# APPENDIX B

## MAINTENANCE AND OPERATIONS ANALYSIS

# APPENDIX B. MAINTENANCE AND OPERATIONS ANALYSIS

## INTRODUCTION

Finalized in Summer 2025, the City of Gresham Maintenance and Operations Analysis provides a point-in-time analysis of Gresham's maintenance budget, summarizes an itemized cost model for developed parks, and outlines potential approaches for improving the operation and maintenance of existing and future park facilities. As a point-in-time analysis, this appendix may include different data counts or other information in comparison to the final Gresham Parks 2035 plan document. The data included in the body of Gresham Parks 2035 represents the most current data and information.

# MEMORANDUM

**To:** Matt Hastie

**From:** Dave Elkin / Lorraine Bamford

**Date:** July 8, 2024

**RE:** Gresham Parks System Plan Task 3.6 Deliverables

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- Itemized Maintenance Cost Model for Developed Parks
- Developed a set of Park Budget Maintenance Scenarios
- Potential approaches for improving the operation and maintenance of existing and future park facilities

**Itemized Maintenance Cost Model for Developed Parks**

We have prepared an itemized maintenance cost model for developed parks, which can be applied to future new parks or significant expansions or development of major new amenities in existing parks. To further assist the City and the Parks Master Plan Report, we included the cost models of the six undeveloped parks for reference.

We reviewed the general level of maintenance requirements for the range of existing park elements with Maintenance staff and quantified them into factor hours. The cost model uses the factor hours and provides a detailed estimated breakdown of maintenance costs and FTE hours needed based on the specified quantities for each proposed park element.

We have included the most updated FTE hourly rate and M&S per acre cost based on the data we received from the City staff.

The materials and supplies costs included in the model were derived from the FY 23/24 budget and calculated on a cost per acre and included in the totals at the bottom of the cost model. Additional costs such as benefits, training, equipment maintenance costs have been included in the M&S costs per the spreadsheet provided by the City of Gresham. The spreadsheet included 2023 materials and

supplies costs and will need to be adjusted for inflation as necessary with future modeling.

The total billable rate for Public Utility Worker #2 is used (per City of Gresham's recommendation) for the hourly rate per FTE in the model. Markup for department overhead and central service costs has been factored in. Travel time between sites and equipment loading / unloading has been included in the factor hours in the Cost Model.

We have applied the cost model to the six undeveloped parks. Based on the cost model, we found that the maintenance cost for planned developed parks is $13,200 per acre. This includes a staffing cost of $8,500 per acre, and materials and supplies cost of $4,700 per acre.

**Gresham Parks Maintenance Budget Analysis**

This budget analysis is focused on reviewing Gresham's current level of maintenance for their existing park system. Of the 1,120 acres of parks throughout the City, there are approximately 200 acres of developed parks which are maintained by twelve FTE of parks maintenance staff.

The FY 2025 City Park Maintenance Budget is approximately $2.5 million. To find Gresham's overall expenditure across the entire park system, we divided $2.5 million (FY25 Budget) by 1,120 acres (existing park system). This is equivalent to a maintenance cost of $2,300 per acre of parks, of which the annual staffing cost is $1,430 per acre and materials and supplies (M&S) cost per acre is $870. The staffing cost also includes a 52.81% markup for department overhead cost and central service allocation cost.

During review, it was identified that overall staffing costs represented 62% of total operations. This could be attributed to veteran staff, who have higher pay scales due to their long-term employment.

For evaluation we compared Gresham's staffing levels for operations and maintenance to Tualatin Hills Parks & Recreation District which is a local comparison. THPRD is a park district and has a well-funded annual budget provided a strong basis for our analysis. We downloaded and examined each line item to develop comparable cost data. While THPRD's district might differ in population and park

acreage, we standardized the data FTE per 10,000 residents and Park Acres. This approach allows for a fair comparison and highlights Gresham's primary staffing challenge.

Upon review of THPRD's budget, we found that Gresham's overall expenditure of $2,300 per acre is significantly lower than THPRD's, which has an overall expenditure of $4,600 per acre (Figure 1). This shows that Gresham's current level of maintenance is half of what THPRD funds their current system. Some of this can be attributed to the large sections of natural area that Gresham includes within their park system acreage.

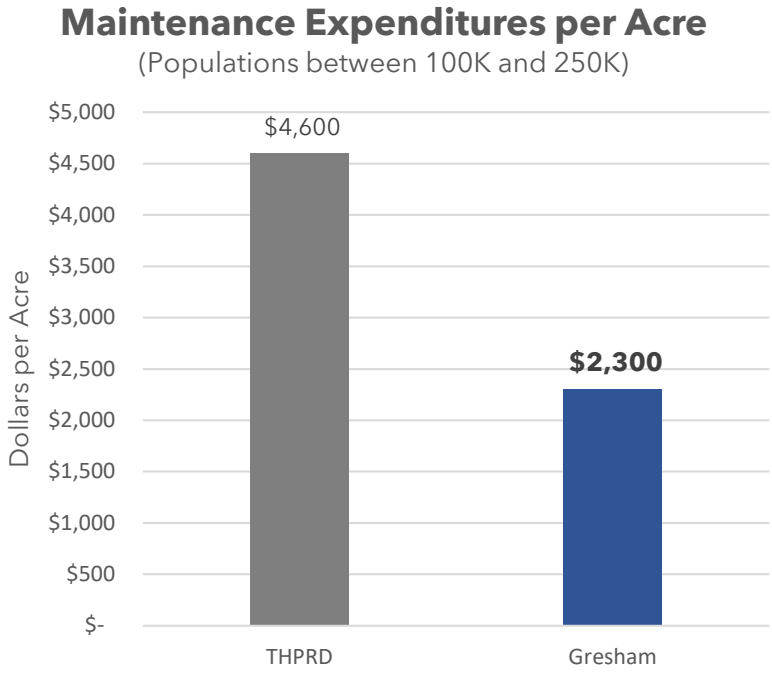


Figure 1. Maintenance expenditures per acre comparison between Gresham and THPRD.

**Maintenance Staffing Comparison**

Presently, Gresham has a Parks Maintenance staff of 12 FTE to serve a population of over 111,600 residents. This breaks down to approximately 1 FTE per 10,000 residents (Figure 2). For comparison, THPRD has 70 FTE to serve a population of 270,000 residents, which is approximately 2.5 FTE per 10,000 residents.

Gresham has approximately 200 acres of developed parks across the system. That breaks down to 18 acres per 10,000 residents. For comparison, THPRD has 1,100 acres of developed parks which is approximately 41 acres per 10,000 residents (Figure 3).

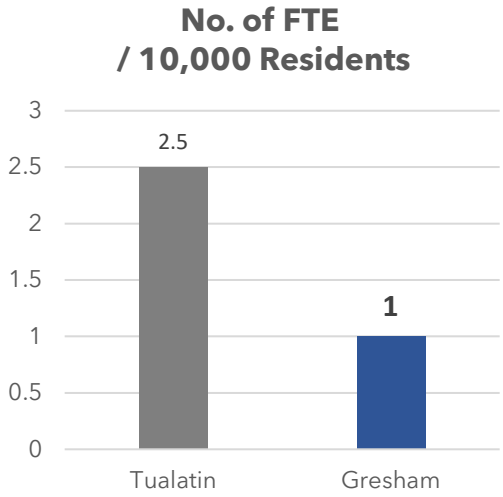


Figure 2. Number of FTE / 10,000 Residents comparison between Tualatin and Gresham.

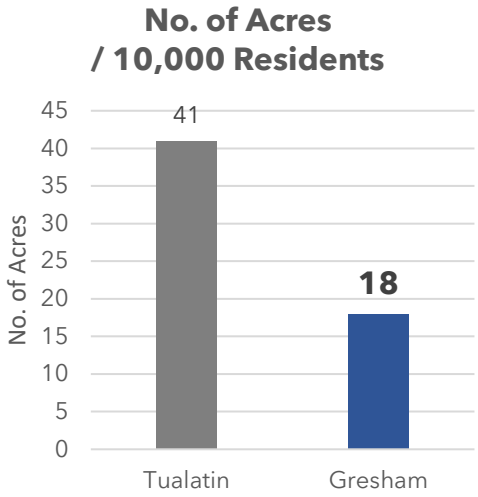


Figure 3. Number of Acres / 10,000 Residents comparison between Tualatin and Gresham.

The staffing level based on population and total developed park acreage seems to be consistent with the THPRD comparison. The greater acres of developed parks would require a greater number of maintenance FTE. As Gresham adds more parks, the number of Maintenance FTE will need to increase accordingly.

Comparison of the acres of developed park per FTE, the two park systems are similar with Gresham having 16.6 acres of developed park per FTE and THPRD having 15.7 acres of developed park per FTE (Figure 4). However, the comparison of the acres served per FTE shows that Gresham is serving almost 3 times more acres per FTE than THPRD (Figure 5).

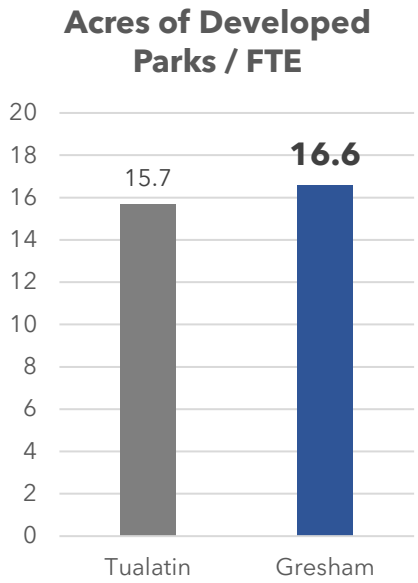


Figure 4. Acres of Developed Parks / FTE comparison between Tualatin and Gresham.

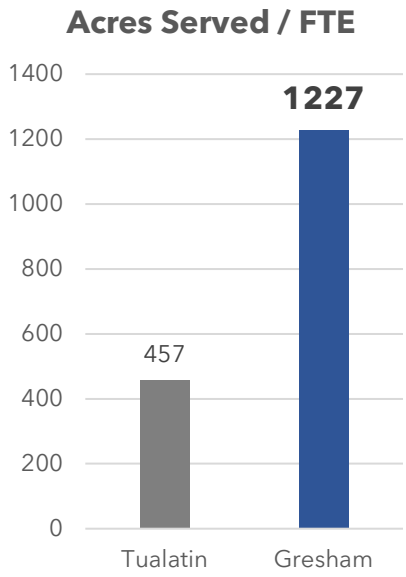


Figure 5. Acres Served / FTE comparison between Tualatin and Gresham.

The difference in total acres served per FTE is significant and likely a major factor in the overall ability of the maintenance staff to manage the park system effectively. Gresham's large disbursement of parks throughout the City is likely increasing drive time across the City to manage various parks and / or maintenance emergencies and would significantly impact the overall hours spent maintaining parks.

**Maintenance Scenarios**

The provided budget data allows us to project future park maintenance costs. However, the cost model is likely too detailed for direct scenario comparison. A more in-depth analysis by the City of Gresham may be needed (if desired) to determine which cost model items could be reduced or eliminated for each budget scenario. Alternatively, Gresham could adjust the Public Utility Worker #2 billing rate within the model to see how lower-cost labor would affect overall costs.

Since future park designs are still under development, focusing the current budget discussion on existing facilities might be more productive. Estimated future park capital and maintenance costs could be included in another chapter of the master plan.

Hence, the following scenarios are focused on increasing the annual maintenance budget for the City of Gresham's current park system based on the analysis above.

Scenario 1 – Increase annual maintenance budget from approximately $2,300 per acre to $2,600 per acre. This would increase the budget by approximately $300,000 for a total maintenance budget $2.8 million (2024 dollars). This will allow Gresham to acquire approximately 1.75 additional FTE for a total of 13.75 FTE.

Scenario 2 – Increase annual maintenance budget to $2,850 per acre. This would increase the budget by approximately $600,000 for a total maintenance budget of $3.1 million (2024 dollars). This will allow Gresham to acquire approximately 3.5 additional FTE for a total of 15.5 FTE.

Scenario 3 - Increase the annual maintenance cost to $3,400 per acre. This would increase the budget by approximately $920,000 for a total maintenance budget of $3.7 million (2024 dollars). This will allow Gresham to acquire approximately 5 additional FTE for a total of 17.25 FTE.

| | **FY 2025** | **MAINTENANCE SCENARIOS** | | |
|---|---|---|---|---|
| | Current Budget | Scenario 1 | Scenario 2 | Scenario 3 |
| Annual Maintenance Budget | $2.5 mil | $2.8 mil | $3.1 mil | $3.7 mil |
| Maintenance Cost Per Acre | $2,300 | $2,575 | $2,850 | $3,400 |
| FTE | 12 | 13.75 | 15.5 | 17.25 |

*Table 1. Maintenance scenarios.*

The scenarios aim to improve the current park system. As Gresham adds more parks, the budget will need to be increased accordingly to ensure an adequate budget for maintenance and new improvements.

**Maintenance Approaches**

After analyzing the operations and maintenance data and discussing with city staff, below is a list of potential maintenance approaches we identified:

- Reallocate Downtown Parking Lots FTE Hours
- Establish Maintenance Hubs throughout the City
- Leveraging Best-Suited Staff
- Improve Asset Management with Scheduled Maintenance
- Improve Asset Quality

- Establish Tree Team / Arborists
- Hire Park Rangers
- Hire Contractors for Specific Park Maintenance
- Establish Rapid Response Team
- Increase Field Grass Area
- Use Landscape Fabric in Shrub Beds
- Adopt-A-Park Program

Reallocate Downtown Parking Lots FTE Hours

The Maintenance Staff is currently managing Downtown parking lots maintenance such as garbage pickup. This approach recommends Gresham Parks to clarify responsibilities for downtown parking lots maintenance tasks, enabling the Parks Maintenance staff to concentrate their efforts on the upkeep of park facilities. By implementing this approach, Parks Maintenance staff can effectively allocate resources, ensuring that both downtown areas and park facilities receive the attention they require, thereby enhancing the overall quality of urban maintenance services.

Establish Maintenance Hubs throughout the City

Gresham is serving almost 3 times more acres per FTE than THPRD. To enable Maintenance staff to manage the parks more efficiently, Gresham can divide the City into various service areas and establish a maintenance hub in each of the service area. This approach would enable staff to reduce travel time, store essential equipment locally, and improve the overall efficiency in park maintenance. Capital investment would be necessary to acquire land (if necessary) and develop a secure storage facility for each location.

Leveraging Best-Suited Staff

Gresham's staffing costs represented 62% of total operations. The Maintenance staff currently collectively shoulders the responsibility of overseeing all Parks maintenance tasks. Gresham can rely on full-time, part-time, seasonal staff, and leverage the best-suited staff for the appropriate tasks to perform their work throughout the year.

Improve Asset Management with Scheduled Maintenance

Currently, Gresham does not have a robust asset management plan to manage its amenities, resulting in the gradual deterioration of these vital resources, which diminishes their functionality, and in turn, requires more FTE hours to maintain or repair those amenities. This deficiency affects the Maintenance staff's ability to

strategically allocate resources, prioritize maintenance efforts, and maximize the longevity and functionality of its assets.

To address this challenge, there is a critical need for an improved maintenance scheduling policy to maintain Gresham Parks' assets. By planning and identifying the frequency of each maintenance task for each park, park management can establish clear guidelines and timelines for routine maintenance activities, preventive inspections, and corrective interventions. Maintenance staff can transition from a reactive stance to a proactive stance, enhancing operational efficiency, prolonging asset lifespan, and elevating the overall quality of park maintenance services for the benefit of park users. This may also partially address the distances that maintenance staff need to travel for repairs. If these were scheduled, perhaps additional tasks that need to be completed within the local area could improve efficiency.

Improve Asset Quality

Enhancing asset quality serves to extend its operational lifespan by minimizing the frequency of breakdowns and the need for extensive repairs, consequently lowering the demand for FTE hours. This approach involves utilizing durable materials and implementing robust maintenance protocols. The upfront investment in quality assets often leads to long-term cost savings, as they are less prone to premature deterioration and require less frequent and intensive maintenance interventions. The emphasis on asset quality ensures reliable asset performance and optimizes the efficient use of personnel and resources across the Department.

Establish Tree Team / Arborists

Establishing a dedicated Tree Team or hiring certified arborists to oversee tree-related maintenance within the park will help optimize resource allocation and enhance maintenance efficiency. Currently, Gresham has no tree team or arborists to handle tree maintenance and emergencies. As climate change intensifies, trees face unprecedented stressors such as extreme weather events, pests, and diseases, threatening their health and resilience. By entrusting a designated Tree Team or arborists with responsibilities such as tree pruning, removal, health assessment, and emergency response, the staff can ensure the health and longevity of its tree canopy.

Hire Park Rangers

Park rangers help safeguarding and enhancing the quality of park environments. Park rangers play a pivotal role in managing and maintaining the cleanliness, safety, and overall integrity of park spaces. Their presence helps deter vandalism, illegal

activities, and unauthorized access, contributing to the preservation of park resources and the promotion of responsible recreational practices. Moreover, park rangers serve as frontline ambassadors for conservation and public safety, fostering a welcoming and secure atmosphere for all park users.

Hire Contractors for Specific Park Maintenance

In an alternative approach to addressing the division of maintenance responsibilities between contractors and Parks Maintenance staff, Gresham could consider hiring a private maintenance contractor for a specific park, particularly those located at a considerable distance, to supplement staffing shortages. By assigning contractors to handle all maintenance tasks within a park, the scope of work for both contractors and Parks Maintenance staff can be simplified. This approach will enhance efficiency and reduce the frequency for Parks Maintenance staff to inspect and oversee the work conducted by contractors, consequently minimizing FTE hours and administrative burden. Through this approach, Gresham can optimize efficiency in workflows, enhance accountability, and ensure consistent standards of maintenance across its park facilities.

Establish Rapid Response Team

Unscheduled maintenance is a huge inefficiency currently experienced by Maintenance staff. Maintenance tasks are often done as emergency calls requested. This reactive approach strains available resources and compromises the overall effectiveness of maintenance operations. Therefore, the establishment of a Rapid Response Team, which can be comprised of temporary employees, will specifically help handle emergency calls within the parks system. By instituting a dedicated Rapid Response Team, equipped with the necessary resources, the Maintenance staff can enhance their readiness to tackle unforeseen challenges promptly and efficiently, minimizing disruptions of regular maintenance and ensuring the safety and well-being of park visitors and assets.

To streamline emergency response efforts, the Team can categorize unscheduled maintenance into distinct levels of priority. This tiered approach allows for a systematic and informed allocation of resources and efforts.

Increase Field Grass Area

In planning for future parks, a shift towards allocating larger areas for natural field grass instead of designating them as highly maintained mowed lawns could reduce the frequency of mowing requirements and minimize resource-intensive maintenance

efforts. Embracing field grass will help conserve time and resources, allow staff to prioritize FTE hours on other maintenance tasks, while enriching the overall park experience for visitors and ensuring the preservation of green spaces.

Use Landscape Fabric in Shrub Beds

Based on the observations and experiences of Maintenance staff, using landscape fabric in shrub beds has demonstrated a tangible reduction in FTE hours, e.g. Yamhill Neighborhood Park. Drawing from this practical insight, it is strongly recommended by staff to implement landscape fabric as a standard practice in future park development projects. By incorporating landscape fabric into shrub beds, parks can benefit from minimized weed growth, improved moisture retention, and enhanced aesthetic appeal, while simultaneously reducing the need for labor-intensive maintenance tasks. Adopting this approach will elevate the Parks standard and improve maintenance efficiency.

Adopt-A-Park Program

The Adopt-a-Park program represents a collaborative effort between communities and local governments to enhance the maintenance and stewardship of public parks. Numerous agencies administer such programs. Gresham presently lacks one of its own, however, community efforts have been seen to help maintain a number of parks across Gresham. By formalizing such efforts into an Adopt-A-Park Program, individuals, families, businesses, and community organizations are given the opportunity to actively participate in the care and upkeep of designated parks within their vicinity. Participants typically commit to regular clean-up activities, landscaping projects, and other maintenance tasks, thereby supplementing the efforts of Parks Maintenance staff and extending the reach of limited resources.

End of Memo

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | All 6 Parks |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 7785 | LF | 0.0125 | 97.313 | 0.047 | $ 7,580.64 |
| Crushed Rock Pathways (5' Wide) | 8520 | LF | 0.00378 | 32.206 | 0.015 | $ 2,508.82 |
| Bike Trails | 1 | EA | 0.005 | 0.005 | 0.000 | $ 0.39 |
| Dog Park | 34400 | SF | 0.0289 | 994.160 | 0.478 | $ 77,445.06 |
| Play Area | 44500 | SF | 0.0555 | 2469.750 | 1.187 | $ 192,393.53 |
| Parking Lot | 27500 | SF | 0.0000735 | 2.021 | 0.001 | $ 157.46 |
| Sports Courts | 17000 | SF | 0.00226 | 38.420 | 0.018 | $ 2,992.92 |
| Community Garden | 22000 | SF | 0.000612 | 13.464 | 0.006 | $ 1,048.85 |
| Picnic Structure (2000SF) | 2 | SF | 0.0555 | 0.111 | 0.000 | $ 8.65 |
| Picnic Structure (540SF) | 5 | SF | 0.0555 | 0.278 | 0.000 | $ 21.62 |
| Picnic Structure (350SF) | 4 | SF | 0.0555 | 0.222 | 0.000 | $ 17.29 |
| Viewpoints | 7 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 4638 | LF | 0.02 | 92.760 | 0.045 | $ 7,226.00 |
| Bathroom | 2 | EA | 198 | 396.000 | 0.190 | $ 30,848.40 |
| Picnic Tables | 26 | EA | 2 | 52.000 | 0.025 | $ 4,050.80 |
| Benches | 76 | EA | 2 | 152.000 | 0.073 | $ 11,840.80 |
| Kiosk | 16 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 16 | EA | 1.5 | 24.000 | 0.012 | $ 1,869.60 |
| Drinking Fountain | 7 | EA | 8.5 | 59.500 | 0.029 | $ 4,635.05 |
| Bike Racks | 21 | EA | 1 | 21.000 | 0.010 | $ 1,635.90 |
| Dog Waste Station | 20 | EA | 8.67 | 173.400 | 0.083 | $ 13,507.86 |
| Trash Receptacles | 22 | EA | 22 | 484.000 | 0.233 | $ 37,703.60 |
| Drainage System | 3 | EA | 10 | 30.000 | 0.014 | $ 2,337.00 |
| Trees | 192 | EA | 0.125 | 24.000 | 0.012 | $ 1,869.60 |
| Lawn | 73000 | SF | 0.0038 | 277.400 | 0.133 | $ 21,609.46 |
| Shrub Beds | 94500 | SF | 0.0173 | 1634.850 | 0.786 | $ 127,354.82 |
| High Grass | 611792 | SF | 0.000206 | 126.029 | 0.061 | $ 9,817.67 |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **7194.888** | **3.459** | **$ 560,481.78** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **66.47** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **7200.00** |
| Estimated Total FTE Needed | **3.459** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 8,500.00 |
| Total Staffing Cost | $ 560,481.78 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 312,500.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $872,981.78 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 13,200.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | Southwest Community |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 2573 | LF | 0.0125 | 32.163 | 0.015 | $ 2,505.46 |
| Crushed Rock Pathways (5' Wide) | 1648 | LF | 0.00378 | 6.229 | 0.003 | $ 485.27 |
| Bike Trails | 0 | EA | 0.005 | 0.000 | 0.000 | $ - |
| Dog Park | 20000 | SF | 0.0289 | 578.000 | 0.278 | $ 45,026.20 |
| Play Area | 15000 | SF | 0.0555 | 832.500 | 0.400 | $ 64,851.75 |
| Parking Lot | 12500 | SF | 0.0000735 | 0.919 | 0.000 | $ 71.57 |
| Sports Courts | 11000 | SF | 0.00226 | 24.860 | 0.012 | $ 1,936.59 |
| Community Garden | 10000 | SF | 0.000612 | 6.120 | 0.003 | $ 476.75 |
| Picnic Structure (2000SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Picnic Structure (540SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Picnic Structure (350SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Viewpoints | 2 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 1429 | LF | 0.02 | 28.580 | 0.014 | $ 2,226.38 |
| Bathroom | 1 | EA | 198 | 198.000 | 0.095 | $ 15,424.20 |
| Picnic Tables | 6 | EA | 2 | 12.000 | 0.006 | $ 934.80 |
| Benches | 20 | EA | 2 | 40.000 | 0.019 | $ 3,116.00 |
| Kiosk | 2 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 5 | EA | 1.5 | 7.500 | 0.004 | $ 584.25 |
| Drinking Fountain | 1 | EA | 8.5 | 8.500 | 0.004 | $ 662.15 |
| Bike Racks | 3 | EA | 1 | 3.000 | 0.001 | $ 233.70 |
| Dog Waste Station | 3 | EA | 8.67 | 26.010 | 0.013 | $ 2,026.18 |
| Trash Receptacles | 3 | EA | 22 | 66.000 | 0.032 | $ 5,141.40 |
| Drainage System | 1 | EA | 10 | 10.000 | 0.005 | $ 779.00 |
| Trees | 39 | EA | 0.125 | 4.875 | 0.002 | $ 379.76 |
| Lawn | 50000 | SF | 0.0038 | 190.000 | 0.091 | $ 14,801.00 |
| Shrub Beds | 27000 | SF | 0.0173 | 467.100 | 0.225 | $ 36,387.09 |
| High Grass | 114140 | SF | 0.000206 | 23.513 | 0.011 | $ 1,831.65 |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **2566.035** | **1.234** | **$ 199,894.13** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **25.00** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **2600.00** |
| Estimated Total FTE Needed | **1.234** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 8,000.00 |
| Total Staffing Cost | $ 199,894.13 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 117,500.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $317,394.13 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 12,700.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | Southeast Community |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 813 | LF | 0.0125 | 10.163 | 0.005 | $ 791.66 |
| Crushed Rock Pathways (5' Wide) | 1933 | LF | 0.00378 | 7.307 | 0.004 | $ 569.20 |
| Bike Trails | 0 | EA | 0.005 | 0.000 | 0.000 | $ - |
| Dog Park | 4700 | SF | 0.0289 | 135.830 | 0.065 | $ 10,581.16 |
| Play Area | 15000 | SF | 0.0555 | 832.500 | 0.400 | $ 64,851.75 |
| Parking Lot | 15000 | SF | 0.0000735 | 1.103 | 0.001 | $ 85.88 |
| Sports Courts | 3000 | SF | 0.00226 | 6.780 | 0.003 | $ 528.16 |
| Community Garden | 4000 | SF | 0.000612 | 2.448 | 0.001 | $ 190.70 |
| Picnic Structure (2000SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Picnic Structure (540SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (350SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Viewpoints | 1 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 990 | LF | 0.02 | 19.800 | 0.010 | $ 1,542.42 |
| Bathroom | 1 | EA | 198 | 198.000 | 0.095 | $ 15,424.20 |
| Picnic Tables | 6 | EA | 2 | 12.000 | 0.006 | $ 934.80 |
| Benches | 10 | EA | 2 | 20.000 | 0.010 | $ 1,558.00 |
| Kiosk | 2 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 2 | EA | 1.5 | 3.000 | 0.001 | $ 233.70 |
| Drinking Fountain | 1 | EA | 8.5 | 8.500 | 0.004 | $ 662.15 |
| Bike Racks | 3 | EA | 1 | 3.000 | 0.001 | $ 233.70 |
| Dog Waste Station | 3 | EA | 8.67 | 26.010 | 0.013 | $ 2,026.18 |
| Trash Receptacles | 3 | EA | 22 | 66.000 | 0.032 | $ 5,141.40 |
| Drainage System | 1 | EA | 10 | 10.000 | 0.005 | $ 779.00 |
| Trees | 76 | EA | 0.125 | 9.500 | 0.005 | $ 740.05 |
| Lawn | 20000 | SF | 0.0038 | 76.000 | 0.037 | $ 5,920.40 |
| Shrub Beds | 21000 | SF | 0.0173 | 363.300 | 0.175 | $ 28,301.07 |
| High Grass | 318450 | SF | 0.000206 | 65.601 | 0.032 | $ 5,110.29 |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **1876.896** | **0.902** | **$ 146,210.19** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **16.13** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **1900.00** |
| Estimated Total FTE Needed | **0.902** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 9,100.00 |
| Total Staffing Cost | $ 146,210.19 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 75,900.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $222,110.19 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 13,800.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | East Gresham |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 0 | LF | 0.0125 | 0.000 | 0.000 | $ - |
| Crushed Rock Pathways (5' Wide) | 1362 | LF | 0.00378 | 5.148 | 0.002 | $ 401.06 |
| Bike Trails | 1 | EA | 0.005 | 0.005 | 0.000 | $ 0.39 |
| Dog Park | 0 | SF | 0.0289 | 0.000 | 0.000 | $ - |
| Play Area | 2500 | SF | 0.0555 | 138.750 | 0.067 | $ 10,808.63 |
| Parking Lot | 0 | SF | 0.0000735 | 0.000 | 0.000 | $ - |
| Sports Courts | 0 | SF | 0.00226 | 0.000 | 0.000 | $ - |
| Community Garden | 0 | SF | 0.000612 | 0.000 | 0.000 | $ - |
| Picnic Structure (2000SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (540SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (350SF) | 3 | SF | 0.0555 | 0.167 | 0.000 | $ 12.97 |
| Viewpoints | 0 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 251 | LF | 0.02 | 5.020 | 0.002 | $ 391.06 |
| Bathroom | 0 | EA | 198 | 0.000 | 0.000 | $ - |
| Picnic Tables | 6 | EA | 2 | 12.000 | 0.006 | $ 934.80 |
| Benches | 10 | EA | 2 | 20.000 | 0.010 | $ 1,558.00 |
| Kiosk | 4 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 1 | EA | 1.5 | 1.500 | 0.001 | $ 116.85 |
| Drinking Fountain | 1 | EA | 8.5 | 8.500 | 0.004 | $ 662.15 |
| Bike Racks | 3 | EA | 1 | 3.000 | 0.001 | $ 233.70 |
| Dog Waste Station | 4 | EA | 8.67 | 34.680 | 0.017 | $ 2,701.57 |
| Trash Receptacles | 5 | EA | 22 | 110.000 | 0.053 | $ 8,569.00 |
| Drainage System | 0 | EA | 10 | 0.000 | 0.000 | $ - |
| Trees | 19 | EA | 0.125 | 2.375 | 0.001 | $ 185.01 |
| Lawn | 0 | SF | 0.0038 | 0.000 | 0.000 | $ - |
| Shrub Beds | 7000 | SF | 0.0173 | 121.100 | 0.058 | $ 9,433.69 |
| High Grass | 0 | SF | 0.000206 | 0.000 | 0.000 | $ - |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **462.245** | **0.222** | **$ 36,008.87** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **5.52** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **500.00** |
| Estimated Total FTE Needed | **0.222** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 6,600.00 |
| Total Staffing Cost | $ 36,008.87 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 26,000.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $62,008.87 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 11,300.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | Jenne Butte |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 1848 | LF | 0.0125 | 23.100 | 0.011 | $ 1,799.49 |
| Crushed Rock Pathways (5' Wide) | 2167 | LF | 0.00378 | 8.191 | 0.004 | $ 638.10 |
| Bike Trails | 0 | EA | 0.005 | 0.000 | 0.000 | $ - |
| Dog Park | 4700 | SF | 0.0289 | 135.830 | 0.065 | $ 10,581.16 |
| Play Area | 5000 | SF | 0.0555 | 277.500 | 0.133 | $ 21,617.25 |
| Parking Lot | 0 | SF | 0.0000735 | 0.000 | 0.000 | $ - |
| Sports Courts | 0 | SF | 0.00226 | 0.000 | 0.000 | $ - |
| Community Garden | 4000 | SF | 0.000612 | 2.448 | 0.001 | $ 190.70 |
| Picnic Structure (2000SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (540SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Picnic Structure (350SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Viewpoints | 2 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 986 | LF | 0.02 | 19.720 | 0.009 | $ 1,536.19 |
| Bathroom | 0 | EA | 198 | 0.000 | 0.000 | $ - |
| Picnic Tables | 2 | EA | 2 | 4.000 | 0.002 | $ 311.60 |
| Benches | 16 | EA | 2 | 32.000 | 0.015 | $ 2,492.80 |
| Kiosk | 3 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 4 | EA | 1.5 | 6.000 | 0.003 | $ 467.40 |
| Drinking Fountain | 2 | EA | 8.5 | 17.000 | 0.008 | $ 1,324.30 |
| Bike Racks | 6 | EA | 1 | 6.000 | 0.003 | $ 467.40 |
| Dog Waste Station | 4 | EA | 8.67 | 34.680 | 0.017 | $ 2,701.57 |
| Trash Receptacles | 4 | EA | 22 | 88.000 | 0.042 | $ 6,855.20 |
| Drainage System | 0 | EA | 10 | 0.000 | 0.000 | $ - |
| Trees | 26 | EA | 0.125 | 3.250 | 0.002 | $ 253.18 |
| Lawn | 0 | SF | 0.0038 | 0.000 | 0.000 | $ - |
| Shrub Beds | 18000 | SF | 0.0173 | 311.400 | 0.150 | $ 24,258.06 |
| High Grass | 111482 | SF | 0.000206 | 22.965 | 0.011 | $ 1,789.00 |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **992.140** | **0.477** | **$ 77,287.71** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **6.73** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **1000.00** |
| Estimated Total FTE Needed | **0.477** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 11,500.00 |
| Total Staffing Cost | $ 77,287.71 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 31,700.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $108,987.71 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 16,200.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | Southeast Neighborhood |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 571 | LF | 0.0125 | 7.138 | 0.003 | $ 556.01 |
| Crushed Rock Pathways (5' Wide) | 909 | LF | 0.00378 | 3.436 | 0.002 | $ 267.67 |
| Bike Trails | 0 | EA | 0.005 | 0.000 | 0.000 | $ - |
| Dog Park | 0 | SF | 0.0289 | 0.000 | 0.000 | $ - |
| Play Area | 3000 | SF | 0.0555 | 166.500 | 0.080 | $ 12,970.35 |
| Parking Lot | 0 | SF | 0.0000735 | 0.000 | 0.000 | $ - |
| Sports Courts | 0 | SF | 0.00226 | 0.000 | 0.000 | $ - |
| Community Garden | 0 | SF | 0.000612 | 0.000 | 0.000 | $ - |
| Picnic Structure (2000SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (540SF) | 1 | SF | 0.0555 | 0.056 | 0.000 | $ 4.32 |
| Picnic Structure (350SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Viewpoints | 1 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 251 | LF | 0.02 | 5.020 | 0.002 | $ 391.06 |
| Bathroom | 0 | EA | 198 | 0.000 | 0.000 | $ - |
| Picnic Tables | 2 | EA | 2 | 4.000 | 0.002 | $ 311.60 |
| Benches | 6 | EA | 2 | 12.000 | 0.006 | $ 934.80 |
| Kiosk | 2 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 2 | EA | 1.5 | 3.000 | 0.001 | $ 233.70 |
| Drinking Fountain | 1 | EA | 8.5 | 8.500 | 0.004 | $ 662.15 |
| Bike Racks | 3 | EA | 1 | 3.000 | 0.001 | $ 233.70 |
| Dog Waste Station | 2 | EA | 8.67 | 17.340 | 0.008 | $ 1,350.79 |
| Trash Receptacles | 3 | EA | 22 | 66.000 | 0.032 | $ 5,141.40 |
| Drainage System | 0 | EA | 10 | 0.000 | 0.000 | $ - |
| Trees | 14 | EA | 0.125 | 1.750 | 0.001 | $ 136.33 |
| Lawn | 3000 | SF | 0.0038 | 11.400 | 0.005 | $ 888.06 |
| Shrub Beds | 8000 | SF | 0.0173 | 138.400 | 0.067 | $ 10,781.36 |
| High Grass | 0 | SF | 0.000206 | 0.000 | 0.000 | $ - |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **447.539** | **0.215** | **$ 34,863.29** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **5.63** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **500.00** |
| Estimated Total FTE Needed | **0.215** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 6,200.00 |
| Total Staffing Cost | $ 34,863.29 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 26,500.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $61,363.29 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 10,900.00 |

# ITEMIZED MAINTENANCE COST MODEL FOR DEVELOPED PARKS

| Park Name: | Columbia View |
|---|---|

| Task | Qty | Unit | Factor Hrs | Total Hours/Year | No. of FTE Needed | Maintenance Cost |
|---|---|---|---|---|---|---|
| Concrete Pathways (5' Wide) | 1980 | LF | 0.0125 | 24.750 | 0.012 | $ 1,928.03 |
| Crushed Rock Pathways (5' Wide) | 501 | LF | 0.00378 | 1.894 | 0.001 | $ 147.53 |
| Bike Trails | 0 | EA | 0.005 | 0.000 | 0.000 | $ - |
| Dog Park | 5000 | SF | 0.0289 | 144.500 | 0.069 | $ 11,256.55 |
| Play Area | 4000 | SF | 0.0555 | 222.000 | 0.107 | $ 17,293.80 |
| Parking Lot | 0 | SF | 0.0000735 | 0.000 | 0.000 | $ - |
| Sports Courts | 3000 | SF | 0.00226 | 6.780 | 0.003 | $ 528.16 |
| Community Garden | 4000 | SF | 0.000612 | 2.448 | 0.001 | $ 190.70 |
| Picnic Structure (2000SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Picnic Structure (540SF) | 2 | SF | 0.0555 | 0.111 | 0.000 | $ 8.65 |
| Picnic Structure (350SF) | 0 | SF | 0.0555 | 0.000 | 0.000 | $ - |
| Viewpoints | 1 | EA | 0 | 0.000 | 0.000 | $ - |
| Fencing | 731 | LF | 0.02 | 14.620 | 0.007 | $ 1,138.90 |
| Bathroom | 0 | EA | 198 | 0.000 | 0.000 | $ - |
| Picnic Tables | 4 | EA | 2 | 8.000 | 0.004 | $ 623.20 |
| Benches | 14 | EA | 2 | 28.000 | 0.013 | $ 2,181.20 |
| Kiosk | 3 | EA | 0 | 0.000 | 0.000 | $ - |
| All Signage (Entry & Educational) | 2 | EA | 1.5 | 3.000 | 0.001 | $ 233.70 |
| Drinking Fountain | 1 | EA | 8.5 | 8.500 | 0.004 | $ 662.15 |
| Bike Racks | 3 | EA | 1 | 3.000 | 0.001 | $ 233.70 |
| Dog Waste Station | 4 | EA | 8.67 | 34.680 | 0.017 | $ 2,701.57 |
| Trash Receptacles | 4 | EA | 22 | 88.000 | 0.042 | $ 6,855.20 |
| Drainage System | 1 | EA | 10 | 10.000 | 0.005 | $ 779.00 |
| Trees | 18 | EA | 0.125 | 2.250 | 0.001 | $ 175.28 |
| Lawn | 0 | SF | 0.0038 | 0.000 | 0.000 | $ - |
| Shrub Beds | 13500 | SF | 0.0173 | 233.550 | 0.112 | $ 18,193.55 |
| High Grass | 67720 | SF | 0.000206 | 13.950 | 0.007 | $ 1,086.73 |
| Splash Pad | 0 | EA | 489.6176 | 0.000 | 0.000 | $ - |
| Skatepark | 0 | SF | 0.00977 | 0.000 | 0.000 | $ - |
| Bridges | 0 | SF | 0.00985 | 0.000 | 0.000 | $ - |
| Sports Fields | 0 | EA | 55.65 | 0.000 | 0.000 | $ - |
| Disc Golf Course | 0 | EA | 6.5 | 0.000 | 0.000 | $ - |
| Horseshoe Pits | 0 | EA | 1.51 | 0.000 | 0.000 | $ - |
| Artwork / Statues | 0 | EA | 1 | 0.000 | 0.000 | $ - |
| Ponds | 0 | AC | 60 | 0.000 | 0.000 | $ - |
| **Totals** | | | | **850.033** | **0.409** | **$ 66,217.58** |

| SUMMARY | |
|---|---|
| Total Acres of Developed Area | **7.46** |
| 2024 PUW 2 Hourly Rate per FTE | **$77.90** |
| Estimated Total Hours Needed | **900.00** |
| Estimated Total FTE Needed | **0.409** |

| STAFFING COST | |
|---|---|
| Staffing Cost Per Acre | $ 8,900.00 |
| Total Staffing Cost | $ 66,217.58 |

| M&S COST | |
|---|---|
| M&S Cost Per Acre | $ 4,700.00 |
| Total M&S Park Cost | $ 35,100.00 |

| TOTAL ANNUAL MAINTENANCE COST | |
|---|---|
| Total Annual Maintenance Cost | $101,317.58 |

| TOTAL COST PER ACRE | |
|---|---|
| Total Cost per Acre | $ 13,600.00 |

| Park Maintenance Matrix (Methodology 2020) | More Info. |
|---|---|
| Derived in part from "Hogan Butte Master Plan Estimated Maintenance Cost" 2008. | |
| **Each maintenance task listed below was evaluated by Parks field staff and the Parks Superintendent. A staff meeting was held on 3/02/2020 and other less formal interviews with staff informed this methodology. Some of the hourly estimates were based in part on the "Hogan Butte Master Plan" (HMP) document and may have been adjusted after staff review. This document was reviewed by the Parks Analyst for QA/QC. Some research was conducted on the internet for general material pricing and contract services (see links). Some information was derived by actual estimates from landscape contractors. No inflationary factor is included. For subsequent years after 2020, a 1%-3% inflationary rate should be included. Hourly rates and equipment charges should be updated each year as necessary. Daily work is based on 319 working days per year.** | |
| | |
| **Shrub Beds** - Includes pruning, trimming, litter pick, bark, mulch fertilizer, weed control, replacement of plant materials as necessary. The Park will be inspected each day Mon - Friday weekends and holidays in the summer. The 'Landscape' category in the HMP document was used for this estimate and verified by operations staff. The hours from the HMP document showed **.0173 sq. ft per hour, per year** for landscaping/shrub beds. | |
| **Drainage/Storm System -**A typical storm system in a park includes parking lots and play area drainage. CB cleaned annually, rain garden/bioswale maintenance as needed including weeding and litter removal, clean outs, rodding/unplug as needed. It was determined through interviews with the Parks Staff that a typical Park would require **10 hours per year per park** for drainage maintenance. It is assumed every new park will include drainage systems. | |
| **Trees** - Pruning as needed, fertilize, roots, remove, replace. The HMP document used .25 hrs. per tree per year. After discussions with Parks staff this figure was reduced by 50%. **.125 hours per year/per tree.** | |
| **Concrete Pathways** - Edging weekly during the growing season. The HMP document and staff review shows 1.3 seconds a lnr. ft. concrete paths have 2 sides, therefore 2.6 seconds per lnr. ft. 3600 seconds in 1 hr. 2.6 / 3600 = .000722 hrs. per lnr. ft. x 16 times per year = .0115 hrs. per lnr. foot per year. General Cleaning and inspections--Pressure wash as needed. Remove graffiti within 2 days pressure wash for moss and to remove food, drinks and dog waste. 1 hr. per 1000 lnr. ft. per year = .001 hrs. per lnr. ft. per year. Total hours per lnr. foot = .001 hrs. per year general cleaning + .0115 hrs. per year edging = **.0125 lnr. ft per hour, per year** | |
| **Crushed Rock Paths** - re-grade 1 time per year, clear brush, remove debris, weed, add rock to holes/low spots as needed. Nadaka path was used as a representative example for this evaluation. Nadaka path is 1584 ln. ft. Park staff estimates 6 hrs per year to maintain the path. **6 hrs / 1584 = .00378 hrs. per lnr. ft. per year**. | |
| **Sports Courts** - Blow, clean/remove moss, pressure wash, seal cracks, repair fence, refresh paint lines. Vance Park futsal court is a typical example for sports court maintenance. Vance futsal court is 15,000 sq. ft. Parks staff verified approximately .5 hours per week to maintain the court and pressure washing 1 time per year for 8 hrs. 52 weeks x .5 hrs. = 26 hrs. per year + 8 hrs per year for pressure washing = 34 hrs per year / 15,000 = **.00226 hrs. per sq. ft. per year.** | |
| **View Points** - View points generally contain benches and a hard surface. These areas were not evaluated separately. **N/A 0 hrs** | |
| **Lawn/Turf Mowing** - 31 times per year - this includes hand mowing areas. Includes loading off loading the mower, travel time, fueling, equipment adjustments, cleaning and stopping to pick up litter/debris. 1.3 hrs. per acre 31 times a year = 40.3 hours per acre, per year / 43,560 sq. ft per acre = **.000925 sq. ft per hour, per year.** | .000925 + .000075 + .0028 **= .0038 hrs per sq. ft. per year.** |
| **Lawn/Turf Maintenance** - Aeration, fertilizer/weed control x 2 times per year, summer and winter, includes flagging heads to avoid damage. Fertilizer - purchase, store, load, transport, fill and clean spreader, dispose of bags. 1.1 hrs. per acre 2 times per year = 2.2 hrs. per acre, per year. Aeration - run irrigation, flag sprinkler heads, drag over plugs, load haul and clean aerator. 1.1 hrs. per acre, time per year = 1.1 hours per acer, per year. Fertilize 2.2 hrs. + Aeration 1.1 hrs. = 3.3 hrs. per acre per year / 43,560 sq. ft per acre = **.000075 sq. ft per hour, per year.** | |
| **Lawn/Turf Leaf Removal** - Remove leaves from turf areas in the fall on a regular basis to avoid damage to turf areas, by using finger sweeper, harper sweeper vac, gator and flat bed trucks. Two seasonal employees are hired each year from June-November. Equipment is loaded and hauled to the site. The HMP document did not provide enough information, so the crew provided details to inform a per square foot cost. We used Davis Park as a representative example for this evaluation. Generally, the crew picks up leaves 1 time per week October - 2nd week of December or 10 times per year. It takes 4 FTE about 8 hrs. for Davis Park. 32 hrs. x 10 times = 320 hours. Davis has 2.65 acres of turf. 320 / 2.65 acres = 120.75 hours per acre, per year. An acre is 43,560 sq. feet. 120.75 / 43,560 = **.0028 hrs. per sq. ft of turf, per year**. | |
| **Mowing High Grass** - Remove debris/trash, transport load and unload mower, includes fueling and minor adjustments. 1.5 hrs./per acre, 6 times per year = 9 hrs. per acre per year / 43560 sq. ft per acre = **.000206 sq. ft per hr., per year.** | |
| **Bike Trails** - Re-grade, trim vegetation/branches, remove debris, drainage repairs. 5 hrs. per year per 1000 lnr. Ft. = 5 hrs / 1000 = **.005 hrs. per lnr. ft. per year**. | Bike Trail Maintenance |
| **Bike Racks -** Bike racks would have approx. %50 less maintenance than benches and tables. blow, remove graffiti, repair/replace. **1 hr. per year.** | |
| **Dog Waste Station - Restock, and repair/replace. 10 min per week x 52 weeks = 520 min.. / 60 = 8.67 hrs. per year** | dog waste costs |

| Park Maintenance Matrix (Methodology 2020) | More Info. |
|---|---|
| Derived in part from "Hogan Butte Master Plan Estimated Maintenance Cost" 2008. | |
| **Each maintenance task listed below was evaluated by Parks field staff and the Parks Superintendent. A staff meeting was held on 3/02/2020 and other less formal interviews with staff informed this methodology. Some of the hourly estimates were based in part on the "Hogan Butte Master Plan" (HMP) document and may have been adjusted after staff review. This document was reviewed by the Parks Analyst for QA/QC. Some research was conducted on the internet for general material pricing and contract services (see links). Some information was derived by actual estimates from landscape contractors. No inflationary factor is included. For subsequent years after 2020, a 1%-3% inflationary rate should be included. Hourly rates and equipment charges should be updated each year as necessary. Daily work is based on 319 working days per year.** | |
| **Dog Park** - MCP Dog park was used for this evaluation. The dog park is 4,800 sq. ft. Regular daily maintenance includes brief inspection, litter pick, and debris removal. .125 hrs per day x 345 days = 43.125 hrs. per year. 1 time per month play chips are added and leveled. Also, weeding fence repairs are generally taken care of 1 time per month. The monthly maintenance is performed by 2 FTE and it takes approximately 4 hrs. 4 hrs. x 2 FTE = 8 hrs per month. 43.125 hrs. per year + 96 hrs. per year **= 139.125 hrs per year.** | |
| **Irrigation System -** Maintenance including winterization, inspections, repairs, and adjustments, mains, laterals valves and controller. HMP document had 12 hrs. per year for irrigation. After meeting with the crew it was decided this was not accurate for most irrigation systems. Currently the Parks irrigation maintenance program includes approx. 3 hours per year to winterize, 8 hours to re-activate and 1 hour per week April -October 15th to check and repair the system. 26 weeks x 1 hour = 26 hours + 3 hrs. winterize + 8 hrs. reactivate = **37 hrs. per irrigation system, per year.** (Note: All irrigation systems are different some larger and some smaller, requiring varying hours per year to maintain) | |
| **Garbage/Litter** - Dump cans, replace liners, litter pick. 22 hours per receptacle per year was the hourly estimate from HMP document and that estimate was reviewed by Parks staff for accuracy. **22 hrs. per year / per receptacle / litter pick (to and from cans) included.** | |
| **Clean Picnic Shelters -** General cleaning hosing down, remove staples, tape & gum, pressure wash at least 4 times a year, inspect daily and clean before reservations April 1st - Sept. 30th. Inspect, clean as needed weekly October - March. Information was gathered from Parks staff. HMP document was inaccurate for this category. Coho shelter was used as the example. Coho shelter is 1296 sq. ft. Pressure wash - 2 people, 2 hrs. x 4 times= 16 hours per year. 16 hrs / 1296 sq. ft. = .0123 hrs. per sq. ft. Clean daily 6 mos. = 24 weeks = 168 days x 20 min. =3360 min / 60 = 56 hrs. per year. 56 hrs / 1296 sq. ft. = .0432 hrs. per sq. ft. .0432 + .0123 = **.0555 hrs. per sq. ft. per year** | |
| **Drinking Fountain** - start up, shut down, clean, unplug, vandalism, repair/replace. Start up /shut down 1.5 hours per year. Weekly maintenance 15 minutes April - Oct. 28 weeks x 15 min. = 420 min. / 60 min. per hr. = 7 hrs. Per year. 7 hrs. regular maintenance + 1.5 hrs. start up / shut down **= 8.5 hrs. per year.** | |
| **Picnic tables** - Clean/repair/replace. HMP document references painting wood tables. The Parks new standard for tables is expanded metal, which requires less maintenance. **2 hrs. per year** based on Parks staff feedback. | |
| **Benches** - Clean/repair/replace. HMP document references painting wood benches. The Parks new standard for benches is expanded metal, which requires less maintenance. **2 hrs. per year** based on Parks staff feedback. | |
| **Fence Maintenance** - Inspect daily and repair/stretch as needed. Based on chain-link fences at MCP, Kirk, Rockwood, Nadaka, Vance, Gradin, SW community and around the futsal courts; staff estimates 2 hrs. per 100 lnr. ft. 2 hrs. /100 lnr. feet = **.02 hrs. per lnr. ft. per year** | |
| **Retaining walls** - Remove graffiti, moss. pressure wash as needed. HMP document includes pressure washing 2 times per year. This was reduced by %50 to 1 time per year and from 2 FTE to 1 FTE. 100 sq. feet. = .43 hrs. / 100 sq. ft. = **.0043 hrs. per sq. ft. per year**. | |
| **Signs** - Clean/graffiti, repair, replace, install new, all signs including entry, kiosks, rules, and parking signs. Reduced 75% from HMP document. .125 hours/month per sign. .125 hrs. x 12 months = **1.5 hrs. per year per sign.** | |
| **Play Area** - Estimated hrs. Taken from HMP document. Parks staff works weekends from April 1st to October 31st. Parks staff does not work weekends from Nov-March. There are 20 weekends and 6 holidays that are not worked in the calendar year. 365-46 = 319 days per year that Parks conducts daily quick inspections. The daily quick inspection may include cleaning, repairing and inspecting racking play chips, litter pick graffiti removal, and reporting and or closing the play structure if there are safety issues. Discussions with the crew verified .16 hrs per day is accurate for a 2000 sq., ft. play area. .16 x 319 = 51.04 hrs. per year. 1 time per month the play area is thoroughly inspected for about 5 hrs. 5 hrs. x 12 months = 60 hrs. 51.04 hrs. + 60 hrs. = 111.04 hrs. per year / 2000 = **.0555 hrs per sq. ft.** | |
| **Restrooms -** Cleaning, restock supplies maintain structure i.e. painting, roof, rain gutters, plumbing repairs, doors. 1hr per day 198 days per year = **198 hours per /year** | |

| Park Maintenance Matrix (Methodology 2020) | More Info. |
|---|---|
| Derived in part from "Hogan Butte Master Plan Estimated Maintenance Cost" 2008. | |
| **Each maintenance task listed below was evaluated by Parks field staff and the Parks Superintendent. A staff meeting was held on 3/02/2020 and other less formal interviews with staff informed this methodology. Some of the hourly estimates were based in part on the "Hogan Butte Master Plan" (HMP) document and may have been adjusted after staff review. This document was reviewed by the Parks Analyst for QA/QC. Some research was conducted on the internet for general material pricing and contract services (see links). Some information was derived by actual estimates from landscape contractors. No inflationary factor is included. For subsequent years after 2020, a 1%-3% inflationary rate should be included. Hourly rates and equipment charges should be updated each year as necessary. Daily work is based on 319 working days per year.** | |
| **Parking Lots**- Clean/blow, repair, based on HMP document. .2 hrs./week x 52 weeks = 10 hours per year. 10 hrs. / 13600 = **.0000735 hrs. per sq. ft. per year**. Restripe (contractor) $350 mob, 1 ADA $35, $4 per line, width of parking space is 9 feet, length is 14 feet. Extra drive lane is 14 feet. Therefore 28 feet x 9 feet = 252 Sq. Ft. Approx. $ .016 per square foot, plus $35 for ADA, plus $350 mob. Gravel parking lots require grading and new gravel 1 time per year. | Striping |
| **Community Gardens** - Deliver material (chips and soil), pick up compost, winterize and activate water service and repair storage shed and fence. .25 hrs per year to winterize and turn on water. 1 hour a year to deliver chips, 4 hours a year to pick up compost, 1.5 hours a year for vandalism, shed and fence repairs. .25 hrs 2 x a year for perimeter weed control. **7.25 hrs per year.** | |
| **BBQ** - After interviews with the Parks staff the occurrences in the HMP document was reduced to 16 times. Clean, remove ashes 16 times per year. 16 times x .25 hrs. = **4hrs per year / per BBQ** | |
| **Splash Pad** - Sampling testing and logging information 15 minutes (daily 6 mos), filter cleaning main filter 20 min. daily, pump filters 1 hour weekly (6mos). Backwash- 5 days a week 20 min. Check and add chlorine 7 days per week, takes 5 min. Check Co2 tank, 7 days a week 5min. check water level in tank every day 2 min. Blow off debris daily 15 min. 6 days a week. Start up test daily 5 min. Full start up at the begining of the season 1 time per year, 10 hours. Shut down end of season 2 hours. Unscheduled repairs i.e. pump rebuils and leaks, average 30 hours per year. Materials and supplies, 6 hrs annually ...Before opening to the public, conduct a thorough inspection of the splash pad.<br>Assume 24 weeks for 6 mos (based on "Clean Picnic Shelters" description above).<br>0.25 hrs x 7 days x 24 weeks + 0.33 hrs x 7 days x 24 weeks + 1 hr x 24 days + 0.33 hrs x 5 days x 24 weeks + 0.0833 hr x 7 days x 24 weeks + 0.0833 hr x 7 days x 24 weeks + 0.0333 hr x 7 days x 24 weeks + 0.25 hr x 6 days x 24 weeks + 0.0833 hr x 7 days x 24 weeks + 10 hrs + 2 hrs + 30 hrs + 6 hrs = 292.6176 hrs per splash pad per year.<br><br>Ensure that disinfection, secondary disinfection (such as UV and ozone), and recirculation systems are operating correctly. 7 days a week for 6 mos 15 min (45 hours)<br>Inspect for and remove biofilm on splash pad surfaces (such as the tank, spray nozzles, and drains). 7 days a week for 6 mos 15 min (45 hours)<br>Ensure drains prevent standing water from collecting in the water play area. 7 days a week for 6 mos 5 min (15 hours)<br>Regularly inspect the tank and clean it as needed. 1 time per month for 6 months 1 hour (6 hours)<br>Document operation and management activities, including water testing results and equipment maintenance. Every week for 6 mos 15 min (6 hours)<br>Train staff handling pool chemicals (such as chlorine, bromine, and acid) in pool chemical safety and general Aquatic training. 1 time per year 8 hours X 10 employees (80 hours)<br>add 197 hrs to 292.6176 hrs.<br>**Total splash pad hours per year shoud be 489.6176 hrs** | |
| **Bridges** - remove/blow debris, pressure wash, paint, remove graffitti, replace boards, ispect, and repair. 60 hours for repairs divide by all bridges. Maintenance 2 hours per bridge per year. Total sq. ft. of all 20 bridges is 10,158.33 SF (based on bridge inventory). Repair hrs = 60hrs / 10,158.33 sq. ft. = 0.00591 hrs per sq. ft. per year. 2 hrs x 20 bridges / 10,158.33 sq. ft. = 0.00394 hrs per sq. ft. per year. 0.00591 hrs + 0.00394 hrs = **0.00985 hrs per sq. ft. per year**. | |
| **Sports Fields** - Soccer, baseball/softball ...Top dressing, renovations etc… 20 hours two people 1 time per year per field. Set up goals 2 people 5 hours 2 times per year. Fertilize 90 minutes per year per field. Infield prep, till, drag,remove debris and rock, spread turface, herbicide, edge, dougouts, fencing, painting. 60 hrs twice a year. mowing included above add 1 time per week, growing season 2 mos out of the year. 1 hr per field. Striping completed by teams and contractors. Pest control, turf repairs, 2 hours per year. There are 14 soccer fields and 12 baseball / softball diamonds, totalling 26 fields. Dividing hrs for setting up goals, infield prep, and pest control & turf repairs by 26 fields for approximate estimate, regardless of soccer or baseball/softball. 40 hrs + 20 hrs / 26 fields + 1.5 hrs + 120 hrs / 26 fields + 1 hr x 8.69 weeks + 2 hrs / 26 fields = **55.65 hrs per field per year.** | |
| **Skate Park** - Graffiti removal 1 time per week, 90 minutes, 1 person. 52 weeks x 1.5 hrs = 78 hrs per year. Blowing, 6 hrs per year. 78 hrs + 6 hrs = 84 hrs per year. Total skatepark sq. ft. is 8,595 sq. ft. (Main 5,710 sq. ft. + Davis 2,885 sq. ft.). 84 hrs per year / 8,595 sq. ft. = **0.00977 hrs per sq. ft. per year.** | |
| **Disc Golf** - pressure wash pads. Add chips twice a year. 3 hrs two people… General maintenance 1 hr per year. 6 hrs x 2 times + 1 hr = 13 hrs per year / 2 courses (Rockwood and Vance) = **6.5 hrs per course per year.** | |
| **Horseshoe Pits** - edge, 4 hours per year. Mow, weekly during growing season 6 mos, 30 minutes. 24 weeks x 0.5 hr = 12 hrs per year. Litter picks daily in the summer, 10 minutes, 92 days x 10/60 hrs = 15.33 hrs per year. Replace back board for pits, add sand, paint, fence repair, concrete repairs, 5 hrs per year. Main City Park has 24 pits. 4 hrs + 12 hrs + 15.33 hrs + 5 hrs = 36.33 hrs / 24 pits = **1.51 hrs per pit per year.** | |

| Park Maintenance Matrix (Methodology 2020) | More Info. |
|---|---|
| Derived in part from "Hogan Butte Master Plan Estimated Maintenance Cost" 2008. | |
| **Each maintenance task listed below was evaluated by Parks field staff and the Parks Superintendent. A staff meeting was held on 3/02/2020 and other less formal interviews with staff informed this methodology. Some of the hourly estimates were based in part on the "Hogan Butte Master Plan" (HMP) document and may have been adjusted after staff review. This document was reviewed by the Parks Analyst for QA/QC. Some research was conducted on the internet for general material pricing and contract services (see links). Some information was derived by actual estimates from landscape contractors. No inflationary factor is included. For subsequent years after 2020, a 1%-3% inflationary rate should be included. Hourly rates and equipment charges should be updated each year as necessary. Daily work is based on 319 working days per year.** | |
| **Artwork / Statues** - Graffiti…. Vandalism **1 hr per site per year.** | |
| **Ponds** - i.e. Red Sunset, well, litter removal, boat, aerator, 2 people 10 hrs… veg maint. 2 people 20 hours. Red Sunset pond size is approximately 1 acre. **60 hrs per acre per year.** | |
| **M&S Cost Per Acre** - Assume $4,700 for developed parks only based on the M&S rate per acre in FY 2025. | |

**Park Operations Hours**

| Year | Total Hours | Hours Removed | Total Dedicated Park Hours | % Park to Total |
|---|---|---|---|---|
| 2017 | 18,954.25 | 2,912.51 | 16,041.75 | 84.6% |
| 2018 | | | | |
| 2019 | 21,745.50 | 4,004.25 | 17,741.25 | 81.6% |
| 2020 | | | | |
| 2021 | | | | |
| 2022 | 17,165.70 | 3,200.50 | 13,965.20 | 81.4% |
| 2023 | 19,313.00 | 3,402.50 | 15,910.50 | 82.4% |
| Totals | 19,294.61 | 3,379.94 | 15,914.67 | 82.5% |

**Park Operations Budget**

| Year | Total M&S Budget | Actual Expenditures | Projected Expenditures | % Budget to Actual |
|---|---|---|---|---|
| 2022 | 1,250,330.00 | 913,499.48 | | 73.1% |
| 2023 | 1,272,340.00 | 1,081,955.71 | | 85.0% |
| 2024 | 1,436,500.00 | 844,895.63 | 1,136,284.72 | 79.1% |
| 2025 | 1,409,800.00 | | 1,115,164.78 | 79.1% |
| Totals | 1,261,335.00 | 997,727.60 | | 79.1% |

**Park Operations Annual Budget Increase**

| Year | Total M&S Budget | % Increase Annually |
|---|---|---|
| 2022 | 1,250,330.00 | |
| 2023 | 1,272,340.00 | 101.8% |
| 2024 | 1,436,500.00 | 112.9% |
| 2025 | 1,409,800.00 | 98.1% |
| Totals | 1,342,242.50 | 104.3% |

| | |
|---|---|
| Projected expenditures for FY2025: | 1,115,164.78 |
| Dedicated park hours %: | 82.5% |
| Dedicated park expenditures: | 919,815.50 |
| Dedicated park acres: | 199.17 |
| Rate per acre: | $ 4,618 |
| Materials & Services Budget increase annually: | 4.3% |

| | |
|---|---|
| Dedicated park hours %: | 82.5% |
| 1 - Field Ops Sup. | $ 214,421 |
| 2 - Senior PUW | $ 381,600 |
| 8 - PUW 2 | $ 1,296,207 |
| | $ 1,560,755 |

| | |
|---|---|
| Dedicated park hours %: | 82.5% |
| 1 - Field Ops Sup. | $ 214,421 |
| 2 - Senior PUW | $ 381,600 |
| 8 - PUW 2 | $ 1,296,207 |
| 1 - Program Technician | $ 196,426 |
| | $ 1,722,773 |

| | |
|---|---|
| Projected expenditures for FY2025: | 1,115,164.78 |
| Staffing | 1,892,226.78 |
| Dedicated park hours %: | 82.5% |
| Dedicated park expenditures: | 2,480,570.96 |
| Dedicated park acres: | 199.17 |
| Rate per acre: | $ 12,455 |
| Materials & Services Budget increase annually: | 4.3% |

| | |
|---|---|
| Projected expenditures for FY2025: | 1,115,164.78 |
| Staffing | 2,088,653.25 |
| Dedicated park hours %: | 82.5% |
| Dedicated park expenditures: | 2,642,588.37 |
| Dedicated park acres: | 199.17 |
| Rate per acre: | $ 13,268 |
| Materials & Services Budget increase annually: | 4.3% |