facility and infrastructure by using national cost database modeling, existing records, interviews with plant staff, onsite surveys, and facility experience. Software catalogs current deferred maintenance and future capital renewal costs.

## **Facility Condition Index (FCI)**

A benchmark to compare the relative condition of a group of facilities. It is computed by dividing the planned maintenance needs by the current replacement value.

### **Normal/Routine Maintenance and Minor Repairs**

Cyclical, planned work activities funded through the annual budget cycle, done to continue or achieve either the originally anticipated life of a fixed asset (i.e., buildings and fixed equipment) or an established level of performance. Normal/routine maintenance is performed on capital assets such as buildings and fixed equipment to help them reach their originally anticipated life.

### **Preventive Maintenance**

Routine planned, scheduled, controlled program of periodic inspection, adjustment, cleaning, lubrication, and selective parts replacement of components, and minor repair, as well as performance testing and analyses intended to maximize the reliability, performance, and life cycle of building systems and equipment. Consists of many checkpoint activities, often recommended by the manufacturer, which if disabled, may interfere with an essential installation operation, endanger life or property, or involve high cost or long lead time for replacement. The intent is to avert the incipient failures before they become actual or major failure, which would require "corrective" maintenance.

### **Recapitalization/Reinvestment Rate**

Restructuring a company's debt and equity mixture, often with the aim of making a company's capital structure more stable or optimal.

### **Routine Repairs**

Actions taken to restore a system or piece of equipment to its original capacity, efficiency, or capability. Routine repairs are not intended to increase significantly the capacity of the item involved. For example, replacing a failed boiler with a new unit of similar capacity would be a routine repair project. However, if the capacity of the new unit were double the capacity of the original unit, the cost of the extra capacity would have to be capitalized and would not be considered routine repair work.

# Total Cost of Ownership Assessment

## Purpose

The District's development of a Total Cost of Ownership (TCO) Assessment aims to formalize and integrate various independent facility development and operations initiatives and programs. The Total Cost of Ownership Assessment provides several benefits to the District including:

- Offers a structured approach to managing the District's assets effectively.
- Helps the District understand the full costs associated with assets, allowing for better allocation of financial and operational resources.
- Facilitates a comprehensive understanding of long-term financial implications of capital facility investments through TCO analysis, enabling informed decision-making on economic viability.
- Aids in short- and long-term financial planning, budgeting, and future capital planning needs.
- Identifies long-term funding needs and sources to support a structured facility renovation and replacement program.
- Establishes objective criteria to determine custodial, maintenance, and grounds staffing based on national standards of care.
- Integrates performance information to establish facility operating budgets.
- Provides benchmarks to measure facility operations performance against goals and identify opportunities for improvement.
- Encourages a proactive rather than reactive approach to project development and facility operations.

## Methodology

This report presents a comprehensive analysis of the Total Cost of Ownership (TCO) for both the Napa Valley College Main Campus and the Upper Valley Campus. Refer to Appendix A for the Summary Data which informs this report.

Data on budgeted Full-Time Equivalents (FTEs) within the maintenance and operations staff, along with their associated salaries and benefits, were collected to assess personnel costs. Note that administrative staff FTEs and their salaries and benefits were not incorporated in the calculation of these FTEs.

Building gross square footage (GSF) and campus acreage, sourced from the FUSION database, were utilized to calculate average annual costs per square foot. For the Napa Valley College Main Campus, the total site acreage excluded unmaintainable grounds. In order to calculate the acreage of non-building grounds maintained by the grounds personnel, the GSF of the buildings were subtracted from the total site acreage. The costs per square foot can then be applied to individual buildings for a more detailed analysis. For the Upper Valley Campus, the GSF which was leased to the City of St. Helena and not maintained by the District was excluded from GSF calculations. Only non-leased square footage was utilized in cost per square foot calculations and is referred to in the TCO Tool as "Maintainable" site acreage or GSF.



Refer to Appendix E for instructions on how to use the TCO Tool to view the estimated breakdown of annual costs per building.

The budgeted FTEs and square footage data were used to estimate the levels of care expected for each facility, enabling recommendations for staffing improvements to meet target standards and the associated costs of those staffing changes. These estimates are based upon staffing costs and GSF maintained by the District, and therefore this report excludes staffing performance, costs, and square footage maintained by the City of St. Helena.

Annual utility expenses were examined to estimate ongoing costs for energy and water consumption, as well as annual expenses related to minor maintenance and repairs. For the Upper Valley Campus, the District pays 44% of all utilities while the City of St. Helena pays 56%. Therefore, the utilities costs per square foot presented in this TCO and in Appendix A represent only the costs and GSF maintained by the District.

The recommendations for long-term management also rely on the Facility Condition Index (FCI), which evaluates the overall condition and maintenance needs of each building, including repair and replacement costs. The repair and replacement costs from the 2022-2027 FCI Assessment, sourced from FUSION, are included in Appendix B.

By integrating these data points, this report aims to present a holistic view of the TCO, supporting informed decision-making regarding facility management and investment priorities.

The District's Total Cost of Operation Assessment is divided into the following major elements:

- **Development Cost:** Costs associated with the planning, design, construction, furnishing, and commissioning of new facilities.
- **Annual Operational Costs:** Annual costs related to staffing, utilities, and maintenance necessary for keeping facilities in good condition, ensuring that buildings and grounds are clean and well-maintained.
- **Long-Term Management Costs:** Costs incurred from scheduled and deferred maintenance, renovations, replacements, and upgrades or repurposing of facilities over time.

## Development Costs

The Development Costs consist of the expenses for planning, design, construction, commissioning, and opening of a new facility or the renovation of existing spaces. Although the Facility Development Cost typically accounts for only 10%-15% of the overall TCO, effective management of these costs is essential for ensuring the facility's long-term value.

The District adopts a comprehensive master planning strategy that integrates the Educational Master Plan with the Facility Master Plan. The Educational Master Plan is shaped by reviews of educational programs, outlining the necessary and desirable features that facilities should have to support future educational needs. Facility projects focus on addressing space requirements, whether through constructing new buildings or renovating current ones. The Facility Master Plan includes these projects alongside necessary infrastructure improvements, addressing deferred maintenance, code compliance, technological upgrades, and overall management needs.

Once the Board of Trustees approves a project, a project team is formed to define its parameters. This team consists of representatives from user groups, designers, facility development management, and college leadership, as well as operations and maintenance personnel. The project definition will detail the specific space needs and unique requirements of educational programs, along with budget considerations, timelines, and specialized operational and maintenance needs.

This report does not incorporate initial development costs in calculating the TCO, as these figures were unavailable at the time of the assessment. While these costs can significantly impact the overall financial picture, their exclusion focuses the analysis on ongoing operational and maintenance expenses, which are vital for understanding the facility's long-term economic viability. It is important to note that including initial development costs in future assessments may provide a more comprehensive view of the total cost of ownership, offering insights that can inform better decision-making for facility management and investment.

## Operational Costs

Annual Operational Costs include:

- **Maintenance and Operations Staffing:** Salaries, benefits, and contracted expenses for Custodial, Maintenance, Grounds, and other Operations & Maintenance of Plant personnel.
- **Utilities:** Gas (SPURR), Electricity (PG&E), and Water (City of Napa, Napa Sanitation District, City of St. Helena).
- **Operating, Maintenance, and Repairs:** Supplies, materials, equipment, operating expenses & services.

## Maintenance and Operations Staffing Costs

### 2023-24 Annual Maintenance and Operations Staff Cost

The following staff costs include salary and benefits for custodial, maintenance, and grounds staff. The 2023-24 annual budget is used to allow projection of staff salary and benefits in relation to recommended changes in staffing levels. Refer to Appendix A for the 2023-24 budgeted FTEs, staffing costs, and square footage used for the following calculations.

Annual Budgeted Costs per Square Foot (2023-24)	Napa Valley College	Upper Valley Campus
<b>Custodial</b>	\$2.0606	\$0.1940
<b>Maintenance</b>	\$0.5390	\$0.0000
<b>Grounds</b>	\$0.0759	\$0.0069
<b>Other Operations &amp; Maintenance of Plant</b>	\$0.6265	\$0.0000
<b>Projected Annual Total</b>	<b>\$3.3020</b>	<b>\$0.2009</b>

### Maintenance and Operations Staffing Levels

The Association of Physical Plant Administrators (APPA) has developed staffing guidelines for maintenance, custodial, and grounds staff. These guidelines suggest staffing levels for APPA's five defined performance levels, or Standards of Care, which range from Level 1 (Excellent) to Level 5 (Marginal or Poor). The APPA standards are determined by the total gross square footage of the site and the number of full-time equivalent staff responsible for its maintenance. The TCO Tool includes a scenario planning calculator that estimates performance levels and associated costs based on projected changes in the number of full-time equivalent staff (FTE). Refer to Appendix C for the staffing performance scenario tool.

#### Custodial Staffing Level

In the 2023-24 fiscal year, the **Napa Valley College Main Campus** had budgeted for 14 FTE custodians, each responsible for 35,081 square feet of site's Gross Square Footage of 491,140 square feet. The expected level of care is approximately APPA Standard **Level 4 – Moderate Dinginess**.

In the 2023-24 fiscal year, the **Upper Valley Campus** had contracted 0.25 FTE custodians, responsible for 7,788 square feet of the site's maintainable Gross Square Footage. This equates to

31,152 square feet to be maintained per 1.0 FTE custodian, or approximately APPA **Standard Level 3 – Casual Inattention.**

APPA Standard	Level 1 Orderly Spotlessness	Level 2 Ordinary Tidiness	Level 3 Casual Inattention	Level 4 Moderate Dinginess	Level 5 Unkempt Neglect
Recommended SQFT per Custodian to maintain	8,500	16,700	26,500	39,500	45,600

### Maintenance Staffing Level

In the 2023-24 fiscal year, the **Napa Valley College Main Campus** had budgeted for 4.0 FTE maintenance staff, each responsible for 122,785 square feet of the site’s Gross Square Footage of 491,140 square feet. The expected level of care is approximately APPA Standard **Level 4 – Reactive Management.** The Napa Valley College Main Campus maintenance staff perform maintenance at the Upper Valley Campus as needed, which is not incorporated into the calculations of staffing level or recommendations of this report.

APPA Standard	Level 1 Showpiece Facility	Level 2 Comprehensive Stewardship	Level 3 Managed Care	Level 4 Reactive Management	Level 5 Crisis Response
Recommended SQFT per Maintenance Personnel to maintain	47,220	67,456	94,439	118,049	236,098

### Grounds Staffing Level

In the 2023-24 fiscal year, the **Napa Valley College Main Campus** had budgeted for 4.0 FTE grounds staff, each responsible for 922,655 square feet (21.2 acres) of the site’s total maintainable grounds of 3,690,620 square feet (84.7 acres). The expected level of care is approximately APPA Standard **Level 4 – Moderately Low-Level.**

In the 2023-24 fiscal year, the **Upper Valley Campus** contracted 0.25 FTE grounds staff, responsible for 281,388 square feet (6.45 acres) of the site’s total grounds. This equates to 1,125,552 square feet (25.85 acres) to be maintained per 1.0 FTE grounds staff, aligning with approximately APPA Standard **Level 4 – Moderately Low-Level.**

APPA Standard	Level 1 State of the Art	Level 2 High Level	Level 3 Moderate Level	Level 4 Moderately Low-Level	Level 5 Minimum Level
Recommended SQFT per Grounds Staff to maintain	346,738	451,717	608,098	976,615	1,855,656

### Staffing Recommendations

Refer to Appendix C for complete breakdown of increased staffing projections and salaries.

For the Napa Valley College Main Campus to achieve an estimated APPA Standard Level 3 for Custodial, Maintenance, and Grounds, the District would need to increase its staff at that site by at least 1.0 FTE for Custodial, 1.0 FTE for Maintenance, and 1.0 FTE for Grounds, decrease the building square footage or grounds acreage to maintain, or a combination of both.

For the Upper Valley Campus to achieve an estimated APPA Standard Level 3 for Maintenance and Grounds, the District would need to increase its staff at that site by at least 0.25 FTE for Grounds, decrease the building square footage or grounds acreage to maintain, or a combination of both. It is important to note that because the Upper Valley Campus site has a very small square footage, the APPA Standards may not be as accurate and actual levels of performance may vary.

Note that the TCO Tool is a planning tool and does not take into account unique site, building, or personnel circumstances. Actual performance levels and associated costs may vary. Certain buildings may require more staff time because they have more equipment to maintain or require more cleaning services. Successful institutions often go beyond the APPA guidelines by using technology, improving processes, adopting strong management practices, and offering training to boost employee productivity.

#### Recommended Annual Staffing Costs per GSF

Recommended Annual Costs per Square Foot (APPA Standard Level 3)	Napa Valley College	Upper Valley Campus
<b>Custodial</b>	\$2.2078	\$0.1940
<b>Maintenance</b>	\$0.6738	\$0.0000
<b>Grounds</b>	\$0.0949	\$0.0137
<b>Other Operations &amp; Maintenance of Plant</b>	\$0.6265	\$0.0000
<b>Projected Annual Total</b>	<b>\$3.6030</b>	<b>\$0.2077</b>

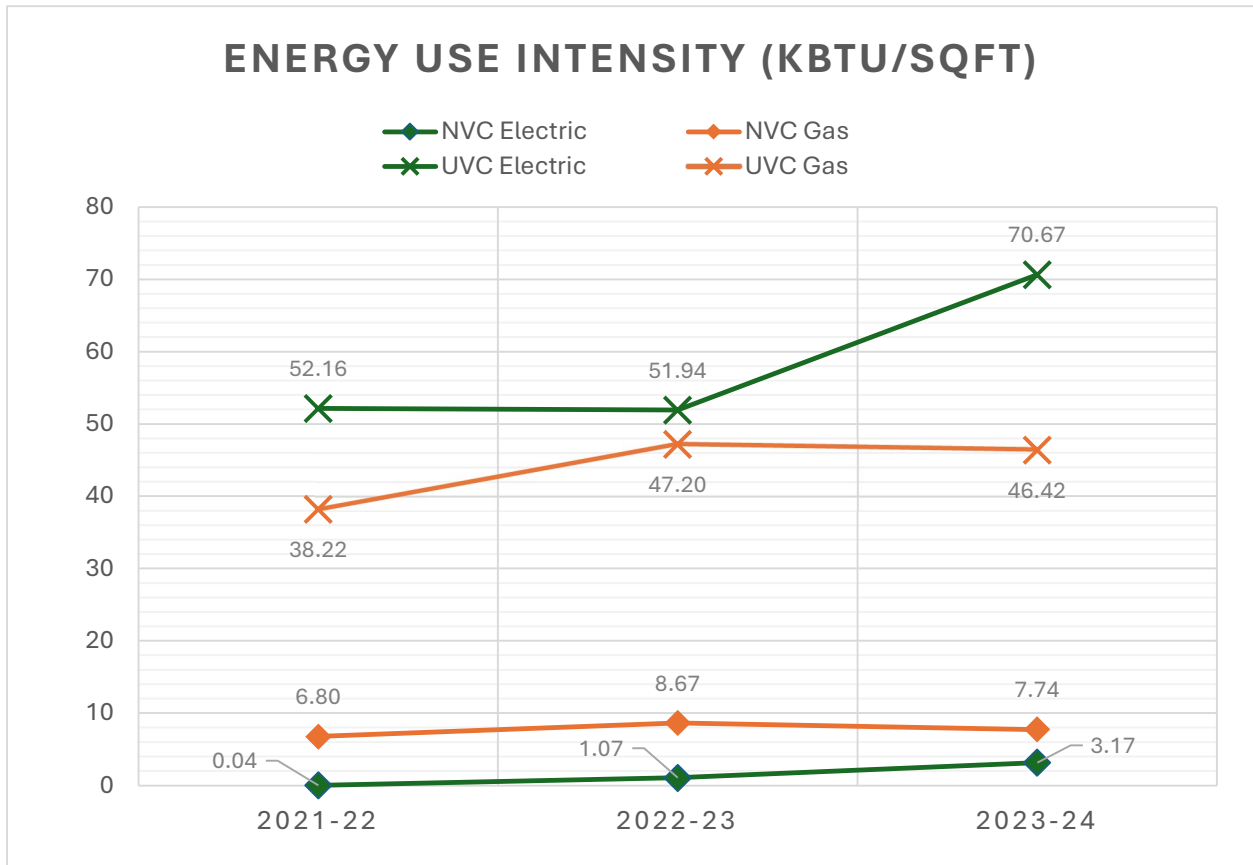
#### Utilities Costs

Electricity, gas, and water costs are significant components of the TCO. These utility expenses impact not only the budget but also the sustainability efforts and operational efficiency of the institution.

For both campuses at Napa Valley College, electricity costs were calculated using PG&E invoices, and gas costs are from SPURR billing. For the Main Campus, water costs are from the City of Napa and Napa Sanitation District, and for the Upper Valley Campus, water costs are from the City of St. Helena.

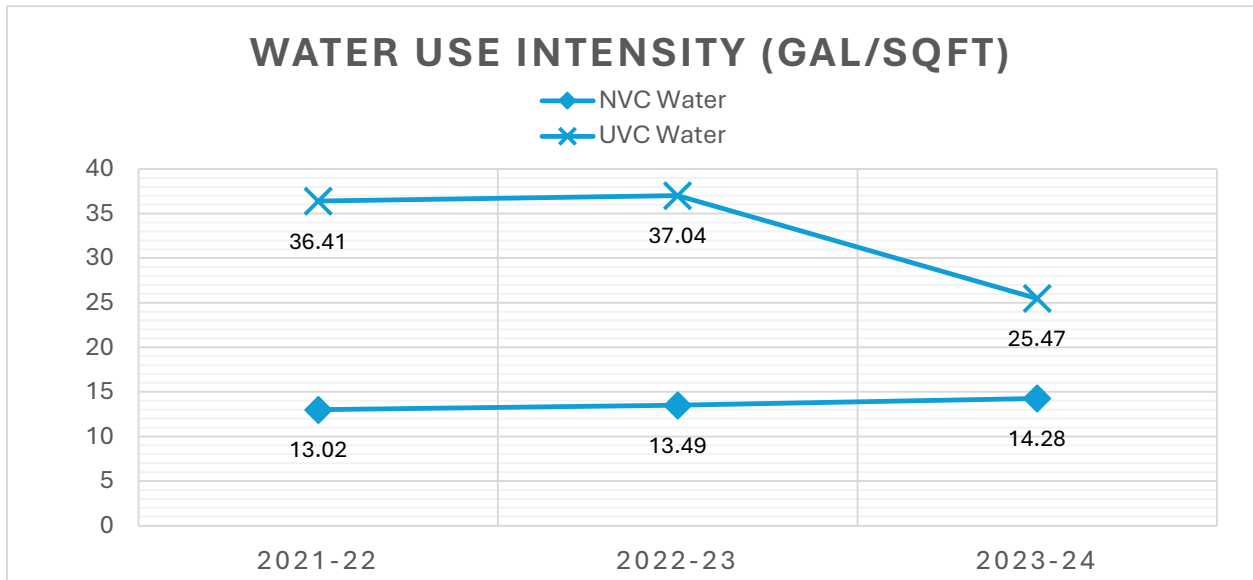
Annual Utility Cost per Square Foot (2023-24)	Napa Valley College	Upper Valley Campus
<b>Electricity (PG&amp;E)</b>	\$0.7114	\$5.8283
<b>Gas (NVC: SPURR &amp; DGS; UVC: SPURR)</b>	\$0.9144	\$0.9214
<b>Water (NVC: City of Napa &amp; Napa Sanitation District; UVC: City of St. Helena)</b>	\$0.0283	\$0.0227
<b>Total</b>	<b>\$1.6541</b>	<b>\$6.7724</b>

## Energy Use Intensity



Over the past three years, UVC had higher energy use intensity for both electric and gas, while NVC improved in electric but was less consistent in gas usage. NVC's electric energy use intensity (EUI) increased slightly, though it remained lower than the EUI at UVC. While NVC's gas usage varied slightly, UVC consistently showed higher and more stable gas consumption. Note that NVC's electricity consumption appears nearly zero due to the energy generated and exported at that campus. Excluding both the energy generated and consumed onsite, as well as the energy exported, would provide a clearer understanding of the campus's actual energy use intensity. This analysis would be independent of the energy sources and any exported values that may offset overall usage.

## Water Use Intensity



Over the past three years, UVC's water use intensity has consistently been higher than that of NVC, similar to the trend observed in energy use intensity. NVC's water consumption has shown a steady increase, while UVC's water use has fluctuated, with a notable decline in the latest year.

## Utilities Recommendations

All utilities costs are dependent upon usage patterns and market conditions. Efficient management of electric, gas, and water equipment and conservation measures can help minimize consumption and overall costs. Investing in and maintaining efficient systems, and renewable energy sources, such as solar panels, energy-efficient appliances, and low-flow water fixtures, can significantly reduce utility costs over time. This approach not only enhances the District's resilience to the impacts of climate change and resource constraints but also leads to long-term financial savings and sustainability.

Additionally, implementing occupancy-based operational strategies and optimizing building hours, such as reducing operational days to one or two per week, can lead to significant reductions in utility consumption for electricity, gas, and water. This approach enhances resource efficiency and aligns with best practices in facilities management.

Overall, UVC has higher utility consumption per square foot than NVC. This is likely due to the Napa Valley Cooking School at UVC, which requires substantial energy and water for kitchen equipment, appliances, and heating systems used in cooking, food preparation, and cleaning. However, a detailed energy and water usage audit would be needed to confirm this. If the District is looking to lower energy and water use intensity at UVC, focusing on the culinary program's needs, such as incorporating energy-efficient appliances and implementing water-saving practices, could help reduce its overall impact on resource consumption.

## Operating, Maintenance, and Repairs Costs

The Operating, Maintenance, and Repair Costs primarily cover minor expenses necessary for the daily upkeep of the maintenance, custodial, and grounds departments. This includes materials and supplies for routine tasks, such as cleaning products, tools, and landscaping supplies, which help maintain a safe and tidy environment. Additionally, these costs encompass service contracts for minor equipment maintenance and repair projects.

This report does not analyze the cost-effectiveness of the breakdown of these expenses; it incorporates the annual totals into the calculated annual operating costs below. Further analysis would be needed to identify potential improvements, and as a result, no recommendations are being made in this report regarding the optimization of these costs.

## Total Annual Operating Costs

The projected total Annual Cost of Operations combines the recommended projected M&O Staffing with the historical Utilities and Operating, Maintenance, and Repairs Costs from 2023-24 FY data to estimate a total annual cost per gross square foot to operate and maintain the campus facilities and grounds.

### Total Annual Operating Costs with 2023-24 Budgeted Staffing (Appendix B Scenario)

Annual Costs per Square Foot w/ Budgeted Staffing	Napa Valley College	Upper Valley Campus
<b>Budgeted Staffing (2023-24)</b>	\$3.3020	\$0.2009
<b>Utilities</b>	\$1.6541	\$6.7724
<b>Operating, Maintenance, and Repairs Costs</b>	\$1.9549	\$6.9891
<b>Annual Total</b>	<b>\$6.9111</b>	<b>\$13.9624</b>

### Total Annual Operating Costs with Recommended Staffing (Appendix D Scenario)

Annual Costs per Square Foot w/ Recommended Staffing	Napa Valley College	Upper Valley Campus
<b>Recommended Staffing (APPA Level 3)</b>	\$3.6030	\$0.2077
<b>Utilities</b>	\$1.6541	\$6.7724
<b>Operating, Maintenance, and Repairs Costs</b>	\$1.9549	\$6.9891
<b>Projected Annual Total</b>	<b>\$7.2120</b>	<b>\$13.9692</b>



## Long-Term Management Costs

### Repair and Replacement Costs

As the buildings age, various components inevitably reach the end of their useful life. In such cases, opting for a major renovation or complete replacement of the building may prove to be more cost-effective than continuing to perform repairs. The California Community Colleges Chancellor's Office conducts comprehensive building condition assessments every three years to evaluate the Current Replacement Value and Current Repair Costs of facilities. This report draws upon the replacement and repair values documented in the FUSION 2022-2027 Facilities Condition Index.

The Current Repair Costs include scheduled maintenance and deferred maintenance projects aimed at restoring or replacing damaged systems, particularly for major components like roofing or HVAC systems. Funding is required for repurposing and upgrading facilities to accommodate new programs, enhance performance, and comply with updated code requirements. These types of repairs can be incorporated into larger renovation projects.

The Facilities Condition Index (FCI) is calculated by dividing the total repair cost by the total replacement cost. This index serves as an industry-standard measure of deferred maintenance needs for buildings, campuses, or districts. Generally, when the FCI reaches 0.30, users begin to notice signs of disrepair, and neglected maintenance can adversely affect other systems—for example, a roof leak might damage interior finishes or structural components. When the FCI approaches 0.50, it often becomes more cost-effective to either demolish and rebuild or undertake a comprehensive remodel of the facility.

Refer to Appendix B or D for detailed repair, replacement, and FCI values for each building.

### Long-Term Management Recommendations

#### **Facilities Condition Index: Repair vs. Replacement**

Using the FCI, the District can assess whether it is more economical to repair or replace a particular building. In Appendix B or D, under the column titled “FCI (% REPR of REPL),” buildings recommended for replacement are highlighted in darker red, indicating a greater need for significant intervention. Conversely, buildings that do not require major repairs are highlighted in darker green, signaling a better overall condition. This color-coded approach allows for a clear visual representation of the buildings' conditions and aids in decision-making regarding major renovation and replacement priorities.

#### **End of Useful Life and Meeting Efficiency Needs**

It is essential to assess how much longer the current asset can be expected to perform efficiently. If the asset is nearing the end of its useful life, replacement may be a prudent decision, even if the current Total Cost of Ownership (TCO) appears lower. The District can evaluate whether newer models offer improved efficiency, productivity, or lower operational costs that could justify their higher initial investment. Additionally, the District should consider how the performance of the current asset impacts overall productivity. A declining asset may lead to increased downtime, operational inefficiencies, or safety risks, despite a lower TCO.

The District should recognize that a building with outdated, inefficient systems could incur higher annual operational costs in the long run. Newer models may provide energy savings, reduced maintenance costs, and enhanced performance, which could offset the initial replacement costs over time and lead to long-term savings. While the TCO calculated in this report primarily relies on cost per square foot, it is important to note that many systems have varying resource dependencies. Therefore, the specific needs of individual buildings should be taken into account when making decisions about replacement and upgrades.

## Conclusion

The Total Cost of Ownership (TCO) assessment for the Napa Valley Community College District provides a valuable framework for managing facilities effectively and sustainably. Using this assessment, the District can comprehensively evaluate the full spectrum of costs associated with its facilities, ensuring informed decision-making regarding resource allocation and financial management.

### Key Findings:

1. **Comprehensive Asset Management:** The TCO assessment offers insights into all costs related to facility management, from initial development to long-term operational expenses. This holistic perspective supports strategic funding priorities and enhances the overall management of District resources.
2. **Alignment with Performance Standards:** By leveraging staffing guidelines from the Association of Physical Plant Administrators (APPA), the District can align its custodial, maintenance, and grounds staffing levels with industry best practices. The use of these guidelines fosters operational efficiency and continuous improvement within the District.
3. **Utility Management and Sustainability:** Utility costs are a major component of the TCO. By investing in energy-efficient systems and sustainability initiatives, the District can not only reduce annual operational expenses but also demonstrate its commitment to responsible resource management.
4. **Regular Condition Assessments:** Conducting Facility Condition Assessments (FCA) on a routine basis enhances the District's ability to evaluate the condition of its facilities. The Facilities Condition Index (FCI) serves as a vital tool for identifying when repairs or replacements are needed, ensuring that facilities effectively support educational programs.
5. **Planning for Future Needs:** The TCO analysis encourages a proactive approach to facility management, enabling the District to anticipate future needs and align them with strategic financial planning. This proactive strategy supports the long-term sustainability of the institution and ensures that facilities continue to meet evolving educational demands.

This TCO assessment equips the Napa Valley Community College District with a strategic approach to facility management, fostering effective planning, resource allocation, and operational efficiency. By prioritizing comprehensive analysis, adhering to recognized staffing standards, managing utility costs, and conducting regular condition assessments, the District enhances the quality of its facilities. This approach not only supports current operations but also positions the District for future success and sustainability.

## Contact Information

For further inquiries or additional information regarding this report, please reach out to our team:



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Napa Valley College		Historical Fiscal Year	2023-2024	
<i>Select fiscal year from dropdown list above and enter data in yellow boxes below</i>				
Total Gross Square Footage (GSF) FROM FUSION			491,140	
Total Assignable Square Footage (ASF) FROM FUSION			338,933	
Total Site Acreage FROM FUSION (Maintainable Grounds)			96.00	
Total Site Acreage converted to Square Footage			4,181,760	
Total Site Acreage Grounds Only (Total Site Acreage - Total GSF)			3,690,620	
		<b>Full Time</b>	<b>Part Time</b>	<b>FT Equivalent</b>
Budgeted Custodians		14	0	14
Budgeted Maintenance Personnel		4	0	4
Budgeted Grounds Personnel		4	0	4
Other Operations & Maintenance of Plant		1	0	1
<b>Total Full-Time Employee Count</b>		23		
<b>Total Part-Time Employee Count</b>			0	
		<b>Full Time</b>	<b>Part Time</b>	<b>Totals</b>
Budgeted Custodian Salaries		\$1,012,034	\$0	\$1,012,034
Budgeted Maintenance Personnel Salaries		\$264,747	\$0	\$264,747
Budgeted Grounds Personnel Salaries		\$280,295	\$0	\$280,295
Other Operations & Maintenance of Plant Salaries		\$307,675	\$0	\$307,675
<b>Total Salary &amp; Benefits</b>				<b>\$1,864,751</b>
<b>Conversion to Expense per SQ FT</b>				
Average Custodian Salaries per Square Foot of GSF				\$2.0606
Average Maintenance Salaries per Square Foot of GSF				\$0.5390
<b>P</b>	Average Grounds Salaries per Site Acreage (Grounds Only) in SQFT			\$0.0759
Average Other Operations & Maintenance of Plant Salaries per Square Foot of GSF				\$0.6265
<b>Average Expense per GSF + Average Expense per Site Acreage in SQFT</b>				<b>\$3.3020</b>
<b>U (W)</b>	Annual <b>Water</b> Usage (City of Napa / Napa Sanitation District)			<b>\$118,379</b>
	<b>Average Expense Per Square Foot of Site Acreage in SQFT</b>			<b>\$0.0283</b>
<b>U (E)</b>	Annual <b>Gas</b> Usage (SPURR and DGS)			<b>\$449,101</b>
	<b>Average Expense Per Square Foot of GSF</b>			<b>\$0.9144</b>
<b>U (E)</b>	Annual <b>Electricity</b> Usage (PG&E)			<b>\$349,411</b>
	<b>Average Expense Per Square Foot of GSF</b>			<b>\$0.7114</b>
<b>OM&amp;R</b>	Annual Operating, (Planned) Maintenance & Repairs			<b>\$960,128</b>
	<b>Average Expense Per Square Foot of GSF</b>			<b>\$1.9549</b>
<b>O</b>	Other Annual Expenses			<b>\$0</b>
	<b>Average Expense Per Square Foot of GSF</b>			<b>\$0.0000</b>

<b>Upper Valley Campus</b>		<b>Historical Fiscal Year</b>	<b>2023-2024</b>
<i>Select fiscal year from dropdown list above and enter data in yellow boxes below</i>			
Total Gross Square Footage (GSF) FROM FUSION			19,176
Total Assignable Square Footage (ASF) FROM FUSION			2,408
Total Maintainable Gross Square Footage (GSF) (Non-leased Space)			7,788
Total Site Acreage FROM FUSION			6.90
Total Site Acreage converted to Square Footage			300,564
Total Site Acreage Grounds Only (Total Site Acreage - Total GSF)			281,388
		<b>Full Time</b>	<b>Part Time</b>
		<b>FT Equivalent</b>	
Custodians		0.25	0
Maintenance Personnel		0	0
Grounds Personnel		0.25	0
Other Operations & Maintenance of Plant		0	0
	<b>Total Full-Time Employee Count</b>	0.5	
	<b>Total Part-Time Employee Count</b>		0
		<b>Full Time</b>	<b>Part Time</b>
		<b>Totals</b>	
Custodian Salaries		\$1,511	\$0
Maintenance Personnel Salaries		\$0	\$0
Grounds Personnel Salaries		\$1,928	\$0
Other Operations & Maintenance of Plant Salaries		\$0	\$0
	<b>Total Salary &amp; Benefits</b>		\$3,439
<b>Conversion to Expense per SQ FT</b>			
Average Custodian Salaries per Square Foot of Maintainable GSF			\$0.1940
Average Maintenance Salaries per Square Foot of Maintainable GSF			\$0.0000
<b>P</b>	Average Grounds Salaries per Site Acreage (Grounds Only) in SQFT		\$0.0069
Average Other Operations & Maintenance of Plant Salaries per Maintainable Square Foot of GSF			\$0.0000
<b>Average Expense per GSF + Average Expense per Site Acreage in SQFT</b>			<b>\$0.2009</b>
<b>U (W)</b>	Annual <b>Water</b> Usage (City of St Helena)		<b>\$6,560</b>
	<b>Average Expense Per Square Foot of Maintainable Site Acreage in SQFT</b>		<b>\$0.0227</b>
<b>U (E)</b>	Annual <b>Gas</b> Usage (SPURR)		<b>\$7,176</b>
	<b>Average Expense Per Square Foot of Maintainable GSF</b>		<b>\$0.9214</b>
<b>U (E)</b>	Annual <b>Electricity</b> Usage (PG&E)		<b>\$45,391</b>
	<b>Average Expense Per Square Foot of Maintainable GSF</b>		<b>\$5.8283</b>
<b>OM&amp;R</b>	Annual Operating, (Planned) Maintenance & Repairs		<b>\$54,431</b>
	<b>Average Expense Per Square Foot of Maintainable GSF</b>		<b>\$6.9891</b>
<b>O</b>	Other Annual Expenses		<b>\$0</b>
	<b>Average Expense Per Square Foot of Maintainable GSF</b>		<b>\$0.0000</b>

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																						
Napa Valley College										Historical FY: 2023-2024					Projected Expenses after X Years					50		
BLDG ID	BLDG NAME	YEAR BLT.	LAST ADD.	GSF	ASF	Efficiency	Current Repair Cost (REPR)	Current Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Historical Fiscal Year Expenses	E Escalated	W Escalated	OM&R Escalated	O Escalated	P Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P
100	PERFORMING ARTS CENTER	2010		39,688	25,467	64.17%	\$ 1,180	\$ 21,581,544	0.01%	\$ 64,526	\$ 1,124	\$ 65,650	\$ 77,586	\$ 0	\$ 131,051	\$ 274,286	\$ 10,245,055	\$ 178,383	\$ 9,013,994	\$ -	\$ 15,225,589	\$ 34,664,201
400	NORTH GYM	2009		19,409	12,175	62.73%	-	\$ 11,956,977	0.00%	\$ 31,556	\$ 549	\$ 32,105	\$ 37,943	\$ 0	\$ 64,089	\$ 134,137	\$ 5,010,237	\$ 87,236	\$ 4,408,199	\$ -	\$ 7,445,915	\$ 16,951,587
600	GYMNASIUM COMPLEX	1976		64,613	38,946	60.28%	\$ 18,187,413	\$ 40,657,713	44.73%	\$ 105,050	\$ 1,829	\$ 106,879	\$ 126,312	\$ 0	\$ 213,254	\$ 446,545	\$ 16,679,192	\$ 290,411	\$ 14,674,995	\$ -	\$ 24,787,618	\$ 74,619,629
690	POOL BLDG	1976		1,831	163	8.90%	\$ 173,465	\$ 745,295	23.27%	\$ 2,977	\$ 52	\$ 3,029	\$ 3,579	\$ 0	\$ 6,046	\$ 12,654	\$ 472,654	\$ 8,230	\$ 415,859	\$ -	\$ 702,430	\$ 1,772,638
691	PE FIELD STORAGE	1982		848	801	94.46%	-	\$ 31,117	0.00%	\$ 1,379	\$ 24	\$ 1,403	\$ 1,658	\$ 0	\$ 2,800	\$ 5,861	\$ 218,903	\$ 3,811	\$ 192,599	\$ -	\$ 325,320	\$ 740,633
692	BASEBALL PRESS BOX	2000		150	136	90.67%	-	\$ 24,022	0.00%	\$ 244	\$ 4	\$ 248	\$ 293	\$ 0	\$ 495	\$ 1,037	\$ 38,721	\$ 674	\$ 34,068	\$ -	\$ 57,545	\$ 131,008
693	SOFTBALL PRESS BOX	1980		350	347	99.14%	\$ 33,158	\$ 142,465	23.27%	\$ 569	\$ 10	\$ 579	\$ 684	\$ 0	\$ 1,156	\$ 2,419	\$ 90,349	\$ 1,573	\$ 79,492	\$ -	\$ 134,271	\$ 338,844
694	SOFTBALL RESTROOMS	2000		480	0	0.00%	\$ 7,265	\$ 253,555	2.87%	\$ 780	\$ 14	\$ 794	\$ 938	\$ 0	\$ 1,585	\$ 3,317	\$ 123,907	\$ 2,157	\$ 109,018	\$ -	\$ 184,143	\$ 426,492
695	PE TENNIS STORAGE	2000		350	0	0.00%	-	\$ 142,465	0.00%	\$ 569	\$ 10	\$ 579	\$ 684	\$ 0	\$ 1,156	\$ 2,419	\$ 90,349	\$ 1,573	\$ 79,492	\$ -	\$ 134,271	\$ 305,686
800	HEALTH OCCUPATIONS	1980		43,964	26,908	61.20%	\$ 10,375,358	\$ 20,646,602	50.25%	\$ 71,478	\$ 1,245	\$ 72,723	\$ 85,945	\$ 0	\$ 145,170	\$ 303,838	\$ 11,348,861	\$ 197,602	\$ 9,985,165	\$ -	\$ 16,866,000	\$ 48,772,986
900	CAMPUS CENTER	1965		16,508	11,700	70.87%	\$ 3,785,240	\$ 9,513,229	39.79%	\$ 26,839	\$ 467	\$ 27,307	\$ 32,271	\$ 0	\$ 54,510	\$ 114,088	\$ 4,261,373	\$ 74,197	\$ 3,749,320	\$ -	\$ 6,332,998	\$ 18,203,129
1000	ADMIN OF JUSTICE	1980		14,676	9,057	61.71%	\$ 3,275,062	\$ 6,892,219	47.52%	\$ 23,861	\$ 415	\$ 24,276	\$ 28,690	\$ 0	\$ 48,461	\$ 101,427	\$ 3,788,461	\$ 65,963	\$ 3,333,234	\$ -	\$ 5,630,184	\$ 16,092,904
1095	AJ SHED	2002		237	228	96.20%	\$ 5,780	\$ 19,078	30.30%	\$ 385	\$ 7	\$ 392	\$ 463	\$ 0	\$ 783	\$ 1,638	\$ 61,179	\$ 1,065	\$ 53,828	\$ -	\$ 90,921	\$ 212,773
1100	FINANCIAL AID	1965		4,000	3,227	80.68%	\$ 681,621	\$ 2,180,770	31.26%	\$ 6,503	\$ 113	\$ 6,617	\$ 7,820	\$ 0	\$ 13,208	\$ 27,644	\$ 1,032,559	\$ 17,978	\$ 908,486	\$ -	\$ 1,534,528	\$ 4,175,173
1200	LITTLE THEATER	1971	2007	19,505	12,542	64.30%	\$ 4,678,764	\$ 10,278,464	45.52%	\$ 31,712	\$ 552	\$ 32,264	\$ 38,130	\$ 0	\$ 64,406	\$ 134,800	\$ 5,035,018	\$ 87,668	\$ 4,430,003	\$ -	\$ 7,482,743	\$ 21,714,196
1300	Student Services	1965		15,159	9,944	65.60%	\$ 2,516,868	\$ 6,860,983	36.68%	\$ 24,646	\$ 429	\$ 25,075	\$ 29,634	\$ 0	\$ 50,055	\$ 104,765	\$ 3,913,142	\$ 68,134	\$ 3,442,933	\$ -	\$ 5,815,478	\$ 15,756,556
1400	BUSINESS	1965		6,681	6,273	93.89%	\$ 1,192,197	\$ 3,676,552	32.43%	\$ 10,862	\$ 189	\$ 11,051	\$ 13,061	\$ 0	\$ 22,061	\$ 46,173	\$ 1,724,632	\$ 30,029	\$ 1,517,398	\$ -	\$ 2,563,046	\$ 7,027,307
1500	Administration	1966		29,593	17,884	60.43%	\$ 5,348,087	\$ 16,038,994	33.34%	\$ 48,113	\$ 838	\$ 48,951	\$ 57,851	\$ 0	\$ 97,717	\$ 204,519	\$ 7,639,133	\$ 133,009	\$ 6,721,204	\$ -	\$ 11,352,824	\$ 31,194,257
1600	GENERAL CLASSROOMS	1965		6,681	6,261	93.71%	\$ 1,241,248	\$ 3,360,599	36.94%	\$ 10,862	\$ 189	\$ 11,051	\$ 13,061	\$ 0	\$ 22,061	\$ 46,173	\$ 1,724,632	\$ 30,029	\$ 1,517,398	\$ -	\$ 2,563,046	\$ 7,076,353
1700	McCarthy Library	2010		61,637	46,141	74.86%	-	\$ 33,500,839	0.00%	\$ 100,212	\$ 1,745	\$ 101,956	\$ 120,494	\$ 0	\$ 203,227	\$ 425,977	\$ 15,910,967	\$ 277,035	\$ 13,999,082	\$ -	\$ 23,645,929	\$ 53,833,014
1800	PHYSICAL SCIENCES	1965		27,886	21,037	75.44%	\$ 8,191,796	\$ 14,444,134	56.71%	\$ 45,338	\$ 789	\$ 46,127	\$ 54,514	\$ 0	\$ 92,080	\$ 192,722	\$ 7,198,488	\$ 125,337	\$ 6,333,507	\$ -	\$ 10,697,964	\$ 32,547,092
1890	GREENHOUSE	2014		475	408	85.89%	-	\$ 25,498	0.00%	\$ 772	\$ 13	\$ 786	\$ 929	\$ 0	\$ 1,568	\$ 3,283	\$ 122,616	\$ 2,135	\$ 107,883	\$ -	\$ 182,225	\$ 414,859
1891	GARDEN SHED	1991		244	220	90.16%	\$ 20,643	\$ 19,641	105.10%	\$ 397	\$ 7	\$ 404	\$ 477	\$ 0	\$ 806	\$ 1,686	\$ 62,986	\$ 1,097	\$ 55,418	\$ -	\$ 93,606	\$ 233,750
1892	BOAT SHED	1990		526	526	100.00%	\$ 14,860	\$ 54,854	27.09%	\$ 940	\$ 16	\$ 956	\$ 1,130	\$ 0	\$ 1,909	\$ 3,995	\$ 149,205	\$ 2,598	\$ 131,276	\$ -	\$ 221,739	\$ 519,678
1893	ELECTRICAL SWITCH	1965		194	178	91.75%	\$ 113,522	\$ 174,472	65.07%	\$ 315	\$ 5	\$ 321	\$ 379	\$ 0	\$ 641	\$ 1,341	\$ 50,079	\$ 872	\$ 44,062	\$ -	\$ 74,225	\$ 282,599
2000	LIFE SCIENCES	2008		13,805	8,678	62.86%	-	\$ 6,335,538	0.00%	\$ 22,445	\$ 391	\$ 22,835	\$ 26,987	\$ 0	\$ 45,584	\$ 95,407	\$ 3,563,621	\$ 62,048	\$ 3,135,411	\$ -	\$ 5,296,041	\$ 12,057,121
2200	DATATEL MODULAR BLDG	2004	2004	1,066	739	69.32%	\$ 16,420	\$ 396,487	4.14%	\$ 1,733	\$ 30	\$ 1,763	\$ 2,084	\$ 0	\$ 3,520	\$ 7,367	\$ 275,177	\$ 4,791	\$ 242,111	\$ -	\$ 408,952	\$ 947,452
2210	TEMP CLASSROOM MODULAR	2004	2004	2,082	1,816	87.22%	\$ 28,301	\$ 774,377	3.65%	\$ 3,385	\$ 59	\$ 3,444	\$ 4,070	\$ 0	\$ 6,875	\$ 14,389	\$ 537,447	\$ 9,358	\$ 472,867	\$ -	\$ 798,722	\$ 1,846,695
2220	TEMP CLASSROOM MODULAR	2004	2004	1,528	1,367	89.46%	\$ 20,770	\$ 568,323	3.65%	\$ 2,484	\$ 43	\$ 2,528	\$ 2,987	\$ 0	\$ 5,045	\$ 10,560	\$ 394,438	\$ 6,868	\$ 347,041	\$ -	\$ 586,190	\$ 1,355,307
2230	TEMP CLASSROOM MODULAR	2005	2005	1,518	914	60.21%	\$ 12,351	\$ 564,603	2.19%	\$ 2,468	\$ 43	\$ 2,511	\$ 2,968	\$ 0	\$ 5,012	\$ 10,491	\$ 391,856	\$ 6,823	\$ 344,770	\$ -	\$ 582,353	\$ 1,338,154
2240	TEMP CLASSROOM MODULAR	2005	2005	1,517	1,219	80.36%	\$ 12,343	\$ 564,231	2.19%	\$ 2,466	\$ 43	\$ 2,509	\$ 2,966	\$ 0	\$ 5,009	\$ 10,484	\$ 391,598	\$ 6,818	\$ 344,543	\$ -	\$ 581,970	\$ 1,337,272
2250	COLLEGE POLICE/HEALTH	2005	2005	2,237	1,531	68.44%	\$ 18,201	\$ 832,027	2.19%	\$ 3,637	\$ 63	\$ 3,700	\$ 4,373	\$ 0	\$ 7,387	\$ 15,460	\$ 577,459	\$ 10,054	\$ 508,071	\$ -	\$ 858,185	\$ 1,971,970
3000	CDC - ADMINISTRATION A	1992		2,922	2,289	78.34%	\$ 169,969	\$ 1,479,181	11.49%	\$ 4,751	\$ 83	\$ 4,833	\$ 5,712	\$ 0	\$ 9,649	\$ 20,194	\$ 754,285	\$ 13,133	\$ 663,649	\$ -	\$ 1,120,973	\$ 2,722,009
3020	CDC - INFANT/TODDLER B	1992		3,520	2,840	80.68%	\$ 159,561	\$ 1,781,902	8.95%	\$ 5,723	\$ 100	\$ 5,823	\$ 6,881	\$ 0	\$ 11,623	\$ 24,327	\$ 908,652	\$ 15,821	\$ 799,467	\$ -	\$ 1,350,385	\$ 3,233,887
3030	CDC - PRESCHOOL C	1992		3,149	2,614	83.01%	\$ 142,744	\$ 1,594,093	8.95%	\$ 5,120	\$ 89	\$ 5,209	\$ 6,156	\$ 0	\$ 10,398	\$ 21,763	\$ 812,882	\$ 14,154	\$ 715,205	\$ -	\$ 1,208,057	\$ 2,893,402
3040	CDC - INFANT/TODDLER D	1999		1,650	1,262	76.48%	\$ 182,177	\$ 613,699	29.69%	\$ 2,683	\$ 47	\$ 2,729	\$ 3,226	\$ 0	\$ 5,448	\$ 11,403	\$ 425,931	\$ 7,416	\$ 374,750	\$ -	\$ 632,993	\$ 1,623,267
3090	CDC SHEDS	2001		360	345	95.83%	\$ 8,780	\$ 28,979	30.30%	\$ 585	\$ 10	\$ 595	\$ 704	\$ 0	\$ 1,189	\$ 2,488	\$ 92,930	\$ 1,618	\$ 81,764	\$ -	\$ 138,108	\$ 323,190
3100	INDUSTRIAL TECHNOLOGY	1968		10,000	8,845	88.45%	\$ 2,520,454	\$ 5,030,083	50.11%	\$ 16,258	\$ 283	\$ 16,541	\$ 19,549	\$ 0	\$ 33,020	\$ 69,111	\$ 2,581,399	\$ 44,946	\$ 2,271,214	\$ -	\$ 3,836,321	\$ 11,254,334
3200	VWV- VITICULTURE LAB 1	1999		2,193	1,721	78.48%	\$ 80,017	\$ 1,103,097	7.25%	\$ 3,565	\$ 62	\$ 3,628	\$ 4,287	\$ 0	\$ 7,241	\$ 15,156	\$ 566,101	\$ 9,857	\$ 498,077	\$ -	\$ 841,305	\$ 1,995,356
3210	VWV- WINERY BLDG	2002		3,220	2,462	76.46%	\$ 50,360	\$ 1,849,870	2.72%	\$ 5,235	\$ 91	\$ 5,326	\$ 6,295	\$ 0	\$ 10,633	\$ 22,254	\$ 831,210	\$ 14,473	\$ 731,331	\$ -	\$ 1,235,295	\$ 2,862,669
3220	VWV- AGRICULTURE LAB	1946		1,452	1,068	73.55%	\$ 234,081	\$ 735,034	31.85%	\$ 2,361	\$ 41	\$ 2,402	\$ 2,839	\$ 0	\$ 4,795	\$ 10,035	\$ 374,819	\$ 6,526	\$ 329,780	\$ -	\$ 557,034	\$ 1,502,240
3230	VWV- WINE STORAGE	2007		2,194	1,778	81.04%	-	\$ 226,658	0.00%	\$ 3,567	\$ 62	\$ 3,629	\$ 4,289	\$ 0	\$ 7,245	\$ 15,163	\$ 566,359	\$ 9,861	\$ 498,304	\$ -	\$ 841,689	\$ 1,916,213
3290	VWV- VINE FIELD BLDGS	1991		1,723	1,034	60.01%	\$ 145,769	\$ 138,695	105.10%	\$ 2,801	\$ 49	\$ 2,850	\$ 3,368	\$ 0	\$ 5,689	\$ 11,908	\$ 444,775	\$ 7,744	\$ 391,330	\$ -	\$ 660,998	\$ 1,650,617
3300	ECON WORKFORCE DEVELOP	1998	1998	2,610	1,547	59.27%	\$ 313,415	\$ 907,948	34.52%	\$ 4,243	\$ 74	\$ 4,317	\$ 5,102	\$ 0	\$ 8,618	\$ 18,038	\$ 673,					

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																							
Upper Valley Campus												Historical FY: 2023-2024						Projected Expenses after X Years					50
BLDG ID	BLDG NAME	YEAR BLT.	LAST ADD.	GSF	Maintainable GSF	ASF	Efficiency	Current Repair Cost (REPR)	Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Historical Fiscal Year Expenses	E Escalated	W Escalated	OM&R Escalated	O Escalated	P Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P
1	UVC CLASSROOMS	1994	2005	13,796	2,408	2,408	100.00%	\$ 1,180	\$ 21,581,544	0.01%	\$ 16,253	\$ 55	\$ 16,308	\$ 16,830	\$ 90	\$ 484	\$ 33,621	\$ 2,580,615	\$ 8,673	\$ 1,955,283	\$ -	\$ 56,200	\$ 4,601,951
2	CULINARY ARTS	1994	2005	4,245	4,245	0	0.00%	\$ -	\$ 11,956,977	0.00%	\$ 28,653	\$ 96	\$ 28,749	\$ 29,669	\$ 90	\$ 853	\$ 59,270	\$ 4,549,299	\$ 15,289	\$ 3,446,918	\$ -	\$ 99,074	\$ 8,110,579
3	MAINTENANCE	1994		268	268	0	0.00%	\$ 18,187,413	\$ 40,657,713	44.73%	\$ 1,809	\$ 6	\$ 1,815	\$ 1,873	\$ 90	\$ 54	\$ 3,742	\$ 287,211	\$ 965	\$ 217,615	\$ -	\$ 6,255	\$ 18,699,458
4	GROUPS SHED	1998		288	288	0	0.00%	\$ 173,465	\$ 745,295	23.27%	\$ 1,944	\$ 7	\$ 1,950	\$ 2,013	\$ 90	\$ 58	\$ 4,021	\$ 308,645	\$ 1,037	\$ 233,854	\$ -	\$ 6,722	\$ 723,723
5	Culinary Patio Storage	2005	2005	319	319	0	0.00%	\$ -	\$ 31,117	0.00%	\$ 2,153	\$ 7	\$ 2,160	\$ 2,220	\$ 90	\$ 64	\$ 4,454	\$ 341,867	\$ 1,149	\$ 259,026	\$ -	\$ 7,445	\$ 609,488
6	CULINARY STORAGE	2005		70	70	0	0.00%	\$ -	\$ 24,022	0.00%	\$ 472	\$ 2	\$ 474	\$ 489	\$ 90	\$ 14	\$ 977	\$ 75,018	\$ 252	\$ 56,840	\$ -	\$ 1,634	\$ 133,743
7	UVC GREENHOUSE	2005		70	70	0	0.00%	\$ 33,158	\$ 142,465	23.27%	\$ 472	\$ 2	\$ 474	\$ 489	\$ 90	\$ 14	\$ 977	\$ 75,018	\$ 252	\$ 56,840	\$ -	\$ 1,634	\$ 166,902
8	CHICKEN COOP	2005		120	120	0	0.00%	\$ 7,265	\$ 253,555	2.87%	\$ 810	\$ 3	\$ 813	\$ 839	\$ 90	\$ 24	\$ 1,675	\$ 128,602	\$ 432	\$ 97,439	\$ -	\$ 2,801	\$ 236,540
<b>Campus Total</b>					<b>7,788</b>	<b>2,408</b>		<b>\$ 18,402,481</b>	<b>\$ 75,392,688</b>								<b>\$ 108,739</b>						<b>\$ 33,282,384</b>

<b>Projected Site Expenses = U + OM&amp;R + O + P</b>		Multiplier	Escalation
<b>(U) Utilities = (E+W)</b>			<b>4%</b> U
(E) is Present Value of Energy Expenses combined (Gas and Electricity) Average Expense per GSF		6.7498	
(W) is Present Value of Water Expenses per Site Acreage converted to sqft; Average Expense per sqft		0.0227	
<b>(OM&amp;R) = Present Value of Operating, Maintenance &amp; Repairs;</b>			
Average Expense per square foot is Total OM&R/Total Campus GSF		6.9891	<b>3%</b> OM&R & O
<b>(O) = Present Value of other known expenses (Contract Services) Average Expense per GSF</b>		0.0000	
<b>(P) = Payroll Salaries of Custodial, Maintenance, Grounds &amp; Other Operations &amp; Maintenance of Plant Personnel</b>			
Average Expense per square foot including grounds		0.2009	<b>3%</b> P
Source 1 FUSION Space Inventory 2023-2024		Source 2 FUSION 2022-2027 Facilities Condition Index (FCI) Assessment	



## HISTORICAL FISCAL YEAR & PROJECTED STAFFING WORKSHEET

EXISTING CUSTODIAL STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
GSF per Custodian to maintain LEVEL 1 APPA Standard	GSF per Custodian to maintain LEVEL 2 APPA Standard	GSF per Custodian to maintain LEVEL 3 APPA Standard	GSF per Custodian to maintain LEVEL 4 APPA Standard	GSF per Custodian to maintain LEVEL 5 APPA Standard		To increase or decrease projected Custodial Staff, use the yellow fillable box in the table below.							
Orderly Spotlessness	Ordinary Tidiness	Casual Inattention	Moderate Dinginess	Unkempt Neglect		CUSTODIAL STAFFING PROJECTIONS AND SALARIES							
8,500	16,700	26,500	39,500	45,600		Projected Increase or Decrease in Custodial Staff	Projected Staff Count	Projected GSF to clean per Custodian	Projected Cleaning Level that should be met	Fiscal Year Annualized Salaries of Custodians	Fiscal Year Custodial Salaries per FTE	Increase or Decrease in Custodial Staffing Salaries	Projected Total Salaries for Custodial Staffing
Historical FY	Site	Site GSF	Number of Custodians (Converted to Full-Time)	GSF to clean per Custodian	Cleaning Level that should be met based on APPA Standard								
2023-2024	Napa Valley College	491,140	14.0	35,081	4	1.0	15.0	32,743	3	\$1,012,034	\$72,288	\$72,288	\$1,084,323
EXISTING MAINTENANCE STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
SQFT per Maintenance Personnel to maintain LEVEL 1 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 2 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 3 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 4 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 5 APPA Standard		To increase or decrease projected Maintenance Staff, use the yellow fillable box in the table below.							
Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management	Crisis Response		MAINTENANCE STAFFING PROJECTIONS AND SALARIES							
47,220	67,456	94,439	118,049	236,098		Projected Increase or Decrease in Maintenance Staff	Projected Staff Count	Projected GSF per Maintenance Staff	Projected Maintenance Level that should be met	Fiscal Year Annualized Salaries of Maintenance Staff	Fiscal Year Maintenance Staff Salaries per FTE	Increase or Decrease in Maintenance Staffing Salaries	Projected Total Salaries for Maintenance Staffing
Historical FY	Site	Site GSF	Number of Maintenance Staff	SQFT per Maintenance Staff	Maintenance Level that should be met based on APPA Standard								
2023-2024	Napa Valley College	491,140	4.0	122,785	4	1.0	5.0	98,228	3	\$264,747	\$66,187	\$66,187	\$330,933
EXISTING GROUNDS STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
SQFT per Grounds Staff to maintain LEVEL 1 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 2 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 3 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 4 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 5 APPA Standard		To increase or decrease projected Grounds Staff, use the yellow fillable box in the table below.							
State of the Art	High Level	Moderate Level	Moderately Low-Level	Minimum Level		GROUNDS STAFFING PROJECTIONS AND SALARIES							
7.96 Acres to SQFT = 346,738	10.37 Acres to SQFT = 451,717	13.96 Acres to SQFT = 608,098	22.42 Acres to SQFT = 976,615	42.6 Acres to SQFT = 1,855,656		Projected Increase or Decrease in Grounds Staff	Projected Staff Count	Projected SQFT per Grounds Staff	Projected Level that should be met	Fiscal Year Annualized Salaries of Grounds Staff	Fiscal Year Grounds Salaries per FTE	Increase or Decrease in Grounds Staffing Salaries	Projected Total Salaries for Grounds Staffing
Historical FY	Site	Site SQFT Grounds Only	Number of Grounds Staff	SQFT to maintain per Grounds Staff	Grounds level that should be met based on APPA Standard								
2023-2024	Napa Valley College	3,690,620	4.0	922,655	4	1.0	5.0	738,124	3	\$280,295	\$70,074	\$70,074	\$350,369

## HISTORICAL FISCAL YEAR & PROJECTED STAFFING WORKSHEET

EXISTING CUSTODIAL STAFF and Recommended APPA Staffing Standards						<h3>Interactive Section For Projections</h3>							
GSF per Custodian to maintain LEVEL 1 APPA Standard	GSF per Custodian to maintain LEVEL 2 APPA Standard	GSF per Custodian to maintain LEVEL 3 APPA Standard	GSF per Custodian to maintain LEVEL 4 APPA Standard	GSF per Custodian to maintain LEVEL 5 APPA Standard		To increase or decrease projected Custodial Staff, use the yellow fillable box in the table below.							
Orderly Spotlessness	Ordinary Tidiness	Casual Inattention	Moderate Dinginess	Unkempt Neglect		CUSTODIAL STAFFING PROJECTIONS AND SALARIES							
8,500	16,700	26,500	39,500	45,600		Projected Increase or Decrease in Custodial Staff	Projected Staff Count	Projected GSF to clean per Custodian	Projected Cleaning Level that should be met	Fiscal Year Annualized Salaries of Custodians	Fiscal Year Maintenance Salaries per FTE	Increase or Decrease in Custodial Staffing Salaries	Projected Total Salaries for Custodial Staffing
Historical FY	Site	Site GSF	Number of Custodians (Converted to Full-Time)	GSF to clean per Custodian	Cleaning Level that should be met based on APPA Standard	0.00	0.25	31,152	3	\$1,511	\$6,045	\$0	\$1,511
EXISTING MAINTENANCE STAFF and Recommended APPA Staffing Standards						<h3>Interactive Section For Projections</h3>							
SQFT per Maintenance Personnel to maintain LEVEL 1 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 2 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 3 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 4 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 5 APPA Standard		To increase or decrease projected Maintenance Staff, use the yellow fillable box in the table below.							
Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management	Crisis Response		MAINTENANCE STAFFING PROJECTIONS AND SALARIES							
47,220	67,456	94,439	118,049	236,098		Projected Increase or Decrease in Maintenance Staff	Projected Staff Count	Projected GSF per Maintenance Staff	Projected Maintenance Level that should be met	Fiscal Year Annualized Salaries of Maintenance Staff	Fiscal Year Maintenance Salaries per FTE	Increase or Decrease in Maintenance Staffing Salaries	Projected Total Salaries for Maintenance Staffing
Historical FY	Site	Site GSF	Number of Maintenance Staff	SQFT per Maintenance Staff	Maintenance Level that should be met based on APPA Standard	0.00	0.00	Unknown	Unknown	\$0	Unknown	Unknown	Unknown
EXISTING GROUNDS STAFF and Recommended APPA Staffing Standards						<h3>Interactive Section For Projections</h3>							
SQFT per Grounds Staff to maintain LEVEL 1 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 2 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 3 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 4 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 5 APPA Standard		To increase or decrease projected Grounds Staff, use the yellow fillable box in the table below.							
State of the Art	High Level	Moderate Level	Moderately Low-Level	Minimum Level		GROUNDS STAFFING PROJECTIONS AND SALARIES							
7.96 Acres to SQFT =	10.37 Acres to SQFT =	13.96 Acres to SQFT =	22.42 Acres to SQFT =	42.6 Acres to SQFT =		Projected Increase or Decrease in Grounds Staff	Projected Staff Count	Projected SQFT per Grounds Staff	Projected Level that should be met	Fiscal Year Annualized Salaries of Grounds Staff	Fiscal Year Grounds Salaries per FTE	Increase or Decrease in Grounds Staffing Salaries	Projected Total Salaries for Grounds Staffing
346,738	451,717	608,098	976,615	1,855,656		0.25	0.50	562,776	3	\$1,928	\$7,712	\$1,928	\$3,856
Historical FY	Site	Site SQFT Grounds Only	Number of Grounds Staff	SQFT to maintain per Grounds Staff	Grounds level that should be met based on APPA Standard	0.25	0.50	562,776	3	\$1,928	\$7,712	\$1,928	\$3,856

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																						
Napa Valley College										Historical FY: 2023-2024					Projected Expenses after X Years					50		
BLDG ID	BLDG NAME	YEAR BLT.	LAST ADD.	GSF	ASF	Efficiency	Current Repair Cost (REPR)	Current Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Historical Fiscal Year Expenses	E Escalated	W Escalated	OM&R Escalated	O Escalated	P Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P
100	PERFORMING ARTS CENTER	2010		39,688	25,467	64.17%	\$ 1,180	\$ 21,581,544	0.01%	\$ 64,526	\$ 1,124	\$ 65,650	\$ 77,586	\$0	\$ 142,994	\$ 286,230	\$ 10,245,055	\$ 178,383	\$ 9,013,994	\$ -	\$ 16,613,185	\$ 36,051,797
400	NORTH GYM	2009		19,409	12,175	62.73%	-	\$ 11,956,977	0.00%	\$ 31,556	\$ 549	\$ 32,105	\$ 37,943	\$0	\$ 69,930	\$ 139,978	\$ 5,010,237	\$ 87,236	\$ 4,408,199	\$ -	\$ 8,124,504	\$ 17,630,176
600	GYMNASIUM COMPLEX	1976		64,613	38,946	60.28%	\$ 18,187,413	\$ 40,657,713	44.73%	\$ 105,050	\$ 1,829	\$ 106,879	\$ 126,312	\$0	\$ 232,798	\$ 465,989	\$ 16,679,192	\$ 290,411	\$ 14,674,995	\$ -	\$ 27,046,657	\$ 76,878,668
690	POOL BLDG	1976		1,831	163	8.90%	\$ 173,465	\$ 745,295	23.27%	\$ 2,977	\$ 52	\$ 3,029	\$ 3,579	\$0	\$ 6,597	\$ 13,205	\$ 472,654	\$ 8,230	\$ 415,859	\$ -	\$ 766,447	\$ 1,836,555
691	PE FIELD STORAGE	1982		848	801	94.46%	-	\$ 31,117	0.00%	\$ 1,379	\$ 24	\$ 1,403	\$ 1,658	\$0	\$ 3,055	\$ 6,116	\$ 218,903	\$ 3,811	\$ 192,599	\$ -	\$ 354,968	\$ 770,281
692	BASEBALL PRESS BOX	2000		150	136	90.67%	-	\$ 24,022	0.00%	\$ 244	\$ 4	\$ 248	\$ 293	\$0	\$ 540	\$ 1,082	\$ 38,721	\$ 674	\$ 34,068	\$ -	\$ 62,789	\$ 136,253
693	SOFTBALL PRESS BOX	1980		350	347	99.14%	\$ 33,158	\$ 142,465	23.27%	\$ 569	\$ 10	\$ 579	\$ 684	\$0	\$ 1,261	\$ 2,524	\$ 90,349	\$ 1,573	\$ 79,492	\$ -	\$ 146,508	\$ 351,081
694	SOFTBALL RESTROOMS	2000		480	0	0.00%	\$ 7,265	\$ 253,555	2.87%	\$ 780	\$ 14	\$ 794	\$ 938	\$0	\$ 1,729	\$ 3,462	\$ 123,907	\$ 2,157	\$ 109,018	\$ -	\$ 200,925	\$ 443,724
695	PE TENNIS STORAGE	2000		350	0	0.00%	-	\$ 142,465	0.00%	\$ 569	\$ 10	\$ 579	\$ 684	\$0	\$ 1,261	\$ 2,524	\$ 90,349	\$ 1,573	\$ 79,492	\$ -	\$ 146,508	\$ 317,923
800	HEALTH OCCUPATIONS	1980		43,964	26,908	61.20%	\$ 10,375,358	\$ 20,646,602	50.25%	\$ 71,478	\$ 1,245	\$ 72,723	\$ 85,945	\$0	\$ 158,401	\$ 317,068	\$ 11,348,861	\$ 197,602	\$ 9,985,165	\$ -	\$ 18,403,096	\$ 50,310,882
900	CAMPUS CENTER	1965		16,508	11,700	70.87%	\$ 3,785,240	\$ 9,513,229	39.79%	\$ 26,839	\$ 467	\$ 27,307	\$ 32,271	\$0	\$ 59,478	\$ 119,056	\$ 4,261,373	\$ 74,197	\$ 3,749,320	\$ -	\$ 6,910,161	\$ 18,780,291
1000	ADMIN OF JUSTICE	1980		14,676	9,057	61.71%	\$ 3,275,062	\$ 6,892,219	47.52%	\$ 23,861	\$ 415	\$ 24,276	\$ 28,690	\$0	\$ 52,877	\$ 105,843	\$ 3,788,461	\$ 65,963	\$ 3,333,234	\$ -	\$ 6,143,295	\$ 16,606,015
1095	AJ SHED	2002		237	228	96.20%	\$ 5,780	\$ 19,078	30.30%	\$ 385	\$ 7	\$ 392	\$ 463	\$0	\$ 854	\$ 1,709	\$ 61,179	\$ 1,065	\$ 53,828	\$ -	\$ 99,207	\$ 221,509
1100	FINANCIAL AID	1965		4,000	3,227	80.68%	\$ 681,621	\$ 2,180,770	31.26%	\$ 6,503	\$ 113	\$ 6,617	\$ 7,820	\$0	\$ 14,412	\$ 28,848	\$ 1,032,559	\$ 17,978	\$ 908,486	\$ -	\$ 1,674,379	\$ 4,315,024
1200	LITTLE THEATER	1971	2007	19,505	12,542	64.30%	\$ 4,678,764	\$ 10,278,464	45.52%	\$ 31,712	\$ 552	\$ 32,264	\$ 38,130	\$0	\$ 70,276	\$ 140,670	\$ 5,035,018	\$ 87,668	\$ 4,430,003	\$ -	\$ 8,164,689	\$ 22,996,142
1300	Student Services	1965		15,159	9,944	65.60%	\$ 2,516,868	\$ 6,860,983	36.68%	\$ 24,646	\$ 429	\$ 25,075	\$ 29,634	\$0	\$ 54,617	\$ 109,327	\$ 3,913,142	\$ 68,134	\$ 3,442,933	\$ -	\$ 6,345,477	\$ 16,286,554
1400	BUSINESS	1965		6,681	6,273	93.89%	\$ 1,192,197	\$ 3,676,552	32.43%	\$ 10,862	\$ 189	\$ 11,051	\$ 13,061	\$0	\$ 24,071	\$ 48,183	\$ 1,724,632	\$ 30,029	\$ 1,517,398	\$ -	\$ 2,796,631	\$ 7,260,887
1500	Administration	1966		29,593	17,884	60.43%	\$ 5,348,087	\$ 16,038,994	33.34%	\$ 48,113	\$ 838	\$ 48,951	\$ 57,851	\$0	\$ 106,622	\$ 213,425	\$ 7,639,133	\$ 133,009	\$ 6,721,204	\$ -	\$ 12,387,472	\$ 32,228,905
1600	GENERAL CLASSROOMS	1965		6,681	6,261	93.71%	\$ 1,241,248	\$ 3,360,599	36.94%	\$ 10,862	\$ 189	\$ 11,051	\$ 13,061	\$0	\$ 24,071	\$ 48,183	\$ 1,724,632	\$ 30,029	\$ 1,517,398	\$ -	\$ 2,796,631	\$ 7,309,938
1700	McCarthy Library	2010		61,637	46,141	74.86%	-	\$ 33,500,839	0.00%	\$ 100,212	\$ 1,745	\$ 101,956	\$ 120,494	\$0	\$ 222,076	\$ 444,526	\$ 15,910,967	\$ 277,035	\$ 13,999,082	\$ -	\$ 25,800,920	\$ 55,988,004
1800	PHYSICAL SCIENCES	1965		27,886	21,037	75.44%	\$ 8,191,796	\$ 14,444,134	56.71%	\$ 45,338	\$ 789	\$ 46,127	\$ 54,514	\$0	\$ 100,472	\$ 201,114	\$ 7,198,488	\$ 125,337	\$ 6,333,507	\$ -	\$ 11,672,931	\$ 33,522,600
1890	GREENHOUSE	2014		475	408	85.89%	-	\$ 25,498	0.00%	\$ 772	\$ 13	\$ 786	\$ 929	\$0	\$ 1,711	\$ 3,426	\$ 122,616	\$ 2,135	\$ 107,883	\$ -	\$ 198,832	\$ 431,467
1891	GARDEN SHED	1991		244	220	90.16%	\$ 20,643	\$ 19,641	105.10%	\$ 397	\$ 7	\$ 404	\$ 477	\$0	\$ 879	\$ 1,760	\$ 62,986	\$ 1,097	\$ 55,418	\$ -	\$ 102,137	\$ 242,280
1892	BOAT SHED	1990		526	510	96.95%	\$ 14,860	\$ 54,854	27.09%	\$ 940	\$ 16	\$ 956	\$ 1,130	\$0	\$ 2,083	\$ 4,169	\$ 149,205	\$ 2,598	\$ 131,276	\$ -	\$ 241,948	\$ 539,887
1893	ELECTRICAL SWITCH	1965		194	178	91.75%	\$ 113,522	\$ 174,472	65.07%	\$ 315	\$ 5	\$ 321	\$ 379	\$0	\$ 699	\$ 1,399	\$ 50,079	\$ 872	\$ 44,062	\$ -	\$ 81,207	\$ 289,742
2000	LIFE SCIENCES	2008		13,805	8,678	62.86%	-	\$ 6,335,538	0.00%	\$ 22,445	\$ 391	\$ 22,835	\$ 26,987	\$0	\$ 49,739	\$ 99,562	\$ 3,563,621	\$ 62,048	\$ 3,135,411	\$ -	\$ 5,778,699	\$ 12,539,780
2200	DATATEL MODULAR BLDG	2004	2004	1,066	739	69.32%	\$ 16,420	\$ 396,487	4.14%	\$ 1,733	\$ 30	\$ 1,763	\$ 2,084	\$0	\$ 3,841	\$ 7,688	\$ 275,177	\$ 4,791	\$ 242,111	\$ -	\$ 446,222	\$ 984,722
2210	TEMP CLASSROOM MODULAR	2004	2004	2,082	1,816	87.22%	\$ 28,301	\$ 774,377	3.65%	\$ 3,385	\$ 59	\$ 3,444	\$ 4,070	\$0	\$ 7,501	\$ 15,015	\$ 537,447	\$ 9,358	\$ 472,867	\$ -	\$ 871,514	\$ 1,919,487
2220	TEMP CLASSROOM MODULAR	2004	2004	1,528	1,367	89.46%	\$ 20,770	\$ 568,323	3.65%	\$ 2,484	\$ 43	\$ 2,528	\$ 2,987	\$0	\$ 5,505	\$ 11,020	\$ 394,438	\$ 6,868	\$ 347,041	\$ -	\$ 639,613	\$ 1,408,730
2230	TEMP CLASSROOM MODULAR	2005	2005	1,518	914	60.21%	\$ 12,351	\$ 564,603	2.19%	\$ 2,468	\$ 43	\$ 2,511	\$ 2,968	\$0	\$ 5,469	\$ 10,948	\$ 391,856	\$ 6,823	\$ 344,770	\$ -	\$ 635,427	\$ 1,391,227
2240	TEMP CLASSROOM MODULAR	2005	2005	1,517	1,219	80.36%	\$ 12,343	\$ 564,231	2.19%	\$ 2,466	\$ 43	\$ 2,509	\$ 2,966	\$0	\$ 5,466	\$ 10,941	\$ 391,598	\$ 6,818	\$ 344,543	\$ -	\$ 635,008	\$ 1,390,311
2250	COLLEGE POLICE/HEALTH	2005	2005	2,237	1,531	68.44%	\$ 18,201	\$ 832,027	2.19%	\$ 3,637	\$ 63	\$ 3,700	\$ 4,373	\$0	\$ 8,060	\$ 16,133	\$ 577,459	\$ 10,054	\$ 508,071	\$ -	\$ 936,396	\$ 2,050,181
3000	CDC - ADMINISTRATION A	1992		2,922	2,289	78.34%	\$ 169,969	\$ 1,479,181	11.49%	\$ 4,751	\$ 83	\$ 4,833	\$ 5,712	\$0	\$ 10,528	\$ 21,073	\$ 754,285	\$ 13,133	\$ 663,649	\$ -	\$ 1,223,134	\$ 2,824,170
3020	CDC - INFANT/TODDLER B	1992		3,520	2,840	80.68%	\$ 159,561	\$ 1,781,902	8.95%	\$ 5,723	\$ 100	\$ 5,823	\$ 6,881	\$0	\$ 12,682	\$ 25,386	\$ 908,652	\$ 15,821	\$ 799,467	\$ -	\$ 1,473,453	\$ 3,356,955
3030	CDC - PRESCHOOL C	1992		3,149	2,614	83.01%	\$ 142,744	\$ 1,594,093	8.95%	\$ 5,120	\$ 89	\$ 5,209	\$ 6,156	\$0	\$ 11,346	\$ 22,711	\$ 812,882	\$ 14,154	\$ 715,205	\$ -	\$ 1,318,155	\$ 3,003,140
3040	CDC - INFANT/TODDLER D	1999		1,650	1,262	76.48%	\$ 182,177	\$ 613,699	29.69%	\$ 2,683	\$ 47	\$ 2,729	\$ 3,226	\$0	\$ 5,945	\$ 11,900	\$ 425,931	\$ 7,416	\$ 374,750	\$ -	\$ 690,681	\$ 1,680,955
3090	CDC SHEDS	2001		360	345	95.83%	\$ 8,780	\$ 28,979	30.30%	\$ 585	\$ 10	\$ 595	\$ 704	\$0	\$ 1,297	\$ 2,596	\$ 92,930	\$ 1,618	\$ 81,764	\$ -	\$ 150,694	\$ 335,786
3100	INDUSTRIAL TECHNOLOGY	1968		10,000	8,845	88.45%	\$ 2,520,454	\$ 5,030,083	50.11%	\$ 16,258	\$ 283	\$ 16,541	\$ 19,549	\$0	\$ 36,030	\$ 72,120	\$ 2,581,399	\$ 44,946	\$ 2,271,214	\$ -	\$ 4,185,947	\$ 11,603,960
3200	VWV- VITICULTURE LAB 1	1999		2,193	1,721	78.48%	\$ 80,017	\$ 1,103,097	7.25%	\$ 3,565	\$ 62	\$ 3,628	\$ 4,287	\$0	\$ 7,901	\$ 15,816	\$ 566,101	\$ 9,857	\$ 498,077	\$ -	\$ 917,978	\$ 2,072,029
3210	VWV- WINERY BLDG	2002		3,220	2,462	76.46%	\$ 50,360	\$ 1,849,870	2.72%	\$ 5,235	\$ 91	\$ 5,326	\$ 6,295	\$0	\$ 11,602	\$ 23,223	\$ 831,210	\$ 14,473	\$ 731,331	\$ -	\$ 1,347,875	\$ 2,975,248
3220	VWV- AGRICULTURE LAB	1946		1,452	1,068	73.55%	\$ 234,081	\$ 735,034	31.85%	\$ 2,361	\$ 41	\$ 2,402	\$ 2,839	\$0	\$ 5,231	\$ 10,472	\$ 374,819	\$ 6,526	\$ 329,780	\$ -	\$ 607,799	\$ 1,553,006
3230	VWV- WINE STORAGE	2007		2,194	1,778	81.04%	-	\$ 226,658	0.00%	\$ 3,567	\$ 62	\$ 3,629	\$ 4,289	\$0	\$ 7,905	\$ 15,823	\$ 566,359	\$ 9,861	\$ 498,304	\$ -	\$ 918,397	\$ 1,992,921
3290	VWV- VINE FIELD BLDGS	1991		1,723	1,034	60.01%	\$ 145,769	\$ 138,695	105.10%	\$ 2,801	\$ 49	\$ 2,850	\$ 3,368	\$0	\$ 6,208	\$ 12,426	\$ 444,775	\$ 7,744	\$ 391,330	\$ -	\$ 721,239	\$ 1,710,857
3300	ECON WORKFORCE DEVELOP	1998	1998	2,610	1,547	59.27%	\$ 313,415	\$ 907,948	34.52%	\$ 4,243	\$ 74	\$ 4,317	\$ 5,102	\$0	\$ 9,404	\$ 18,823	\$ 673,745	\$ 11,731	\$ 592,787	\$ -		

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																							
Upper Valley Campus												Historical FY: 2023-2024						Projected Expenses after X Years					50
BLDG ID	BLDG NAME	YEAR BLT.	LAST ADD.	GSF	Maintainable GSF	ASF	Efficiency	Current Repair Cost (REPR)	Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Historical Fiscal Year Expenses	E Escalated	W Escalated	OM&R Escalated	O Escalated	P Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P
1	UVC CLASSROOMS	1994	2005	13,796	2,408	2,408	100.00%	\$ 1,180	\$ 21,581,544	0.01%	\$ 16,253	\$ 55	\$ 16,308	\$ 16,830	\$ 90	\$ 500	\$ 33,638	\$ 2,580,615	\$ 8,673	\$ 1,955,283	\$ -	\$ 58,117	\$ 4,603,868
2	CULINARY ARTS	1994	2005	4,245	4,245	0	0.00%	\$ -	\$ 11,956,977	0.00%	\$ 28,653	\$ 96	\$ 28,749	\$ 29,669	\$ 90	\$ 882	\$ 59,299	\$ 4,549,299	\$ 15,289	\$ 3,446,918	\$ -	\$ 102,453	\$ 8,113,958
3	MAINTENANCE	1994		268	268	0	0.00%	\$ 18,187,413	\$ 40,657,713	44.73%	\$ 1,809	\$ 6	\$ 1,815	\$ 1,873	\$ 90	\$ 56	\$ 3,744	\$ 287,211	\$ 965	\$ 217,615	\$ -	\$ 6,468	\$ 18,699,672
4	GROUPS SHED	1998		288	288	0	0.00%	\$ 173,465	\$ 745,295	23.27%	\$ 1,944	\$ 7	\$ 1,950	\$ 2,013	\$ 90	\$ 60	\$ 4,023	\$ 308,645	\$ 1,037	\$ 233,854	\$ -	\$ 6,951	\$ 723,953
5	Culinary Patio Storage	2005	2005	319	319	0	0.00%	\$ -	\$ 31,117	0.00%	\$ 2,153	\$ 7	\$ 2,160	\$ 2,220	\$ 90	\$ 66	\$ 4,456	\$ 341,867	\$ 1,149	\$ 259,026	\$ -	\$ 7,699	\$ 609,741
6	CULINARY STORAGE	2005		70	70	0	0.00%	\$ -	\$ 24,022	0.00%	\$ 472	\$ 2	\$ 474	\$ 489	\$ 90	\$ 15	\$ 978	\$ 75,018	\$ 252	\$ 56,840	\$ -	\$ 1,689	\$ 132,799
7	UVC GREENHOUSE	2005		70	70	0	0.00%	\$ 33,158	\$ 142,465	23.27%	\$ 472	\$ 2	\$ 474	\$ 489	\$ 90	\$ 15	\$ 978	\$ 75,018	\$ 252	\$ 56,840	\$ -	\$ 1,689	\$ 166,957
8	CHICKEN COOP	2005		120	120	0	0.00%	\$ 7,265	\$ 253,555	2.87%	\$ 810	\$ 3	\$ 813	\$ 839	\$ 90	\$ 25	\$ 1,676	\$ 128,602	\$ 432	\$ 97,439	\$ -	\$ 2,896	\$ 236,635
<b>Campus Total</b>					<b>7,788</b>	<b>2,408</b>		<b>\$ 18,402,481</b>	<b>\$ 75,392,688</b>								<b>\$ 108,792</b>						<b>\$ 33,288,584</b>

<b>Projected Site Expenses = U + OM&amp;R + O + P</b>		Multiplier	Escalation
<b>(U) Utilities = (E+W)</b>			<b>4%</b> U
(E) is Present Value of Energy Expenses combined (Gas and Electricity) Average Expense per GSF		6.7498	
(W) is Present Value of Water Expenses per Site Acreage converted to sqft; Average Expense per sqft		0.0227	
<b>(OM&amp;R) = Present Value of Operating, Maintenance &amp; Repairs;</b>			
Average Expense per square foot is Total OM&R/Total Campus GSF		6.9891	<b>3%</b> OM&R & O
<b>(O) = Present Value of other known expenses (Contract Services) Average Expense per GSF</b>		0.0000	
<b>(P) = Payroll Salaries of Custodial, Maintenance, Grounds &amp; Other Operations &amp; Maintenance of Plant Personnel</b>			
Average Expense per square foot including grounds		0.2077	<b>3%</b> P
Source 1 FUSION Space Inventory 2023-2024		Source 2 FUSION 2022-2027 Facilities Condition Index (FCI) Assessment	

# Appendix E: TCO Tool Instructions

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## Purpose of Tool

The Maintenance and Operations Planning, Staffing and Budgeting tool (MOPS+B) was developed for decision makers to understand expenses related to:

- Payroll Expenses for Custodial, Maintenance, and Grounds Personnel “P”
- Utility Expenses (Electric, Gas, and Water) “U”
- Annual Operating (Planned) Maintenance & Repairs “OM&R”
- Other Annual Expenses “O”

In addition to this year, escalated expenses for up to any number years can be projected.

All cells highlighted in yellow are editable by the user.

# Summary Data

Napa Valley College		Historical Fiscal Year	2023-2024	
<i>Select fiscal year from dropdown list above and enter data in yellow boxes below</i>				
	Total Gross Square Footage (GSF) FROM FUSION		491,140	
	Total Assignable Square Footage (ASF) FROM FUSION		338,933	
	Total Site Acreage FROM FUSION		160.00	
	Total Site Acreage converted to Square Footage		6,969,600	
	Total Site Acreage Grounds Only (Total Site Acreage- Total GSF)		6,478,460	
		Full Time	Part Time	FT Equivalent
	Custodians	13	1	13.5
	Maintenance Personnel	3	0	3
	Grounds Personnel	4	0	4
	Other Operations & Maintenance of Plant	1	1	1.5
	Total Full-Time Employee Count	21		
	Total Part-Time Employee Count		2	
		Full Time	Part Time	Totals
	Custodian Salaries	\$975,890	\$0	\$975,890
	Maintenance Personnel Salaries	\$264,747	\$0	\$264,747
	Grounds Personnel Salaries	\$210,221	\$0	\$210,221
	Other Operations & Maintenance of Plant Salaries	\$307,675	\$0	\$307,675
	Total Salary & Benefits			\$1,758,534
		Conversion to Expense per SQ FT		
	Average Custodian Salaries per Square Foot of GSF			\$1.9870
	Average Maintenance Salaries per Square Foot of GSF			\$0.5390
P	Average Grounds Salaries per Site Acreage (Grounds Only) in SQFT			\$0.0324
	Average Other Operations & Maintenance of Plant Salaries per Square Foot of GSF			\$0.6265
	Average Expense per GSF + Average Expense per Site Acreage in SQFT			\$3.1849
U (W)	Annual Water Usage (City of Napa / Napa Sanitation District)			\$118,379
	Average Expense Per Square Foot of Site Acreage in SQFT			\$0.0170
U (E)	Annual Gas Usage (PG&E)			\$349,411
	Average Expense Per Square Foot of GSF			\$0.7114
U (E)	Annual Electricity Usage (SPURR)			\$54,713
	Average Expense Per Square Foot of GSF			\$0.1114
OM&R	Annual Operating, (Planned) Maintenance & Repairs			\$960,128
	Average Expense Per Square Foot of GSF			\$1.9549
O	Other Annual Expenses			\$0
	Average Expense Per Square Foot of GSF			\$0.0000

The yellow box with a green outline is where the user would choose what year this data represents. Changing this value does not affect other values in the tool.

The yellow boxes with a red outline is where the user would have to input data.

The boxes with a red circle are automatically filled using the data in the red outline boxes.



# Staffing Expenses

HISTORICAL FISCAL YEAR & PROJECTED STAFFING WORKSHEET													
EXISTING CUSTODIAL STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
GSF per Custodian to maintain LEVEL 1 APPA Standard	GSF per Custodian to maintain LEVEL 2 APPA Standard	GSF per Custodian to maintain LEVEL 3 APPA Standard	GSF per Custodian to maintain LEVEL 4 APPA Standard	GSF per Custodian to maintain LEVEL 5 APPA Standard		To increase or decrease projected Custodial Staff, use the yellow fillable box in the table below.							
Orderly Spottlessness	Ordinary Tidiness	Casual Inattention	Moderate Dingedness	Unkempt Neglect		CUSTODIAL STAFFING PROJECTIONS AND SALARIES							
8,500	16,700	26,500	39,500	45,600		Projected Increase or Decrease in Custodial Staff	Projected Staff Count	Projected GSF to clean per Custodian	Projected Cleaning Level that should be met	Fiscal Year Annualized Salaries of Custodians	Fiscal Year Custodial Salaries per GSF	Increase or Decrease in Custodial Staffing Salaries	Projected Total Salaries for Custodial Staffing
2023-2024	Napa Valley College	491,140	13.5	36,381	4	1.5	15.0	32,743	3	\$975,890	1.9870	\$97,589	\$1,073,479
EXISTING MAINTENANCE STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
SQFT per Maintenance Personnel to maintain LEVEL 1 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 2 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 3 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 4 APPA Standard	SQFT per Maintenance Personnel to maintain LEVEL 5 APPA Standard		To increase or decrease projected Maintenance Staff, use the yellow fillable box in the table below.							
Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management	Crisis Response		MAINTENANCE STAFFING PROJECTIONS AND SALARIES							
47,220	67,456	94,439	118,049	236,098		Projected Increase or Decrease in Maintenance Staff	Projected Staff Count	Projected GSF per Maintenance Staff	Projected Maintenance Level that should be met	Fiscal Year Annualized Salaries of Maintenance Staff	Fiscal Year Maintenance Staff Salaries per GSF	Increase or Decrease in Maintenance Staffing Salaries	Projected Total Salaries for Maintenance Staffing
2023-2024	Napa Valley College	491,140	3.0	163,713	4	2.0	5.0	98,228	3	\$264,747	0.5390	\$105,899	\$370,645
EXISTING GROUNDS STAFF and Recommended APPA Staffing Standards						Interactive Section For Projections							
SQFT per Grounds Staff to maintain LEVEL 1 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 2 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 3 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 4 APPA Standard	SQFT per Grounds Staff to maintain LEVEL 5 APPA Standard		To increase or decrease projected Grounds Staff, use the yellow fillable box in the table below.							
State of the Art	High Level	Moderate Level	Moderately Low-Level	Minimum Level		GROUNDS STAFFING PROJECTIONS AND SALARIES							
7.96 Acres to SQFT =	10.37 Acres to SQFT =	13.96 Acres to SQFT =	22.42 Acres to SQFT =	42.6 Acres to SQFT =		Projected Increase or Decrease in Grounds Staff	Projected Staff Count	Projected SQFT per Grounds Staff	Projected Level that should be met	Fiscal Year Annualized Salaries of Grounds Staff	Fiscal Year Grounds Salaries per SQFT	Increase or Decrease in Grounds Staffing Salaries	Projected Total Salaries for Grounds Staffing
346,738	451,717	608,098	976,615	1,855,656		4.5	8.5	762,172	3	\$210,227	0.0324	\$111,294	\$321,515

The yellow boxes with a red outline is where the user would input a number change.

The boxes with red circles are automatically filled using the data in the red outline boxes.

Making changes in the boxes with a red outline in this section will also affect the sections below. The user will be able to see how it affects different buildings by changing the building selected in the yellow highlighted box with a green outline and it will automatically change the numbers in the red circles.



## Effect of Projected Staffing Expenses on Other Sections: Expenses by Building

The user will be able to see how changing the staffing expenses affects different buildings by changing the building selected in the yellow highlighted box with a green outline and it will automatically change the numbers in the red circles.

Napa Valley Community College District Projected Maintenance and Operations Expenses (by Building)												
CAMPUS	Napa Valley College		BUILDING NAME	PE TENNIS STORAGE		YEAR BUILT	2000					695
CAMPUS GSF	491,140		HISTORICAL FY	2023-2024		Custodial/Maintenance Staffing (FTE) (Using APPA Staffing Formula)						
Building's Gross Square Foot "GSF" (From FUSION)	350		E: Electric	S/GSF	\$ 0.1114	Populates automatically with changes to Custodial or Maintenance Staffing						
% Annual Escalation - U (E & W)	4%		E: Gas	S/GSF	\$ 0.7114	Campus Custodial FTE	15	Campus Custodial (GSF/FTE)	32.743			
% Annual Escalation - P	3%		W:Water/Sewer	S/Site SF	\$ 0.0170	Campus Maintenance FTE	5	Campus Maintenance (GSF/FTE)	98.228			
% Annual Escalation - OM&R & O	3%		P: M&O Staff	S/GSF	\$ 3.6164	Current Custodial Campus Level	3	Campus Goal APPA Level:	3			
(Escalation values editable in 'Campuswide Expenses')			OM&R & O	S/GSF	\$ 1.9549	Current Maintenance Campus Level	3	Campus Goal APPA Level:	3			
						Custodial FTE for this Bldg	0.01	(Campus GSF/FTE/Bldg GSF)				
						Maintenance FTE for this Bldg	0.00	(Campus GSF/FTE/Bldg GSF)				

Description of Expenses	HISTORICAL FY	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-YEAR PROJECTION
U: (E) Electric Annual escalation 4%	39	41	42	44	46	47	49	51	53	55	58	487
U: (E) Gas Annual escalation 4%	249	259	269	280	291	303	315	328	341	354	369	3,109
U: (W) Water/Sewer Annual escalation 4%	0	0	0	7	7	7	8	8	8	8	9	74
P: M&O Staff Annual escalation 3%	1,264	1,304	1,343	1,383	1,425	1,467	1,511	1,557	1,603	1,652	1,701	14,946
OM&R & O: M&O Expenditures Esc 3%	684	705	726	748	770	793	817	841	867	893	920	8,079
Sub Total Building Operating & Repair Expenses	2,244	2,314	2,387	2,461	2,539	2,618	2,700	2,785	2,872	2,963	3,056	26,995

## Effect of Projected Staffing Expenses on Other Sections: Campuswide Expenses

It will also affect the numbers in this section for the specific buildings under the columns with the red circles. The user can enter any number of years to project expenses for in the highlighted box with a red outline.

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																			
Napa Valley College		Historical FY: 2023-2024										Projected Expenses after X Years			50				
BLDG ID	BLDG NAME	ASF	Efficiency	Current Repair Cost (REPR)	Current Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Escalated	Escalated	Escalated	Escalated	Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P	
3020	CCDC - INFANT/TODDLER B	2,840	80.83%	\$ 159,561	\$ 1,781,902	8.93%	\$ 2,896	\$ 60	\$ 2,956	\$ 6,881	\$ 0	\$ 12,730	\$ 45,567	\$ 489,866	\$ 9,493	\$ 799,467	\$ -	\$ 1,478,963	\$ 2,907,350
3030	CCDC - PRESCHOOL C	2,614	83.01%	\$ 142,744	\$ 1,994,093	8.93%	\$ 2,891	\$ 93	\$ 2,984	\$ 6,156	\$ 0	\$ 11,388	\$ 20,189	\$ 411,397	\$ 8,491	\$ 715,205	\$ -	\$ 1,133,094	\$ 2,600,922
3040	CCDC - INFANT/TODDLER D	1,262	78.48%	\$ 282,177	\$ 613,699	20.46%	\$ 1,318	\$ 28	\$ 1,346	\$ 3,224	\$ 0	\$ 6,987	\$ 10,878	\$ 215,962	\$ 4,450	\$ 374,760	\$ -	\$ 493,244	\$ 1,470,209
3090	CCDC - SHEDS	845	85.83%	\$ 8,780	\$ 28,979	30.30%	\$ 286	\$ 6	\$ 302	\$ 704	\$ 0	\$ 3,002	\$ 2,308	\$ 47,032	\$ 971	\$ 81,764	\$ -	\$ 151,258	\$ 289,803
3100	INDUSTRIAL TECHNOLOGY	8,848	88.45%	\$ 2,520,454	\$ 5,030,083	50.11%	\$ 8,228	\$ 170	\$ 8,398	\$ 19,549	\$ 0	\$ 36,144	\$ 64,111	\$ 1,306,437	\$ 26,968	\$ 2,271,214	\$ -	\$ 4,201,999	\$ 10,326,672
3200	VVIT- VIT/CULTURE LAB 1	1,721	78.48%	\$ 80,617	\$ 1,403,097	7.25%	\$ 1,804	\$ 37	\$ 1,841	\$ 4,287	\$ 0	\$ 7,931	\$ 14,060	\$ 286,502	\$ 5,914	\$ 495,077	\$ -	\$ 921,411	\$ 1,791,620
3210	VVIT- WINERY BLDG	2,462	78.48%	\$ 50,960	\$ 1,849,170	2.73%	\$ 2,650	\$ 55	\$ 2,704	\$ 6,299	\$ 0	\$ 11,645	\$ 20,641	\$ 400,873	\$ 8,654	\$ 731,331	\$ -	\$ 1,152,915	\$ 2,565,962
3220	VVIT- AGRICULTURE LAB	1,068	73.55%	\$ 334,081	\$ 735,034	31.85%	\$ 1,195	\$ 25	\$ 1,219	\$ 2,839	\$ 0	\$ 5,251	\$ 9,309	\$ 189,495	\$ 3,916	\$ 329,780	\$ -	\$ 610,071	\$ 1,367,544
3230	VVIT- WINE STORAGE	1,778	81.04%	\$ -	\$ 226,658	0.00%	\$ 1,805	\$ 37	\$ 1,843	\$ 4,289	\$ 0	\$ 7,934	\$ 14,066	\$ 286,632	\$ 5,917	\$ 488,304	\$ -	\$ 1,121,684	\$ 1,712,684
3290	VVIT- WINE FIELD BLDGS	1,034	60.01%	\$ 145,769	\$ 138,695	108.10%	\$ 1,418	\$ 29	\$ 1,447	\$ 3,368	\$ 0	\$ 6,231	\$ 11,046	\$ 235,099	\$ 4,647	\$ 391,330	\$ -	\$ 725,936	\$ 1,490,781
3300	ECON WORKFORCE DEVELOP	1,947	59.17%	\$ 313,415	\$ 907,848	34.52%	\$ 2,148	\$ 44	\$ 2,192	\$ 5,102	\$ 0	\$ 9,439	\$ 18,733	\$ 360,980	\$ 7,039	\$ 592,787	\$ -	\$ 1,096,617	\$ 2,350,335
3500	CERAMICS STUDIO	2,905	76.73%	\$ -	\$ 1,737,512	0.00%	\$ 3,315	\$ 64	\$ 3,380	\$ 7,401	\$ 0	\$ 15,692	\$ 24,273	\$ 494,617	\$ 10,510	\$ 859,882	\$ -	\$ 1,590,723	\$ 2,958,434
3700	VISUAL ART CENTER	6,471	60.93%	\$ 1,613,630	\$ 5,341,848	35.83%	\$ 8,738	\$ 180	\$ 8,919	\$ 20,761	\$ 0	\$ 38,407	\$ 68,086	\$ 1,387,437	\$ 28,640	\$ 2,412,029	\$ -	\$ 4,462,098	\$ 10,204,134
3900	DIGITAL DESIGN GRAPHICS	2,478	93.09%	\$ 946,924	\$ 926,037	102.26%	\$ 2,190	\$ 45	\$ 2,236	\$ 5,204	\$ 0	\$ 9,627	\$ 17,066	\$ 347,774	\$ 7,179	\$ 604,597	\$ -	\$ 1,119,466	\$ 3,024,939
3950	TRUP CLASSROOM MODULAR	914	87.97%	\$ 24,123	\$ 88,444	3.86%	\$ 853	\$ 18	\$ 873	\$ 2,031	\$ 0	\$ 3,787	\$ 6,661	\$ 135,759	\$ 2,802	\$ 236,979	\$ -	\$ 436,546	\$ 825,189
4000	MAINTENANCE-WAREHOUSE	7,716	84.09%	\$ 2,461,669	\$ 2,937,314	104.90%	\$ 7,851	\$ 166	\$ 7,988	\$ 17,862	\$ 0	\$ 33,192	\$ 58,841	\$ 1,189,048	\$ 24,791	\$ 2,084,320	\$ -	\$ 3,884,328	\$ 8,942,217
4030	MAINTENANCE STORAGE	0	0.00%	\$ 239,671	\$ 178,723	134.10%	\$ 1,423	\$ 29	\$ 1,453	\$ 3,382	\$ 0	\$ 6,284	\$ 11,091	\$ 226,014	\$ 4,665	\$ 392,920	\$ -	\$ 726,877	\$ 1,580,147
4040	MAINTENANCE SHOP	7,166	63.93%	\$ 3,271,261	\$ 3,118,428	104.90%	\$ 2,282	\$ 192	\$ 2,473	\$ 22,051	\$ 0	\$ 40,793	\$ 72,318	\$ 1,473,661	\$ 30,420	\$ 2,561,029	\$ -	\$ 4,739,400	\$ 12,076,675
4050	WAREHOUSE - SOUTH	1,440	86.80%	\$ -	\$ 122,381	0.00%	\$ 1,213	\$ 25	\$ 1,248	\$ 2,805	\$ 0	\$ 5,374	\$ 9,527	\$ 194,137	\$ 4,007	\$ 337,802	\$ -	\$ 624,338	\$ 1,460,034
4070	WAREHOUSE - NORTH	3,356	96.18%	\$ -	\$ 287,423	0.00%	\$ 2,871	\$ 59	\$ 2,931	\$ 6,823	\$ 0	\$ 12,621	\$ 23,379	\$ 465,847	\$ 9,412	\$ 792,654	\$ -	\$ 1,464,388	\$ 3,734,370
4080	WAREHOUSE- OLD	1,739	100.00%	\$ 240,918	\$ 179,653	134.10%	\$ 1,431	\$ 30	\$ 1,460	\$ 3,400	\$ 0	\$ 6,289	\$ 11,149	\$ 227,189	\$ 4,890	\$ 394,664	\$ -	\$ 750,653	\$ 1,599,420
4090	CHILLER PLANT	7,303	83.26%	\$ -	\$ 28,747,814	0.00%	\$ 7,415	\$ 153	\$ 7,568	\$ 17,618	\$ 0	\$ 32,991	\$ 57,777	\$ 1,177,361	\$ 24,303	\$ 2,046,818	\$ -	\$ 53,786,483	\$ 7,034,864
4100	FACILITIES SERVICES	2,409	81.66%	\$ 858,814	\$ 1,111,433	77.27%	\$ 2,429	\$ 54	\$ 2,483	\$ 6,246	\$ 0	\$ 11,956	\$ 20,484	\$ 417,407	\$ 8,616	\$ 725,653	\$ -	\$ 1,342,411	\$ 3,352,901
Campus Total		338,933		\$ 74,106,551	\$ 273,422,036								\$ 3,165,181					\$ 459,499,549	

# Expenses by Building

Napa Valley Community College District Projected Maintenance and Operations Expenses (by Building)															
CAMPUS	Napa Valley College		BUILDING NAME	PE TENNIS STORAGE		YEAR BUILT	2000								695
CAMPUS GSF	491,140		HISTORICAL FY	2023-2024		Custodial/Maintenance Staffing (FTE) (Using APPA Staffing Formula)									
Building's Gross Square Foot "GSF" (From FUSION)	350		E: Electric	S/GSF	\$ 0.1114	Populates automatically with changes to Custodial or Maintenance Staffing									
% Annual Escalation - U (E & W)	4%		E: Gas	S/GSF	\$ 0.7114	Campus Custodial FTE	15	Campus Custodial (GSF/FTE)				32,743			
% Annual Escalation - P	3%		W:Water/Sewer	S/Site SF	\$ 0.0170	Campus Maintenance FTE	5	Campus Maintenance (GSF/FTE)				98,228			
% Annual Escalation - OM&R & O (Escalation values editable in "Campuswide Expenses")	3%		P: M&O Staff	S/GSF	\$ 3.6164	Current Custodial Campus Level:	3	Campus Goal APPA Level:				3			
			OM&R & O	S/GSF	\$ 1.9549	Current Maintenance Campus Level:	3	Campus Goal APPA Level:				3			
						Custodial FTE for this Bldg:	0.01	(Campus GSF/Bldg GSF)							
						Maintenance FTE for this Bldg:	0.00	(Campus GSF/FTE/Bldg GSF)							

Description of Expenses	HISTORICAL FY	10-YEAR PROJECTION										
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
U: (E) Electric Annual escalation 4%	39	41	42	44	46	47	49	51	53	55	58	487
U: (E) Gas Annual escalation 4%	249	259	269	280	291	303	313	328	341	354	369	3,109
U: (W) Water/Sewer Annual escalation 4%	6	6	6	7	7	7	8	8	8	8	9	74
P: M&O Staff Annual escalation 3%	1,266	1,304	1,343	1,383	1,425	1,467	1,511	1,557	1,603	1,652	1,701	14,946
OM&R & O: M&O Expenditures Esc 3%	684	705	726	748	770	793	\$17	\$41	\$67	\$93	\$20	8,079
Sub Total Building Operating & Repair Expenses	2,244	2,314	2,387	2,461	2,539	2,618	2,700	2,785	2,872	2,963	3,056	26,695
Future Renovations/Upgrades* (Scheduled Maintenance & Repairs)												0
Total Building Operating & Repair Expenses	\$2,244	\$2,314	\$2,387	\$2,461	\$2,539	\$2,618	\$2,700	\$2,785	\$2,872	\$2,963	\$3,056	\$26,695

\*For Future Renovations/Upgrades, refer to FUSION and the Assessment Schedule. Enter the amount of the deficiency/repair/replacement under the year it will be addressed.

Historical expenses are converted to an average expense per gross square foot (GSF) or an average expense per square foot of site acreage.

The average is multiplied by the GSF of each building to create an expense per building.

All associated expenses pertaining to the building are displayed

Adding an amount in any of the yellow boxes inside the red outline will lead to the 10-year projection in the red circle to increase by the same amount automatically.

The yellow box with a green outline is where the user would choose which building's data they would like to see.

# Campuswide Expenses (Total Cost of Ownership)

CAMPUSWIDE HISTORICAL & PROJECTED EXPENSES																				
Napa Valley College																				
Historical FY: 2023-2024																				
Projected Expenses after X Years																				
50																				
BLDG ID	BLDG NAME	ASF	Efficiency	Current Repair Cost (REPR)	Current Replacement Cost (REPL)	FCI (% REPR of REPL)	E = Electric + Gas	W	U = E + W	OM&R	O	P	Historical Fiscal Year Expenses	E Escalated	W Escalated	OM&R Escalated	O Escalated	P Escalated	Total Cost of Ownership = Current REPR + Escalated E+W+OM&R+O+P	
3020	ODC-INFANT/TODDLER B	2,840	80.68%	\$ 159,561	\$ 1,781,901	8.95%	\$ 2,898	\$ 60	\$ 2,958	\$ 6,881	\$ 0	\$ 12,790	\$ 22,567	\$ 459,866	\$ 9,493	\$ 799,467	\$ -	\$ -	\$ 1,478,963	\$ 2,907,350
3030	ODC-PRESCHOOL C	2,614	83.01%	\$ 143,741	\$ 1,594,093	8.95%	\$ 2,591	\$ 53	\$ 2,645	\$ 6,156	\$ 0	\$ 11,388	\$ 20,189	\$ 411,397	\$ 8,492	\$ 715,205	\$ -	\$ -	\$ 1,133,084	\$ 2,600,822
3040	ODC-INFANT/TODDLER D	1,260	76.48%	\$ 182,177	\$ 613,699	29.69%	\$ 1,388	\$ 28	\$ 1,386	\$ 3,226	\$ 0	\$ 5,987	\$ 10,578	\$ 215,562	\$ 4,450	\$ 374,750	\$ -	\$ -	\$ 693,264	\$ 1,470,203
3090	ODC-SHEDS	340	95.83%	\$ 8,780	\$ 28,979	30.30%	\$ 296	\$ 6	\$ 302	\$ 704	\$ 0	\$ 1,302	\$ 3,308	\$ 47,032	\$ 971	\$ 81,764	\$ -	\$ -	\$ 151,258	\$ 289,903
3100	INDUSTRIAL TECHNOLOGY	8,841	88.43%	\$ 1,920,454	\$ 6,030,093	30.11%	\$ 8,218	\$ 170	\$ 8,388	\$ 19,549	\$ 0	\$ 36,164	\$ 64,111	\$ 1,306,437	\$ 26,668	\$ 2,271,214	\$ -	\$ -	\$ 4,203,959	\$ 10,326,672
3200	VVW-TITICULTURE LAB S	1,721	78.48%	\$ 80,017	\$ 1,103,097	7.25%	\$ 1,804	\$ 37	\$ 1,842	\$ 4,287	\$ 0	\$ 7,931	\$ 14,060	\$ 286,502	\$ 5,914	\$ 486,077	\$ -	\$ -	\$ 911,411	\$ 1,791,820
3210	VVW-T WINEINR BLDG	2,443	78.46%	\$ 30,360	\$ 1,849,870	7.72%	\$ 2,650	\$ 55	\$ 2,704	\$ 6,295	\$ 0	\$ 11,645	\$ 20,644	\$ 420,673	\$ 8,884	\$ 731,331	\$ -	\$ -	\$ 1,152,915	\$ 2,363,962
3220	VVW-AGRICULTURE LAB	1,069	75.55%	\$ 234,081	\$ 735,094	31.85%	\$ 1,193	\$ 23	\$ 1,219	\$ 2,839	\$ 0	\$ 3,251	\$ 9,309	\$ 189,693	\$ 3,916	\$ 329,780	\$ -	\$ -	\$ 610,071	\$ 1,387,844
3230	VVW- WINE STORAGE	3,778	81.04%	\$ -	\$ 226,698	0.00%	\$ 1,805	\$ 37	\$ 1,843	\$ 4,289	\$ 0	\$ 7,934	\$ 14,066	\$ 286,612	\$ 5,917	\$ 488,904	\$ -	\$ -	\$ 921,851	\$ 1,713,664
3290	VVW-VINE FIELD BLDGS	1,034	60.01%	\$ 145,769	\$ 136,695	103.10%	\$ 1,418	\$ 29	\$ 1,447	\$ 3,368	\$ 0	\$ 6,231	\$ 11,048	\$ 225,099	\$ 4,647	\$ 391,330	\$ -	\$ -	\$ 723,938	\$ 1,490,781
3300	ECON WORKFORCE DEVELOP	1,847	59.27%	\$ 313,415	\$ 907,948	34.31%	\$ 2,148	\$ 44	\$ 2,192	\$ 5,102	\$ 0	\$ 9,439	\$ 16,733	\$ 340,990	\$ 7,039	\$ 592,787	\$ -	\$ -	\$ 1,096,617	\$ 2,350,838
3300	CERAMICS STUDIO	2,900	76.73%	\$ -	\$ 1,737,911	0.00%	\$ 1,115	\$ 64	\$ 1,180	\$ 7,401	\$ 0	\$ 13,692	\$ 24,273	\$ 484,617	\$ 10,210	\$ 839,882	\$ -	\$ -	\$ 1,390,725	\$ 2,939,414
3700	VISUAL ART CENTER	6,471	60.93%	\$ 1,213,892	\$ 3,341,948	35.93%	\$ 7,728	\$ 180	\$ 8,018	\$ 20,781	\$ 0	\$ 38,407	\$ 69,088	\$ 1,387,477	\$ 18,640	\$ 2,121,029	\$ -	\$ -	\$ 4,462,099	\$ 10,204,134
3900	DIGITAL DESIGN GRAPHICS	2,478	93.09%	\$ 946,924	\$ 926,037	102.16%	\$ 2,190	\$ 45	\$ 2,236	\$ 5,204	\$ 0	\$ 9,627	\$ 17,066	\$ 347,774	\$ 7,179	\$ 604,997	\$ -	\$ -	\$ 1,118,466	\$ 3,024,939
3950	TEMP CLASSROOM MODULAR	914	87.97%	\$ 14,123	\$ 386,444	3.63%	\$ 855	\$ 18	\$ 873	\$ 2,051	\$ 0	\$ 3,757	\$ 6,661	\$ 135,739	\$ 2,802	\$ 235,979	\$ -	\$ -	\$ 436,946	\$ 825,839
4000	MAINTENANCE-WAREHOUSE	7,714	84.05%	\$ 2,665,669	\$ 2,537,314	104.90%	\$ 7,592	\$ 196	\$ 7,708	\$ 17,942	\$ 0	\$ 33,192	\$ 59,841	\$ 1,199,048	\$ 24,731	\$ 2,084,520	\$ -	\$ -	\$ 3,856,218	\$ 9,826,217
4030	MAINTENANCE STORAGE	0	0.00%	\$ 239,671	\$ 178,733	134.06%	\$ 1,423	\$ 29	\$ 1,453	\$ 3,392	\$ 0	\$ 6,256	\$ 11,091	\$ 226,014	\$ 4,865	\$ 192,920	\$ -	\$ -	\$ 745,877	\$ 1,590,147
4040	MAINTENANCE SHOP	7,166	63.53%	\$ 3,271,261	\$ 3,118,431	104.90%	\$ 9,282	\$ 192	\$ 9,473	\$ 22,051	\$ 0	\$ 40,793	\$ 73,318	\$ 1,473,661	\$ 30,420	\$ 2,361,929	\$ -	\$ -	\$ 4,739,404	\$ 12,076,678
4050	WAREHOUSE 1 - SOUTH	1,446	96.90%	\$ -	\$ 122,381	0.00%	\$ 1,213	\$ 25	\$ 1,248	\$ 2,905	\$ 0	\$ 5,374	\$ 9,527	\$ 194,137	\$ 4,007	\$ 337,502	\$ -	\$ -	\$ 624,585	\$ 1,180,004
4070	WAREHOUSE 1 - NORTH	3,356	96.16%	\$ -	\$ 287,423	0.00%	\$ 2,872	\$ 59	\$ 2,931	\$ 6,823	\$ 0	\$ 12,621	\$ 22,378	\$ 455,947	\$ 9,412	\$ 782,654	\$ -	\$ -	\$ 1,466,358	\$ 2,724,370
4080	WAREHOUSE-OLD	7,730	100.00%	\$ 240,918	\$ 179,693	134.06%	\$ 1,421	\$ 30	\$ 1,460	\$ 3,400	\$ 0	\$ 6,289	\$ 11,149	\$ 227,189	\$ 4,890	\$ 394,864	\$ -	\$ -	\$ 730,658	\$ 1,598,420
4090	CHILLER PLANT	7,501	81.26%	\$ -	\$ 28,747,814	0.00%	\$ 7,416	\$ 151	\$ 7,568	\$ 17,618	\$ 0	\$ 32,991	\$ 57,777	\$ 1,177,161	\$ 24,333	\$ 2,049,519	\$ -	\$ -	\$ 3,786,481	\$ 7,014,964
4100	FACILITIES SERVICES	2,609	81.66%	\$ 858,814	\$ 1,111,451	77.27%	\$ 2,629	\$ 54	\$ 2,683	\$ 6,246	\$ 0	\$ 11,555	\$ 20,484	\$ 417,407	\$ 8,616	\$ 725,693	\$ -	\$ -	\$ 1,342,411	\$ 3,332,901
Campus Total		338,933		\$ 74,106,551	\$ 273,422,036								\$ 3,165,182						\$ 459,499,549	

Projected Site Expenses = U + OM&R + O + P	Multiplier	Escalation
(U) Utilities = (E+W)	0.8228	4%
(E) = Present Value of Energy Expenses combined (Gas and Electric)	0.0170	
(W) = Present Value of Water Expenses per Site Acreage		
(OM&R) = Present Value of Operating, Maintenance & Repair Expenses per square foot is Total OM&R/Total Area	1.9549	3%
(O) = Present Value of other known expenses (Contract Services, etc.)	0.0000	
(P) = Present Value of Personnel	3.6164	3%
Average Expense per square foot including grounds		

Source 1 FUSION Space Inventory 2023-2024      Source 2 FUSION 2022-2027 Facilities Condition Index (FCI) Assessment

Changing the numbers in the highlighted yellow boxes with a red outline will automatically change the numbers in the columns with the red circles.





into the red box. Then highlight the boxes above the row you just added in the green box and copy and paste them into the new row and it should auto fill using the formulas.