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## BACKGROUND

Washoe County Regional Parks and Open Space mission is to provide exceptional parks and open space and recreational opportunities while preserving our natural, historical and cultural resources. Parks and open space significantly benefit our communities' physical, mental, and economic health. Parks decrease rates of depression, increase property values, attract tourists, provide sustainable ecosystems, and help to mitigate flooding. Quality of life overall is improved by access to safe, open, and clean parks. This has been especially true during the COVID-19 pandemic, when park attendance reached an all-time high as people sought a respite from the indoors. The pandemic also came at a time when staff were still battling the impacts of the 2007-2017 budget cuts. Because of this, infrastructure preservation has been largely a reactive endeavor. In the next 15 years many amenities are expected to reach the end of their useful life and will need to be replaced, renovated, or removed so they do not become a safety hazard. In 2016, Washoe County Regional Parks and Open Space (Parks) identified Park Infrastructure Preservation and Asset Protection as an integral part to Parks' mission. In 2018 Parks launched their Asset Management Program, whose goal is to minimize the total cost of ownership while delivering the level of service citizens desired. This Amenity Condition and Renovation Prioritization Program Report outlines the steps currently being taken to support that goal.

Parks maintains a variety of asset classes, which include pathways, parking lots, ornamental trees, buildings, trails, turf, foot bridges, aquatics facilities, native vegetation, and amenities. This report focuses on amenities, which are the outdoor fixed assets listed in table 1, and does not yet include playgrounds, pools, parking lots, irrigation, turf, pathways, and fencing. As the Asset Management Program grows and matures, other asset classes will be reported on as well.

## EXECUTIVE SUMMARY

Amenities provide significant value to Park customers. The importance of a bench or picnic shelter is often overlooked when clean and available but when they fall into disrepair, they are not only a nuisance but also a safety risk. Amenities are a major interaction point of customers with Parks and are a representation of how customers should treat and fund the parks. This report outlines the data driven approach Parks is using to prioritize limited resources in order to create the most value.

### Quick Facts about Washoe County Park Amenities

- Typical Amenities Include **Picnic Tables, Signs, Benches**, Ect.
- **\$6,547,469** Total Estimated Amenity Value
- **7%** Percent of Park Assets By Value
- **B+** Average Condition
- **\$934,485** Current Labor and Material Capital Needs
- **\$57,293** Current Labor and Material Capital Needs on High Risk Amenities
- **\$1,350,000** Annual Labor and Material Capital Needs to Stay at a B+
- **12.4%** Average Annual Park Attendance Increase
- **20%** Park Attendance Increase Due to COVID-19

## ASSET INVENTORY

Park amenity data has been compiled over time, through a variety of methods. Some amenities being measured and recorded in the field, while other data has been recorded using a combination of aerial photography and GIS technology. Updating the inventory is ongoing, but the most recent full scale update was completed during the summer of 2020 and coincided with the amenity condition assessment. It is important to note that the park amenities inventory represents a snapshot in time and that park development, park upgrades, and data refinement efforts will influence inventory over time. The table below outlines the amenity types included in this study, their counts, their individual replacement costs, and total replacement cost in inventory.

*Table 1: Amenity Count and Replacement Cost*

Amenity Type	Total #	Average Cost	Total Replacement Cost
Picnic Table	1063	\$1,700	\$1,807,100
Sign	886	\$599	\$530,714
Bench	624	\$750	\$468,000
Bollard	383	\$60	\$22,980
Other	341	\$216	\$73,510
Light Pole	285	\$1,500	\$427,500
BBQ	253	\$239	\$60,467
Garbage Can	186	\$526	\$97,836
Gate	161	\$200	\$32,200
Maintenance structures	91	\$450	\$40,950
Garbage can, Bear-Proof	73	\$868	\$63,364
Picnic Shelter	73	\$11,354	\$828,820
Frost-Free Hydrant	66	\$250	\$16,500
Bleachers	65	\$3,995	\$259,675
Drinking Fountain	60	\$2,595	\$155,700
Dugout	58	\$4,500	\$261,000
Horseshoe Court	46	\$750	\$34,500
Mutt mitt container	43	\$150	\$6,450
Bike Rack	40	\$450	\$18,000
Pitching Cage	34	\$869	\$29,546
Kiosks	30	\$1,800	\$54,000
Plaque	27	\$300	\$8,100
Tennis Court	20	\$12,500	\$250,000
Volleyball Court	19	\$4,500	\$85,500
Basketball Court	16	\$35,000	\$560,000
Flagpole	14	\$807	\$11,298
Fire Hydrant	13	\$950	\$12,350
Pergola	11	\$3,624	\$39,860
Donation Box	9	\$40	\$360
Announcer's Booth	7	\$500	\$3,500
Fishing Pier	6	\$2,000	\$12,000
Batting Cage	6	\$869	\$5,214
Horse Arena	4	\$56,100	\$224,400
Ashtray	3	\$25	\$75
Skate Park	3	\$15,000	\$45,000
Stage	1	\$500	\$500
Boat Ramp	1	\$500	\$500
<b>Total</b>	<b>5049</b>		<b>\$6,547,469</b>

# CONDITION OF AMENITIES

## Park Condition Assessment Process

The Park Condition Assessment (PCA) is a key factor to establishing a strategic capital replacement and infrastructure preservation plan. A PCA evaluates each asset's current needs, defects, and condition. Table 2 depicts the Amenity Condition Rubric used to evaluate and score each asset. During the summer of 2020, Washoe County Parks conducted a PCA on all park amenities using a tablet computer with a custom Collector for ArcGIS mapping application.

Table 2: Amenity Condition Rubric

Condition Description	Description	Identifier
<b>Excellent</b> - No Needs	As new - no need for intervention. No risk to public safety.	\$0.00
<b>Good</b> - Requires Routine Maintenance	Some sign of wear and tear - no immediate intervention required. Minor defects only. Minor maintenance required. Note for review at next inspection.	2 Labor Hours *
<b>Fair</b> - Requires Minor Repairs	Some areas of defects - generally able to be addressed through routine/scheduled maintenance required to return to accepted Level of Service. Some risk to public safety and amenity.	3 Labor Hours * 10% asset costs in replacement parts
<b>Poor</b> - Requires Major Repairs	Poor condition - extensive wear and tear – requiring replacement of large sections. Significant risk to public safety and amenity.	4 Labor Hours * 50% asset costs in replacement parts
<b>Failed</b> – Unserviceable, needs replacement	Significant defects - both in terms of severity and extent. Requires replacement of significant part if not all of asset. High risk to public safety and amenity.	5 Labor Hours * 110% asset costs in replacement parts

\*Labor Hours = Maintenance II fully burdened labor, \$42.41/hour

## Condition Results

Overall, Park Amenities scored an average grade of B+, with 83.82% of the 5,079 amenities only needing routine maintenance. A fairly small amount of amenities are Poor or Failed, 2.91%. This equates to a \$934,485 labor and parts needed to maintain, repair, and restore amenities to an “Excellent” condition.

### Summary

- Bleachers, Dugouts, Tennis Courts, Pergolas, and Donation Boxes scored highest overall, an average grade of “A”.
- Volleyball Courts, Horse Arenas, and Ash Trays scored lowest overall, with an average grade of “B”.
- Ballardini Trailhead, Slide Mountain Trailhead, and Thomas Creek Park scored highest overall, an average grade of “A”.
- Swan Lake Nature Study Area and Silver Lake Open Space scored lowest overall.

The conditions scores generally corresponded to the age of the amenities, with some exceptions. Swan Lake Nature Study Area and Silver Lake Open Space were affected by recent flooding, which caused many amenities to become inaccessible and fail.

Figure 1: Amenity Condition Pie Graph

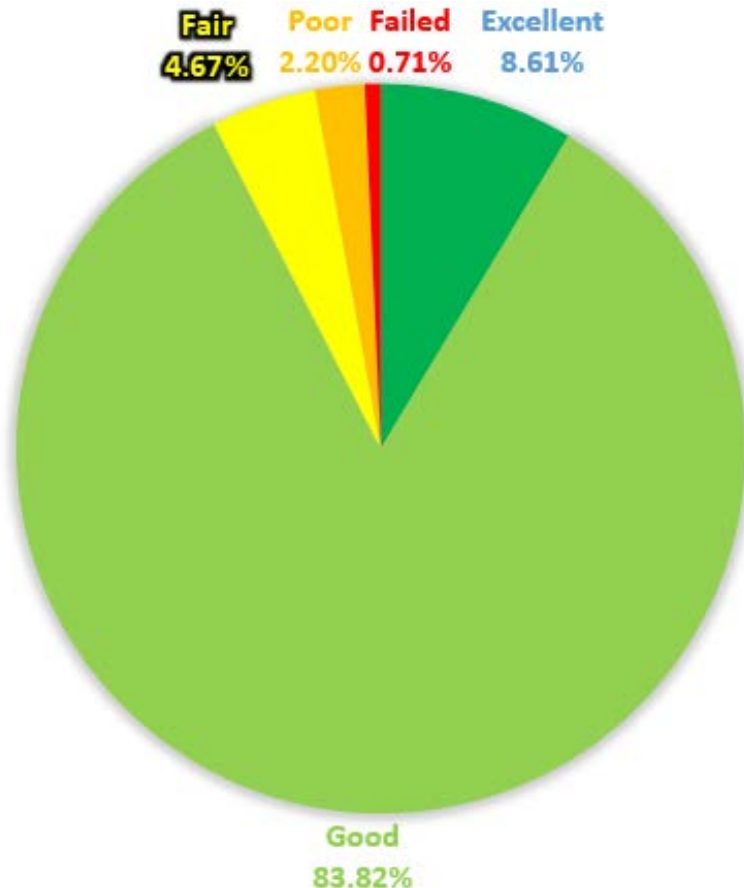


Table 3: Amenity Condition Results by Asset Class

Amenity Type	\$ Needs	Grade	Condition Break Down				
			Excellent	Good	Fair	Poor	Failed
Picnic Table	\$208,336	B+	8%	85%	5%	2%	0%
Sign	\$164,230	B+	10%	79%	6%	4%	1%
Bench	\$119,324	B+	13%	75%	7%	5%	1%
Bollard	\$66,681	B+	2%	93%	2%	1%	1%
Other	\$56,173	A-	5%	93%	1%	0%	0%
BBQ	\$46,572	B+	3%	91%	3%	1%	2%
Light Pole	\$43,427	A-	10%	90%	0%	0%	0%
Garbage Can	\$32,253	B+	7%	83%	10%	1%	0%
Gate	\$28,796	B+	7%	81%	7%	4%	1%
Maintenance structures	\$17,296	B+	4%	85%	9%	0%	2%
Drinking Fountain	\$17,259	B+	3%	85%	7%	3%	2%
Garbage can, Bear-Proof	\$12,214	A-	1%	99%	0%	0%	0%
Picnic Shelter	\$11,555	B+	14%	74%	11%	1%	0%
Volleyball Court	\$10,507	B	16%	63%	5%	16%	0%
Bleachers	\$10,454	A	29%	68%	2%	2%	0%
Frost-Free Hydrant	\$10,178	A-	9%	91%	0%	0%	0%
Basketball Court	\$9,544	B+	13%	75%	13%	0%	0%
Horseshoe Court	\$9,362	B+	0%	91%	7%	0%	2%
Dugout	\$8,677	A-	17%	81%	2%	0%	0%
Mutt mitt container	\$8,342	B+	5%	77%	14%	5%	0%
Kiosks	\$6,634	B+	17%	63%	17%	3%	0%
Bike Rack	\$6,107	A-	10%	90%	0%	0%	0%
Tennis Court	\$6,040	A	40%	45%	15%	0%	0%
Pitching Cage	\$5,767	B+	0%	100%	0%	0%	0%
Plaque	\$4,731	B+	22%	70%	0%	0%	7%
Fire Hydrant	\$2,205	B+	0%	100%	0%	0%	0%
Flagpole	\$2,201	A-	14%	79%	7%	0%	0%
Skate Park	\$1,976	B+	0%	100%	0%	0%	0%
Pergola	\$1,357	A	27%	73%	0%	0%	0%
Announcer's Booth	\$1,276	B+	0%	86%	14%	0%	0%
Donation Box	\$1,187	A	22%	78%	0%	0%	0%
Fishing Pier	\$1,017	B+	0%	100%	0%	0%	0%
Batting Cage	\$1,017	B+	0%	100%	0%	0%	0%
Horse Arena	\$763	B	0%	75%	25%	0%	0%
Ashtray	\$703	B	0%	67%	0%	33%	0%
Stage	\$169	B+	0%	100%	0%	0%	0%
Boat Ramp	\$169	B+	0%	100%	0%	0%	0%



Table 4: Amenity Condition and Capital Needs Results by Park

PARK	Total #	Grade	Total Capital Needs
AMBROSE PARK	6	B	\$1,017
ANDERSON PARK	46	B+	\$8,775
ARROWCREEK PARK	53	B+	\$10,274
AUDREY HARRIS PARK	11	A	\$1,017
BAILEY CREEK PARK	31	B+	\$9,655
BALLARDINI OPEN SPACE	33	A	\$1,671
BARTLEY RANCH REGIONAL PARK	181	B+	\$32,023
BETSY CAUGHLIN DONNELLY PARK	15	B+	\$2,479
BOWERS MANSION REGIONAL PARK	227	B+	\$40,566
BROWNS CREEK TRAILHEAD	2	A	\$169
BROWN'S CREEK TRAILHEAD	3	B	\$628
COLD SPRINGS PARK	57	B	\$14,547
CRYSTAL PEAK PARK	62	B+	\$11,631
DAVIS CREEK REGIONAL PARK	412	B+	\$70,266
DESERT WINDS PARK	32	B+	\$5,622
DOROSTKAR PARK	27	B+	\$4,766
EAGLE CANYON PARK	132	A-	\$22,532
EAST KEYSTONE CANYON TRAILHEAD	9	B+	\$1,646
ELLEN'S PARK	24	B	\$11,378
FOREST PARK	68	B	\$19,576
GALENA CREEK RECREATION AREA	72	A	\$8,287
GALENA CREEK REGIONAL PARK	303	A-	\$46,047
GATOR SWAMP PARK	47	B	\$9,830
GOLDEN VALLEY PARK	38	B+	\$8,039
HIDDEN VALLEY REGIONAL PARK	149	B	\$46,583
HUFFAKER HILLS TRAILHEAD	11	B	\$3,248
LAZY 5 REGIONAL PARK	278	B+	\$50,471
LEMMON VALLEY HORSEMAN'S ARENA	36	B	\$7,767
LEMMON VALLEY PARK	81	B+	\$14,045
LOCKWOOD TRAILHEAD	39	B+	\$7,045
MARTIN LUTHER KING JR MEMORIAL PARK	15	B+	\$2,689
MAYBERRY PARK	40	B	\$8,183
MICHAEL D. THOMPSON TRAILHEAD	21	A-	\$3,053
MOGUL PARK	22	A-	\$5,591
NEW WASHOE CITY PARK	21	B	\$6,438
NORTH VALLEYS REGIONAL PARK	301	A-	\$44,078
PAH RAH INTERPRETIVE TRAIL	6	B+	\$1,017
PAH RAH TRAILHEAD	45	A-	\$7,454
PHILLIP ANNIE CALLAHAN PARK	1	B+	\$169
PHILLIP & ANNIE CALLAHAN PARK	34	B+	\$6,825
PLEASANT VALLEY PARK	9	B+	\$1,526
RANCHO SAN RAFAEL REGIONAL PARK	851	A-	\$145,848
REGIONAL ARCHERY FACILITY	92	A-	\$15,097
SADDLEHORN PARK	12	B	\$4,394
SIERRA ROCK PARK	37	A-	\$5,684
SIERRA SAGE GOLF COURSE	1	B+	\$169
SILVER KNOLLS PARK	221	B+	\$44,184
SILVER LAKE OPEN SPACE	3	C	\$1,573
SLIDE MOUNTAIN TRAILHEAD	15	A	\$1,427
SOUTH VALLEYS REGIONAL PARK	257	A-	\$44,250
SUN VALLEY REGIONAL PARK	143	B+	\$24,553

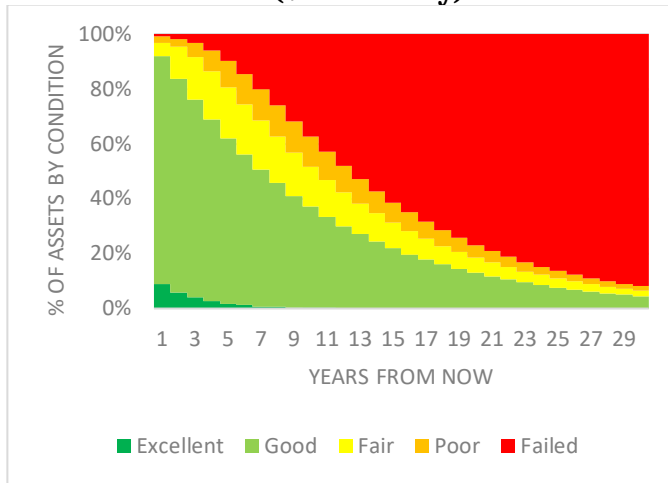


<b>PARK</b>	<b>Total #</b>	<b>Grade</b>	<b>Total Capital Needs</b>
SWAN LAKE NATURE STUDY AREA	73	<b>C+</b>	\$27,326
THOMAS CREEK PARK	26	<b>A-</b>	\$3,502
VILLAGE CENTER PARK	76	<b>A-</b>	\$12,703
VIRGINIA FOOTHILLS PARK	64	<b>B</b>	\$14,582
WASHOE GOLF COURSE	23	<b>B+</b>	\$4,031
WASHOE TENNIS CENTER	41	<b>B+</b>	\$9,542
WHITES CREEK OPEN SPACE	1	<b>B+</b>	\$169
WHITES CREEK PARK	20	<b>B+</b>	\$4,412
WILSON COMMONS PARK	65	<b>B+</b>	\$12,416

# FUTURE FUNDING'S IMPACT ON AMENITY CONDITION

Labor and material resources have a direct impact on amenity condition. The predictive model scenarios below depict expected asset condition based on deterioration rates and infrastructure preservation funding. Without any funding, the model predicts 50% asset failure in 12 years and an average condition grade of "F" at year 30. In order to keep all assets in a grade of "A" the annual funding is estimated at \$2.7 Million.

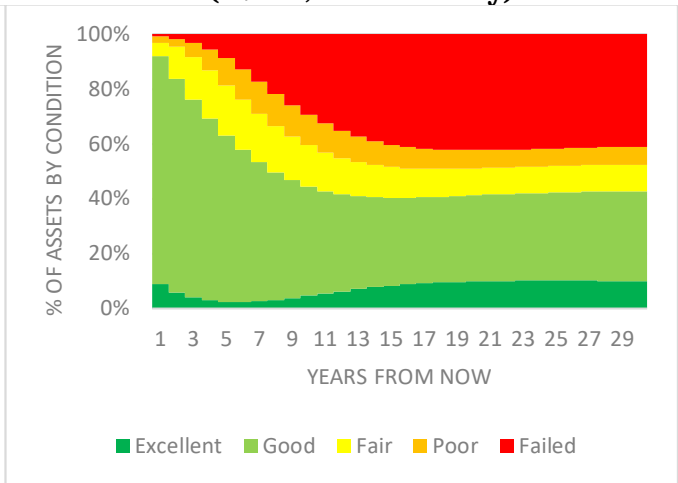
**0.0% Amenity Restoration  
(\$0 Annually)**



Average Grade at Year 30

**F**

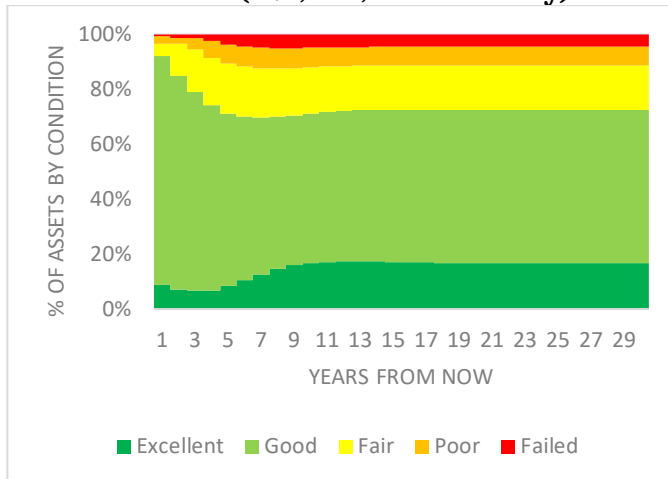
**2.5% Amenity Restoration  
(~\$675,000 Annually)**



Average Grade at Year 30

**C**

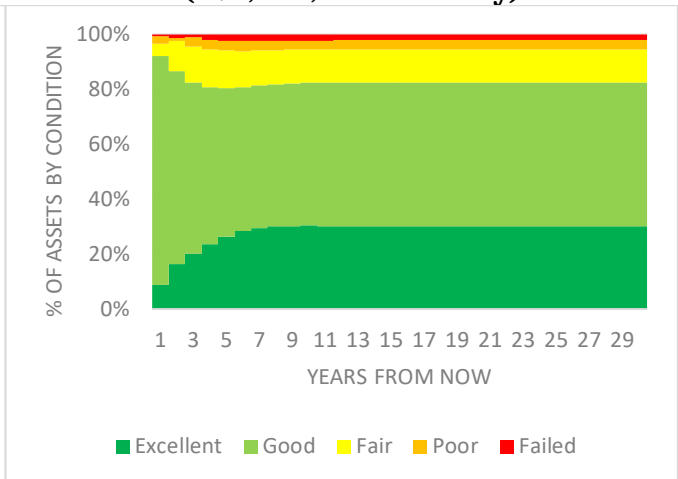
**5.0% Amenity Restoration  
(~\$1,350,000 Annually)**



Average Grade at Year 30

**B+**

**10.0% Amenity Restoration  
(~\$2,700,000 Annually)**



Average Grade at Year 30

**A**

## DEMAND/ PARK ATTENDANCE

Park attendance at larger regional parks have been measured using car counters. From 2016 to 2019 there has been a steady increase of 12.4% per year (5,278 users per month). But during early 2020, parks saw an average increase of 20% compared to early 2019. The largest increase was at Hidden Valley Regional Park, which had an increase of 261%. Most parks saw an increase but some parks trended down. South Valley Regional Park attendance decrease by 58%, which can most likely be attributed to mandates prohibiting specific usage like sports, pools, and rentable facilities.

% change in attendance, early 2020 compared to early 2019:

- +261% Hidden Valley
- +260% Bartley Ranch
- +46% Davis Creek
- +10% Galena Creek
- +4% Truckee River Green Belt
- -3% Lazy 5
- -17% Bowers Mansion
- -58% South Valley Regional Park

Figure 2: Historic Regional Park Attendance

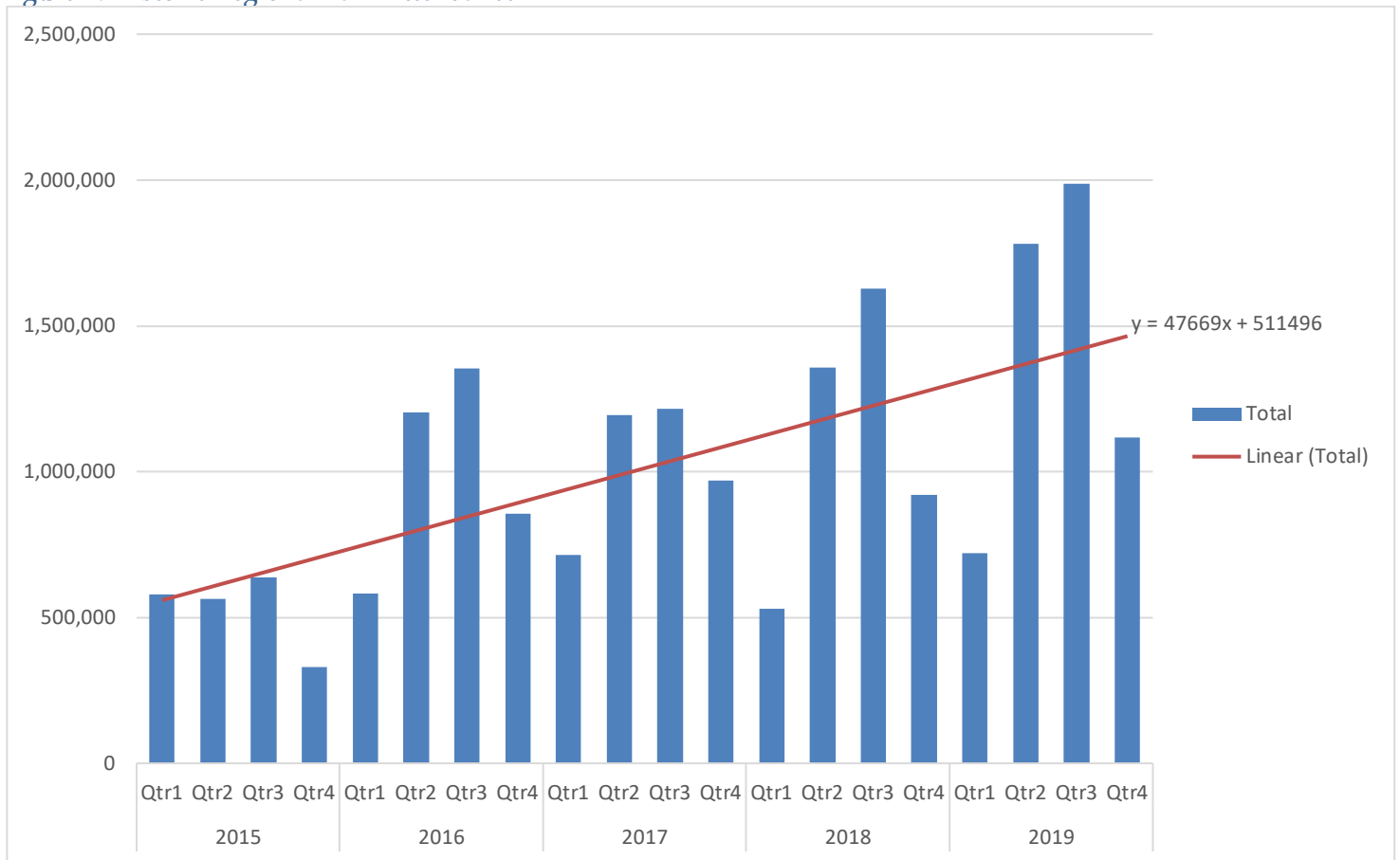


Figure 3: Hidden Valley Regional Park Attendance

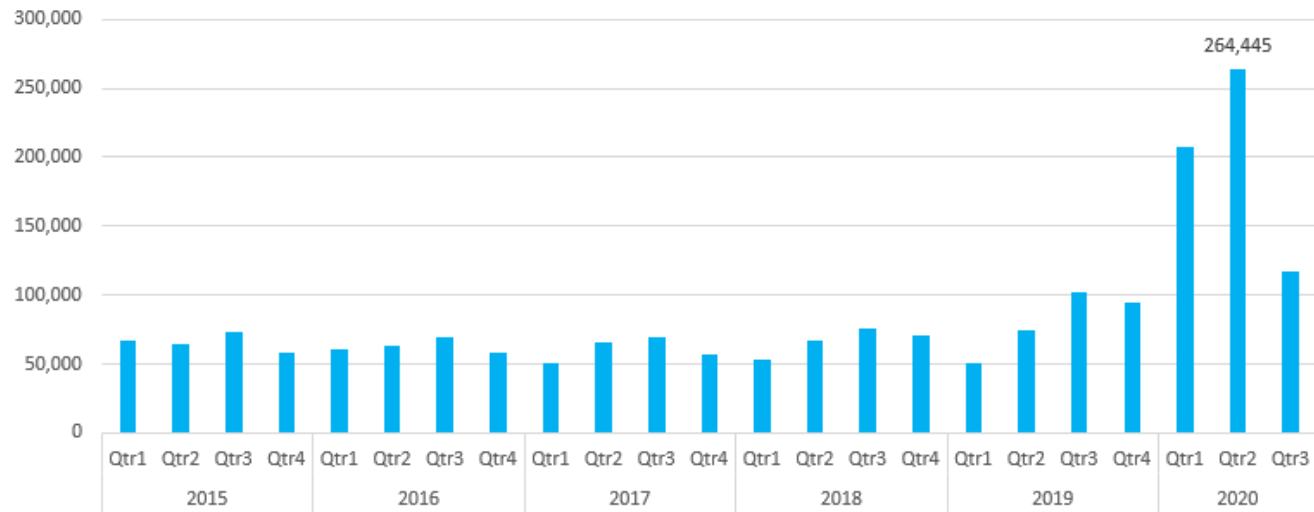


Figure 4: Bartley Ranch Regional Park Attendance

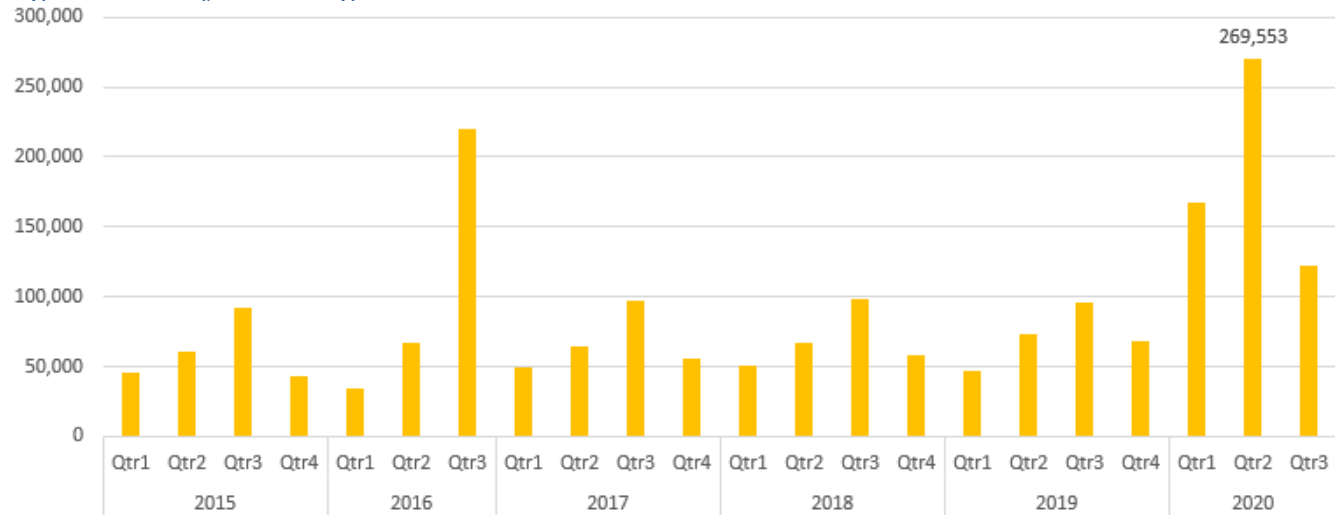
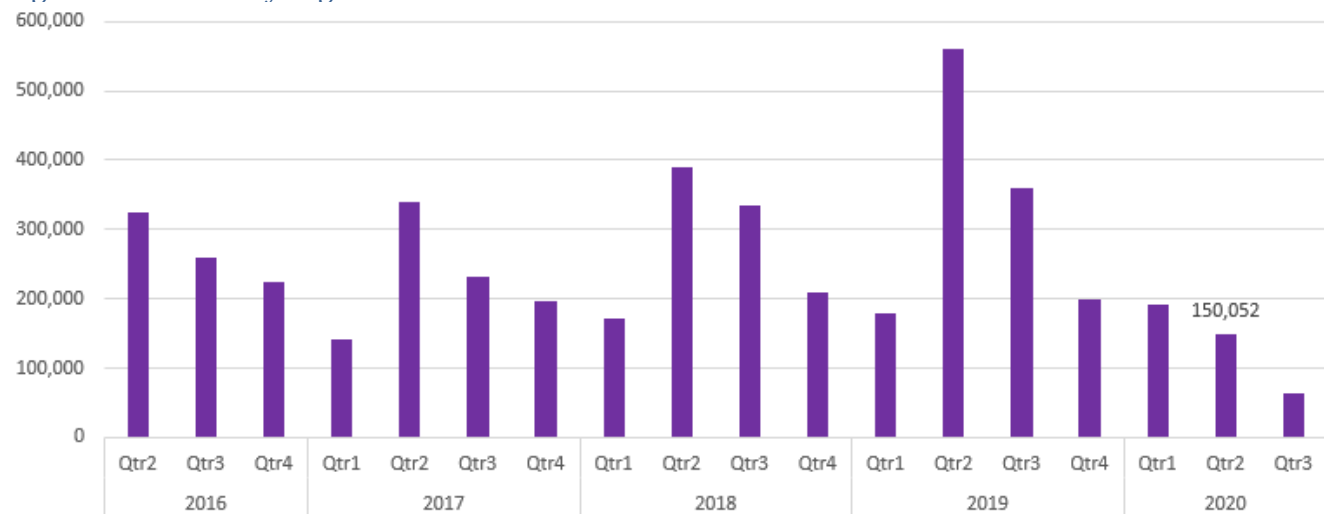


Figure 5: South Valley Regional Park Attendance



# RISK ANALYSIS

With needs consistently increasing and limited resources, Parks is forced to prioritize the allocation of limited resources. Optimal allocation is accomplished using a risk based approach. Risk is a factor of the asset's condition and the asset's consequences of failure. Asset condition was captured using an in person inspection and consequence of failure was calculated using these 3 categories:

- Safety; what safety risk does the asset pose to the customer if the asset failed?
- Importance; how disappointed would customers be if the asset failed?
- Park Attendance; how many customers are likely to be impacted if the asset failed?

Because these categories are not created equal, they were weighted. The weighted consequences of failure were multiplied by the condition, aka likelihood of failure, to arrive at individual risk score. The results were grouped into Low to High risk categories based on their scores, which are profiled below. Using these risk scores, we can see that there is roughly \$500,000 in assets that are at a medium-high to high risk of eroding value.

## Risk Profile by Number of Assets

Risk	Total	%	Consequence of Failure	Severe	5	42	302	23	7	2
High	73	1.4%		Significant	4	175	1189	39	22	10
Med-High	396	7.8%		Moderate	3	119	1512	84	47	9
Med	2,942	57.7%		Minor	2	93	898	74	34	8
Med-Low	1,212	23.8%		Negligible	1	10	372	18	2	7
Low	475	9.3%		Score	1	2	3	4	5	
					Excellent	Good	Fair	Poor	Failed	
<b>Grand Total</b>	<b>5,098</b>			<b>Likelihood of Failure</b>						

## Risk Profile by Replacement Cost

Risk	Total	%	Consequence of Failure	Severe	5	\$ 45,350	\$ 333,313	\$ 18,378	\$ 4,700	\$ 478
High	\$ 61,212	1.0%		Significant	4	\$ 293,239	\$ 1,310,170	\$ 36,682	\$ 21,984	\$ 12,285
Med-High	\$ 423,617	7.2%		Moderate	3	\$ 115,386	\$ 1,584,839	\$ 86,491	\$ 48,830	\$ 3,387
Med	\$ 3,232,868	55.1%		Minor	2	\$ 221,060	\$ 1,419,633	\$ 172,204	\$ 31,684	\$ 4,792
Med-Low	\$ 1,843,063	31.4%		Negligible	1	\$ 5,430	\$ 76,251	\$ 12,980	\$ 1,825	\$ 2,130
Low	\$ 302,741	5.2%		Score	1	2	3	4	5	
					Excellent	Good	Fair	Poor	Failed	
<b>Grand Total</b>	<b>\$ 5,863,501</b>			<b>Likelihood of Failure</b>						

## Risk Profile by Repair Needs

Risk	Total	%	Consequence of Failure	Severe	5	\$ -	\$ 51,231	\$ 7,690	\$ 4,725	\$ 1,374
High	\$ 57,293	6.0%		Significant	4	\$ -	\$ 201,702	\$ 13,592	\$ 18,207	\$ 17,755
Med-High	\$ 114,200	12.0%		Moderate	3	\$ -	\$ 256,985	\$ 29,593	\$ 40,712	\$ 7,543
Med	\$ 555,849	58.4%		Minor	2	\$ -	\$ 153,315	\$ 34,786	\$ 27,471	\$ 8,664
Med-Low	\$ 160,751	16.9%		Negligible	1	\$ -	\$ 63,106	\$ 5,832	\$ 1,604	\$ 5,312
Low	\$ 63,106	6.6%		Score	1	2	3	4	5	
					Excellent	Good	Fair	Poor	Failed	
<b>Grand Total</b>	<b>\$ 951,199</b>			<b>Likelihood of Failure</b>						

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## **SUMMARY**

In order to keep up with deteriorating assets, growing demands, and flat funding Washoe County Parks is leveraging technology, asset management best practices, and data driven decision making. Parks is able to better understand what they own, what condition it is in, what risk it poses, what funding is needed, and how to create the most value with the available resources. To provide the most value, infrastructure preservation spending is being prioritized based on objective risk and customer expectations. This report highlights the wonderful job staff has accomplished thus far but also the challenges that lay ahead.





[www.washoecountyparks.com](http://www.washoecountyparks.com)