We are Yakima

comprehensive plan 2040

CAPITAL FACILITIES PLAN

May, 2017

1.0 INTRODUCTION

The Washington State Growth Management Act (GMA) requires that the Capital Facilities Element of a Comprehensive Plan include an inventory, projected needs, and funding and financing for facilities and infrastructure. This Capital Facilities Plan is intended to provide the technical foundation – inventory, service standards, capacity, proposed projects, and funding as appropriate – for the Capital Facilities Element. The goals and policies for the Capital Facilities Element is included in the body of the Comprehensive Plan.

1.1 The Capital Facilities Plan

The purpose of the Capital Facilities Plan (CFP) is to use sound fiscal policies to provide adequate public facilities consistent with the land use element and concurrent with, or prior to, the impacts of development to achieve and maintain adopted standards for levels of service.

The CFP is based on the following sources of information and assumptions:

- **Capital Facility Functional or System Plans**. Capital facility functional or system plans of the City of Yakima or other service providers were reviewed for inventories, levels of service, planned facilities, growth forecasts, and potential funding.
- **Growth Forecasts**. Population and job growth forecasts were allocated to the City of Yakima by Yakima County, in accordance with the Yakima Countywide Planning Policy (Yakima County 2003). The City considered the targets, planning and permit trends, and land capacity. The City developed growth assumptions that accommodate the targets and are less than capacity. The estimates were distributed by transportation analysis zone (TAZ). The 2022 population (six-year) and 2040 population (23-year) growth for each service provider is estimated.
- **Revenue Forecasts**. Revenues were forecasted for Yakima services to the year 2040. The sources of revenue are summarized from available plans and compared to typical revenue sources for those service providers.

Growth Management Act Requirements

GMA requires that all comprehensive plans contain a capital facilities element. GMA specifies that the capital facilities element should consist of:

- An inventory of existing capital facilities owned by public entities;
- A forecast of the future needs for capital facilities;
- The proposed locations and capacities of expanded or new capital facilities;
- A six-year capital facilities plan that will finance capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes; and
- A requirement to reassess the land use element if probable funding falls short of existing needs. (RCW 36.70a.070(3))

The GMA requires the CFP to identify specific facilities, include a realistic financing plan (for the six-year period), and adjust the plan if funding is inadequate. Capital facilities are important because they support the growth envisioned in the City's Comprehensive Plan. GMA requires that all capital facilities have "probable funding" to pay for capital facility needs, and that jurisdictions have capital facilities in place and readily available when new development comes in or must be of sufficient capacity when the population grows, particularly for transportation (concurrency) or for services deemed necessary to support development.

Levels of service (LOS) are established in the CFP and represent quantifiable measures of capacity. They are minimum standards established by the City to provide capital facilities and services to the Yakima community at a certain level of quality and within the financial capacity of the City or special district provider. LOS standards are influenced by local citizens, elected and appointed officials, national standards, mandates, and other considerations such as available funding. Examples of LOS measures include: amount of intersection delay, acres of park or miles of trails per 1,000 population, gallons of water per capita per day, and others. Those facilities and services necessary to support growth should have LOS standards and facilities.

Recent Growth Management Hearings Boards cases have placed more importance on the preparation and implementation of CFPs. The key points include:

- **Capital facilities plans should address the 20-year planning period** and be consistent with growth allocations assumed in the Land Use Element. Capital facilities plans should also demonstrate an ability to serve the full city limits and urban Growth Area (UGA).
- **Financial plans should address at least a six-year period** and funding sources should be specific and committed. The City should provide a sense of the funding sources for the 20-year period, though it can be less detailed than for the six-year period.

Growth, LOS standards, and a funded capital improvement program are to be in balance. In the case where the LOS cannot be met by a particular service or facility, the jurisdiction could do one of the following: 1) add proposed facilities within funding resources, 2) reduce demand through demand management strategies, 3) lower LOS standards, 4) phase growth, or 5) change the land use plan.

Definition of a Capital Project

According to WAC 365-196-415, at a minimum, those capital facilities to be included in an inventory and analysis are water systems, sewer systems, stormwater systems, schools, parks and recreation facilities, police facilities, and fire facilities. Capital facilities generally have a long useful life and include city and non-city operated infrastructure, buildings, and equipment. Capital facilities planning does not cover regular operations and maintenance, but it does include major repair, rehabilitation, or reconstruction of facilities.

The capital facilities and projects addressed in the plan include infrastructure (such as streets, roads, traffic signals, sewer systems, stormwater systems, water systems, parks, etc.) and public facilities through which services are offered (such as fire protection structures and major equipment, law enforcement structures, schools, etc.).

1.2 Key Principles Guiding Yakima's Capital Investments

There are two main guiding elements behind the capital facilities planning: fiscal policies and the GMA. These principles interact to guide capital investments. Fiscal policies are tools that the City can use to adjust spending and revenues by changing tax rates and identifying specific areas for expenditure.

1.3 Services Addressed in the Capital Facilities Plan

Exhibit 1. Facilities and Services addressed in the Capital Facilities Plan summarizes the facilities and services addressed in this Plan, including the service, the provider, and applicable plans considered in this appendix.

Exhibit 1. Facilities and Services addressed in the Capital Facilities Plan

Facility Type	Provider	Description	Applicable Plans
Public Buildings	City of Yakima	Includes City-owned public buildings.	• City Budget, 2016
Fire and Emergency Services	Yakima Fire Department	Provides facilities that support the provision of fire and emergency services.	• Yakima Fire Department Annual Report, 2015
Law Enforcement	Yakima Police Department	Provides facilities that support the provision of law enforcement services.	• Yakima Police Department 2014 Annual Report
Schools	• Yakima School District • West Valley School District	Provides elementary and secondary facilities for instruction in several branches of learning and study required by the Basic Education Code of the State of Washington. The Yakima School District serves most students and the West Valley School District serves the western part of the city.	• 2014 – 2015 Fiscal Year-End Report (YSD) • 2016 – 2017 Budget Summary (WVSD)
Parks	Yakima Parks and Recreation	Provides facilities for passive and active recreational activities.	• 2012 – 2017 Parks and Recreation Comprehensive Plan (Under Update)
Streets	Yakima Public Works	Provides streets, sidewalks, traffic controls, and street lighting.	• 6-Year TIP, 2017 – 2022 • Transportation System Plan 2017
Transit	Yakima Transit	Provides transit service in and around the City of Yakima.	• Transit Development Plan Annual Report for 2015 and Six-Year Plan 2016 – 2021
Air Terminal	Yakima Air Terminal	The Air Terminal is owned by the airport and provides facilities for air service. The City contracts with a third-party operator.	• Yakima Air Terminal/McAllister Field Airport Master Plan, 2015
Wastewater	Yakima Public Works	Provides facilities used in collection, transmission, storage, and treatment or discharge of waterborne waste within the city.	• 2015 Waste Load Assessment • 2013 Wastewater Collection System Master Plan
Stormwater	Yakima Public Works	Provides facilities that collect and transport stormwater runoff.	• Stormwater Management Program for City of Yakima, 2015

Facility Type	Provider	Description	Applicable Plans
Water	• Yakima Public Works • Nob Hill Water Associates	Provides supply of potable water to portions of the City of Yakima.	• City of Yakima, Water System Plan Update, 2017 • Nob Hill Water Association Draft Water System Plan, May 2015
Irrigation	Yakima Public Works	Provides supply of non-potable irrigation water to portions of the City of Yakima.	• City of Yakima Water/Irrigation Division, 2016
Refuse	City of Yakima Refuse	Provides automated refuse collection to residential customers.	• City Budget, 2016

Source: City of Yakima, 2016; BERK, 2017

1.4 Relationship to the Comprehensive Plan and Future Land Use Plan

The Capital Facilities Plan relies on the policies set forth in the Yakima Comprehensive Plan as a baseline for studying capital planning needs. The future land use plan and the comprehensive plan population assumptions drive future development in the City, which impacts levels of service and determines capacity needs for services provided by city and non-city providers.

Exhibit 2 lists the population assumptions for the six and 23-year planning horizon years for the City of Yakima and the special districts. The City of Yakima is required to plan for capital needs to serve at least its target population of 110,387 residents by 2040. However, the City developed growth numbers for alternatives based on trends and pending plans and permits and those Action Alternative numbers were the numbers tested in the EIS. The Action Alternative is carried forward and is the basis for the CFP. The CFP will be monitored and can be amended if growth numbers are lower or higher than assumed.

Exhibit 2. Yakima Population Assumptions, 2016 – 2040

	2015	2022	2040
City of Yakima*	93,220	100,094	116,431
Irrigation	53,115	54,420	57,246
West Valley School District	22,850	26,157	34,860
Yakima School District	78,932	82,408	90,310
Wastewater	110,413	121,102	147,379
Nob Hill Water District**	28,151	31,766	41,066
Yakima Water District**	73,722	76,787	83,730

*Fire, Police, and Stormwater service area boundaries are synonymous with the City of Yakima city limits.

**City planning numbers differ slightly from the individual district planning numbers.

Source: City of Yakima, 2017; BERK, 2017

1.5 Foundation Documents (Incorporation by Reference)

The documents used to prepare the CFP are the capital facility and capital improvement plans prepared routinely by the City of Yakima, which are required for obtaining project funding. The following documents are incorporated by reference:

- Yakima's Capital Improvement Plan (CIP).
- Functional plans for service areas were also reviewed and are incorporated by reference into this document. See Exhibit 1.

2.0 CAPITAL FACILITIES REVENUE ANALYSIS

2.1 Overview

The revenue analysis of the Capital Facilities Plan supports the financing for providing facilities and services, as required by RCW 36.70A.070(3)(d). Revenue estimates, using assumptions that are based on historical trends, were used to represent realistic expectations for revenue that may be available for capital funding.

This revenue analysis looks at Yakima's capital facility revenues for those services provided by the City of Yakima. Through identifying fiscal constraints in the future, project prioritization can be incorporated into the capital planning process.

The revenue analysis provides an **approximate, and not exact, forecast of future revenue sources**. The numbers projected in this analysis are for planning purposes and cannot account for sensitivities such as local, state, and federal policy, economic trends, and other factors.

2.2 Funding the Capital Facilities Plan

Estimated future revenues are projected for the Plan's 2017 – 2040 time period. The revenue analysis is grouped according to:

- **General Capital Revenues**. Those revenues under the category of general capital revenues are the revenues required by law to be used for capital projects. The general capital revenues in Yakima include REET I and REET II.
- **Dedicated Capital Revenues**. Dedicated revenues are required to be used for certain types of capital spending, outlined by the law. The dedicated capital revenues in Yakima include grants and facility charges and fees.
- **Operating Transfers**. Operating transfers-in are those revenue sources that are transferred in from operating funds. Although these are not dedicated sources to be relied on for capital funding, it has been the historical practice of the City to regularly make transfers into capital funds for certain service departments. Those are calculated separately as the practice may be common enough to be considered a potential funding source, however these transfers are not dedicated to capital spending and could be used elsewhere.
- **Potential Policy Options and Other Funding Sources**. There are additional policy tools and sources available to fund capital projects.

2.3 Assumptions

The assumptions used in this analysis may not align with the City's budget assumptions regarding the same sources of revenue because the purpose of the two analyses is different. The City's budget estimates

how much money the City will have available for spending in the coming fiscal year while this CFP revenue analysis estimates how much money (dedicated to capital spending) the City is likely to receive in total over the next six and 23 years. The Yakima revenue analysis is based on the following assumptions:

- **City Boundary**. The City of Yakima will maintain the same boundary now through the 2040 planning horizon, without annexing any additional unincorporated areas. The buildable lands analysis indicates that the City can accommodate all expected growth by 2040 in the city limits. While annexations may occur with willing landowners, they are likely to be incremental.
- **District Boundaries**. Some of the service providers operate in a geographic area other than the city limits. Population estimates through 2040 for these districts are indicated in Exhibit 2.
- **Real Estate Excise Tax (REET)**. This analysis assumes that assessed values (AV) for property tax will increase an annual rate of 1% going forward and that the turnover rate is 3% for residential properties and 2% for commercial properties. New construction is assumed to be 0.4% of total AV. The growth in assessed value and the turnover rates are important since REET revenues are based on the total value of real estate transactions in a given year. REET 1 and REET 2 each assess 0.25% on the assessed value.

2.4 Dedicated Capital Revenues and Operating Transfers

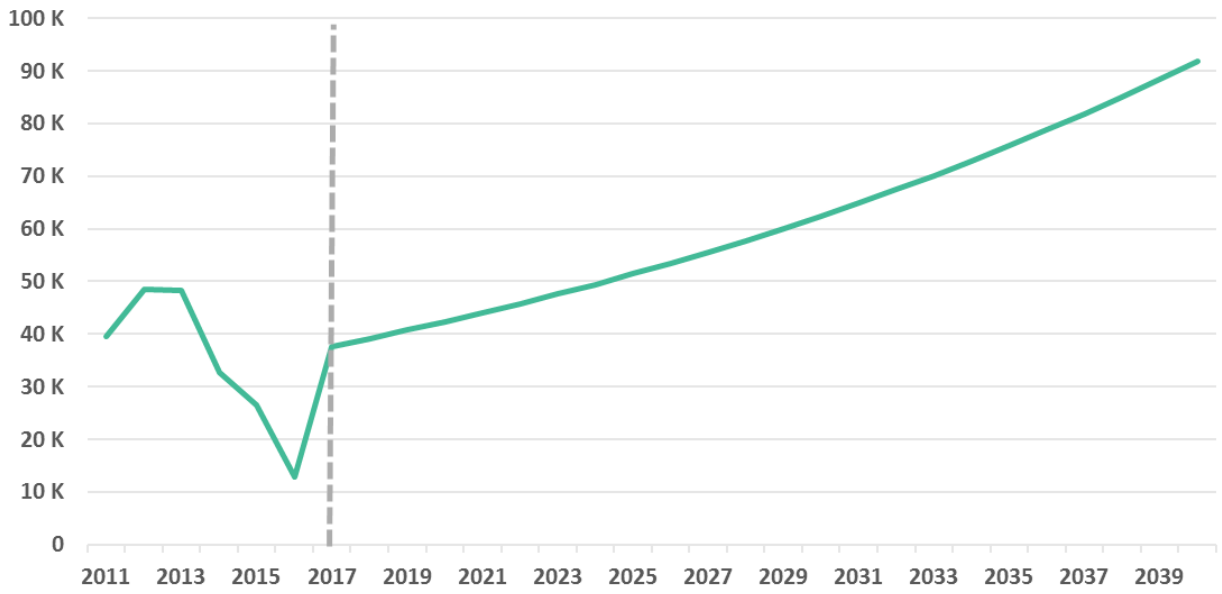
CBD Capital Improvement

CBD Improvement: Dedicated Revenues

The CBD Capital Improvement Fund (Fund 321) historically received an average of $0.42 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model are $0.40 annually. The model assumes inflation growth of 3% annually. Exhibit 3 shows the historical and projected non-transfer and non-grant revenues for CBD capital improvement.

Exhibit 3 shows historical revenues to the left of the dotted line and an estimated future revenue trend to the right of the dotted line. An average annual per capita dollar amount is assumed in each year for this analysis, based on 5-year historical per capita revenues. While the annual average cannot fully represent future receipt of revenues, it approximates how many total dollars may be received over a period of time. This method of projection is consistent for the analysis of dedicated revenues for all service areas analyzed.

Exhibit 3. Historical and Projected CBD Improvement Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 4 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 4. Projected CBD Improvement Dedicated Revenues (2017 – 2040), YOE$

Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$250,000	$1,220,000	$1,470,000

Source: City of Yakima, 2016; BERK, 2016

CBD Capital Improvement: Total Estimated Capital Fund Revenues

Exhibit 5 shows total estimated dedicated revenues available for CBD Improvement capital projects over the planning period. Additionally, Yakima has a 2016 fund balance of about $2,200 in its CBD Improvements Capital Fund. These funds are also available to cover CBD capital projects during the 2017 – 2040 period. The CBD Capital Improvement Fund will focus largely on the construction of the Downtown Plaza and other minor services. In 2018, work is expected to begin on the $10 million plaza. A $9 million LTGO bond will be secured for its construction and will be paid back with $9 million in community donations.

Exhibit 5. Projected Dedicated CBD Improvement Revenues Allocated for Capital (2017 – 2040), YOE$

Total CBD Improvements Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$250,000	$1,220,000	$1,470,000	**$1,480,000**

Source: City of Yakima, 2016; BERK, 2017

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there was almost $500,000 in grant revenues and contributions for CBD Improvement capital spending. The City will need to consider what sources will be needed to fill funding gaps in the future.

CBD Capital Improvement: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated CBD Improvement revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future

dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 6. Estimated CBD Improvement Revenues and Costs (2017 – 2022), YOE$[1]

CBD Improvements	Revenue Gap
Estimated Fund Revenues	**$250,000**
2016 Fund Balance	$2,279
Total Funds Available	**$250,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$250,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

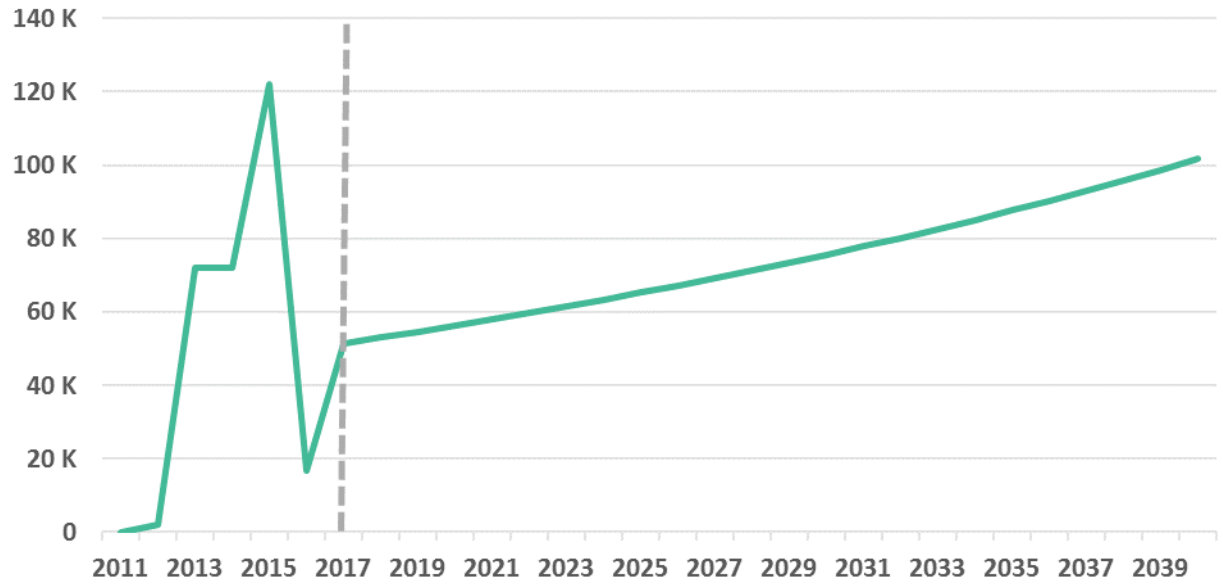
Capitol Theatre

Capitol Theatre: Operating Transfers

The Capitol Theatre Construction Fund (Fund 322) historically received an average of $53,000 annually in operating transfers between 2011 and 2015 (see Exhibit 7). The assumed transfer revenues used in the model are $50,000 annually. The model assumes inflation growth of 3% annually.

Exhibit 7 shows historical revenues to the left of the dotted line and an estimated future revenue trend to the right of the dotted line. An average annual dollar amount is assumed in each year for this analysis, based on the 5-year historical average transfer amount. While the annual average cannot fully represent future receipt of operating transfers, it approximates how many total dollars may be transferred over a period of time. This method of projection is consistent for the analysis of operating transfers for all service areas analyzed.

Exhibit 7. Historical and Projected Capitol Theatre Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2017

Exhibit 8 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 8. Projected Capitol Theatre Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$340,000	$1,440,000	$1,780,000

Source: City of Yakima, 2016; BERK, 2016

Capitol Theatre: Total Estimated Capital Fund Revenues

Exhibit 9 shows total estimated dedicated revenues available for Capitol Theatre capital projects over the planning period. Additionally, Yakima has a 2016 ending fund balance of about $245,000 in its Capitol Theatre Capital Fund. These funds are also available to cover theatre projects during the 2017 – 2040 period.

Exhibit 9. Projected Dedicated Capitol Theatre Revenues Allocated for Capital (2017 – 2040), YOE$

Total Capitol Theatre Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$340,000	$1,440,000	$1,780,000	**$2,030,000**

Source: City of Yakima, 2016; BERK, 2017

Capitol Theatre: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Capitol Theatre revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 10. Estimated Capitol Theatre Revenues and Costs (2017 – 2022), YOE$[1]

Capitol Theatre	Revenue Gap
Estimated Fund Revenues	$340,000
2016 Fund Balance	$245,391
Total Funds Available	**$590,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$590,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

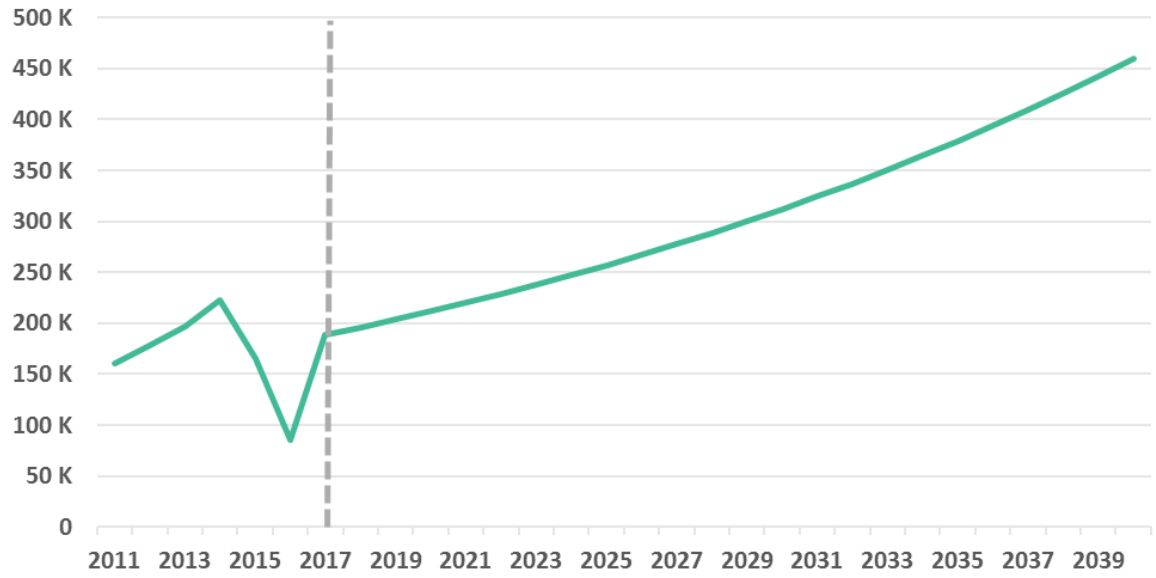
Source: City of Yakima, 2016; BERK, 2017

Convention Center

Convention Center: Dedicated Revenues

The Convention Center Capital Projects Fund (Fund 370) historically received an average of $2.00 per capita annually in non-transfer and non-grant revenues between 2011 and 2015 (see Exhibit 11). The assumed dedicated revenues per capita used in the model are $2.00 annually. The model assumes inflation growth of 3% annually.

Exhibit 11. Historical and Projected Convention Center Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2916; BERK, 2017

Exhibit 12 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 12. Projected Convention Center Dedicated Revenues (2017 – 2040), YOE$

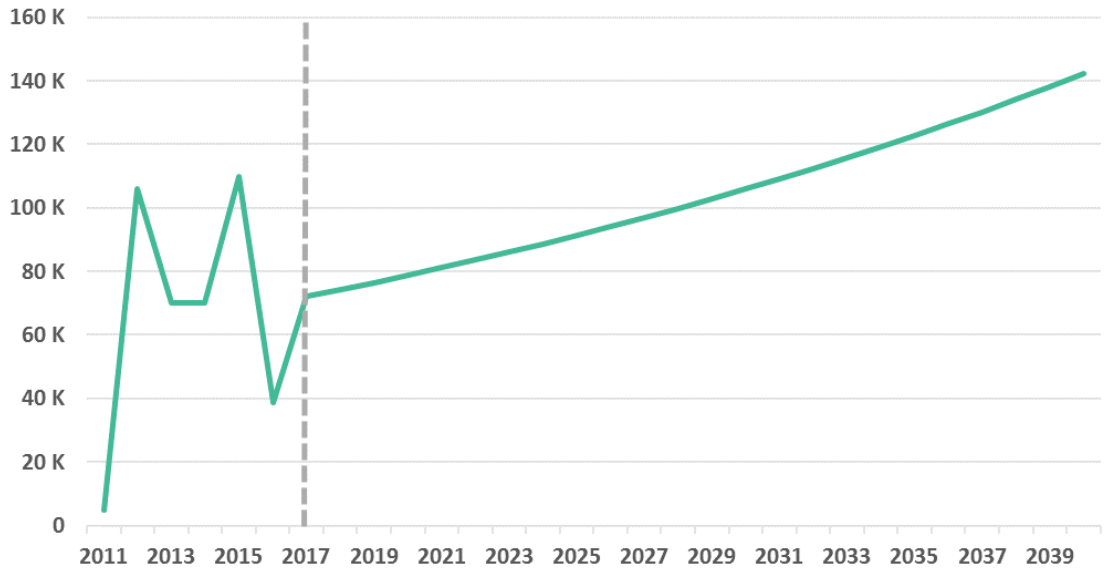
Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$1,250,000	$6,080,000	$7,330,000

Source: City of Yakima, 2016; BERK, 2017

Convention Center: Operating Transfers

The Convention Center Capital Projects Fund historically received an average of about $72,200 annually in operating transfers between 2011 and 2015 (see Exhibit 13). The assumed transfer revenues used in the model are $70,000 annually. The model assumes inflation growth of 3% annually.

Exhibit 13. Historical and Projected Convention Center Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2017

Exhibit 14 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 14. Projected Convention Center Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$470,000	$2,170,000	$2,640,000

Source: City of Yakima, 2016; BERK, 2016

Convention Center: Total Estimated Capital Fund Revenues

Exhibit 15 shows total estimated dedicated revenues available for convention center capital projects over the planning period, including operating transfers. Additionally, Yakima has a 2016 fund balance of about $584,000 in its convention center capital fund. These funds are also available to cover convention center projects during the 2017 – 2040 period.

Exhibit 15. Projected Dedicated Convention Center Revenues Allocated for Capital (2017 – 2040), YOE$

Total Convention Center Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$1,720,000	$8,090,000	$9,810,000	**$10,400,000**

Source: City of Yakima, 2016; BERK, 2017

Convention Center: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Convention Center revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 16. Estimated Convention Center Revenues and Costs (2017 – 2022), YOE$[1]

Convention Center	Revenue Gap

Estimated Fund Revenues	**$1,720,000**
2016 Fund Balance	$583,975
Total Funds Available	**$2,300,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$2,300,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

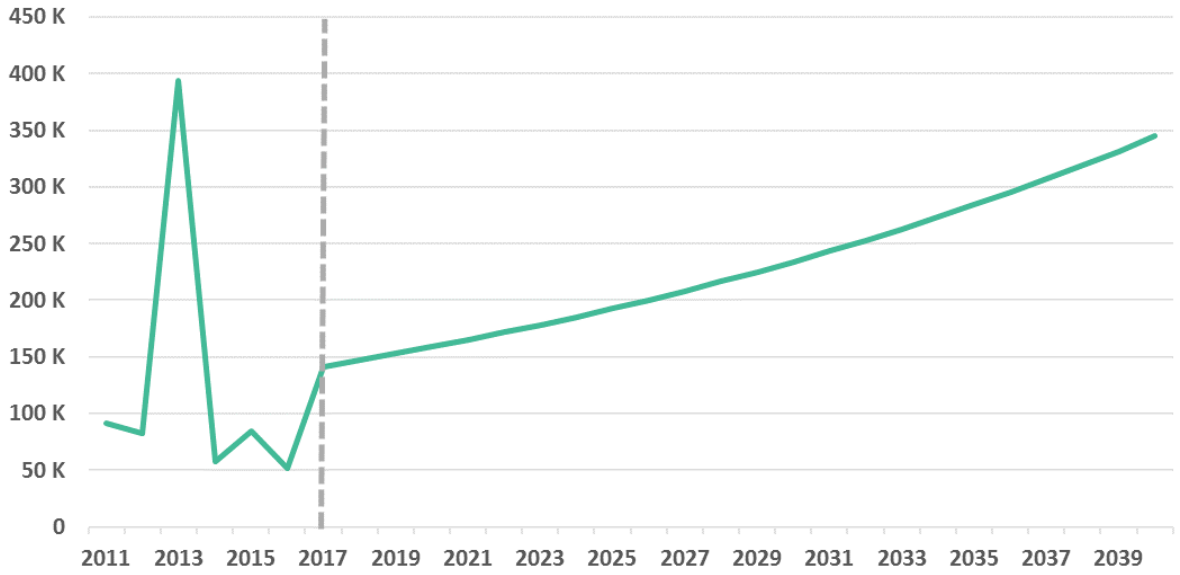
Source: City of Yakima, 2016; BERK, 2017

Fire

Fire: Dedicated Revenues

The Fire Capital Fund (Fund 332) historically received an average of $1.53 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model are $1.50 annually. The model assumes inflation growth of 3% annually.

Exhibit 17. Historical and Projected Fire Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 18 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 18. Projected Fire Revenues (2017 – 2040), YOE$

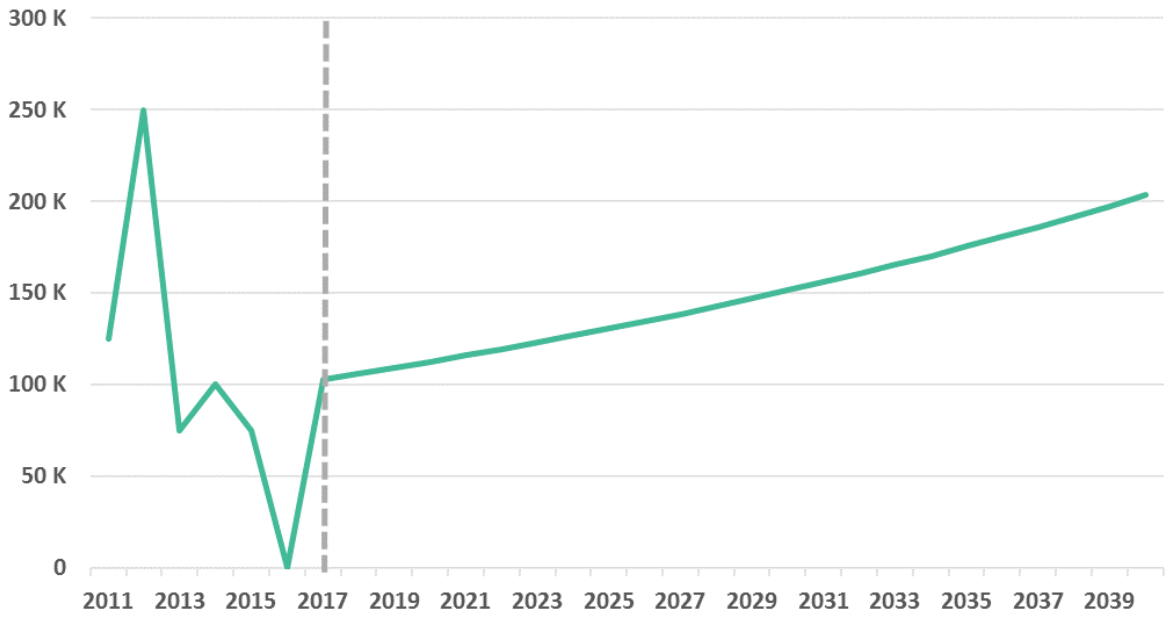
Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$940,000	$4,380,000	$5,320,000

Source: City of Yakima, 2016; BERK, 2016

Fire: Operating Transfers

The Fire Capital Fund historically received an average of $125,000 annually in operating transfers between 2011 and 2015. The conservative assumption for annual operating transfer revenues is $100,000 annually, with 3% inflation growth.

Exhibit 19. Historical and Projected Fire Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 20 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 20. Projected Fire Operating Transfers (2017 – 2040), YOE$

Operating Transfer	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$670,000	$2,880,000	$3,550,000

Source: City of Yakima, 2016; BERK, 2016

Fire: Total Estimated Capital Fund Revenues

Exhibit 21 shows total estimated dedicated revenues available for fire capital projects over the planning period, including grants, contributions, other dedicated sources, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $34,000 in its fire capital fund. These funds are also available to cover fire projects during the 2017 – 2040 period.

Exhibit 21. Projected Fire Revenues Allocated for Capital (2017 – 2040), YOE$

Total Fire Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$1,610,000	$7,440,000	$9,050,000	**$9,090,000**

Source: City of Yakima, 2016; BERK, 2016

Fire: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Fire revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 22. Estimated Fire Revenues and Costs (2017 – 2022), YOE$[1]

Fire	Revenue Gap
Estimated Fund Revenues	$1,610,000
2016 Fund Balance	$34,097
Total Funds Available	**$1,640,000**
Capital Costs[2]	$420,000
Estimated Dedicated Funding Surplus/(Deficit)	**$1,220,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

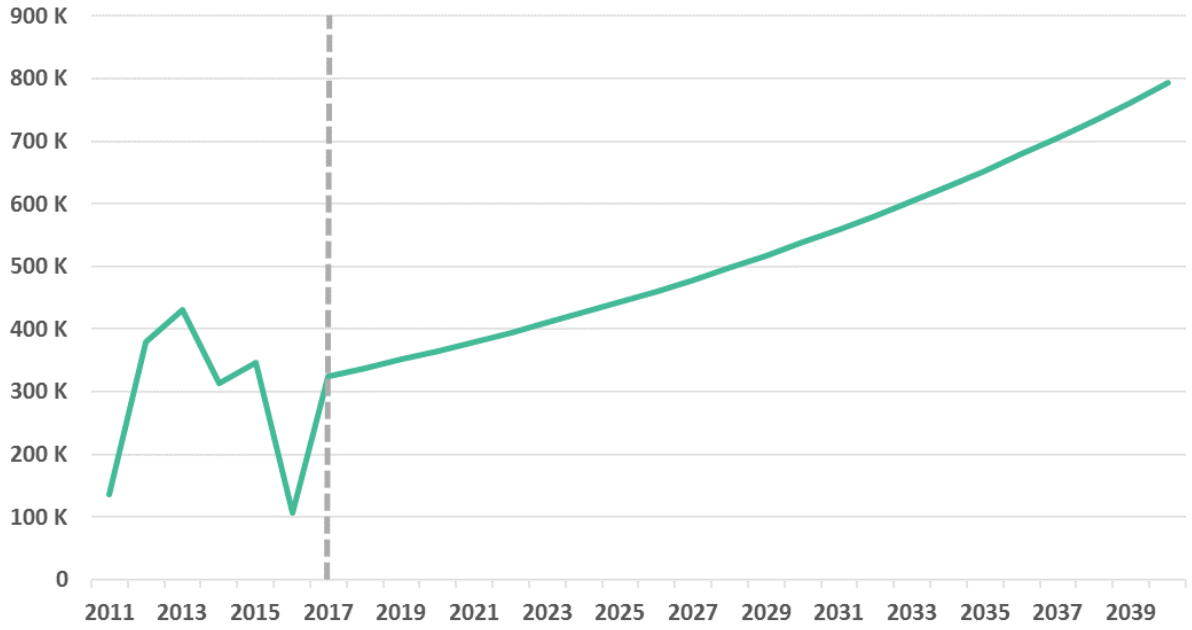
Source: City of Yakima, 2016; BERK, 2017

Law and Justice

Law and Justice: Dedicated Revenues

The Police Capital Fund (Fund 333) historically received an average of $3.47 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model are $3.45 annually. The model assumes inflation growth of 3% annually.

Exhibit 23. Historical and Projected Law and Justice Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 24 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 24. Projected Law and Justice Dedicated Revenues (2017 – 2040), YOE$

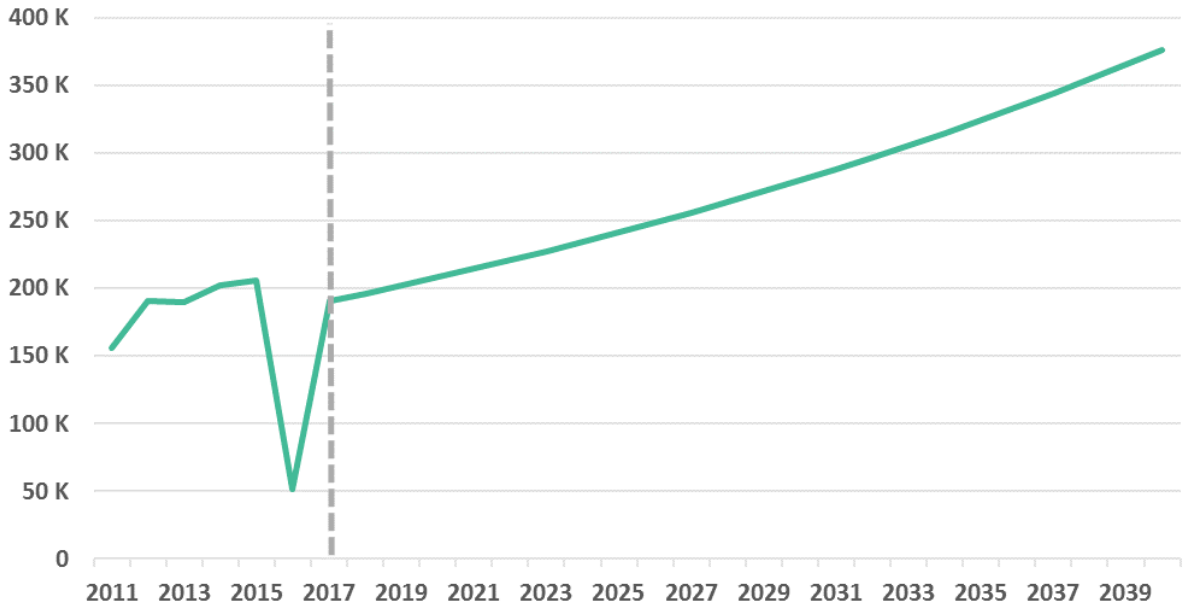
Dedicated Revenues	Subtotal 2017 -2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$2,160,000	$10,480,000	$12,640,000

Source: City of Yakima, 2016; BERK, 2016

Law and Justice: Operating Transfers

The Police Capital Fund historically received an average of $188,667 annually in operating transfers between 2011 and 2015. The assumed operating transfer revenues used in the model are $185,000 annually, with 3% inflation growth.

Exhibit 25. Historical and Projected Law and Justice Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 26 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 26. Projected Law and Justice Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$1,240,000	$5,330,000	$6,570,000

Source: City of Yakima, 2016; BERK, 2016

Law & Justice: Total Estimated Capital Fund Revenues

Exhibit 27 shows total estimated dedicated revenues available for police capital projects over the planning period, dedicated sources and operating transfers. Additionally, Yakima has a 2016 fund balance of about $548,000 in its police capital fund. These funds are also available to cover police projects during the 2017 – 2040 period.

Exhibit 27. Projected Law & Justice Revenues Allocated for Capital (2017 – 2040), YOE$

Total Law & Justice Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$3,390,000	$15,810,000	$19,200,000	**$19,750,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues and operating transfers, over the historical period observed (2011 – 2015) there was around $1.4 million in grant revenues and $4.5 million in loan proceeds for capital

spending on law and justice. The City will need to consider what sources are available to fill potential funding gaps in the future.

Law & Justice: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Law & Justice revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 28. Estimated Law & Justice Revenues and Costs (2017 – 2022), YOE$[1]

Law & Justice	Revenue Gap
Estimated Fund Revenues	**$3,390,000**
2016 Fund Balance	$547,718
Total Funds Available	**$3,940,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$3,940,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

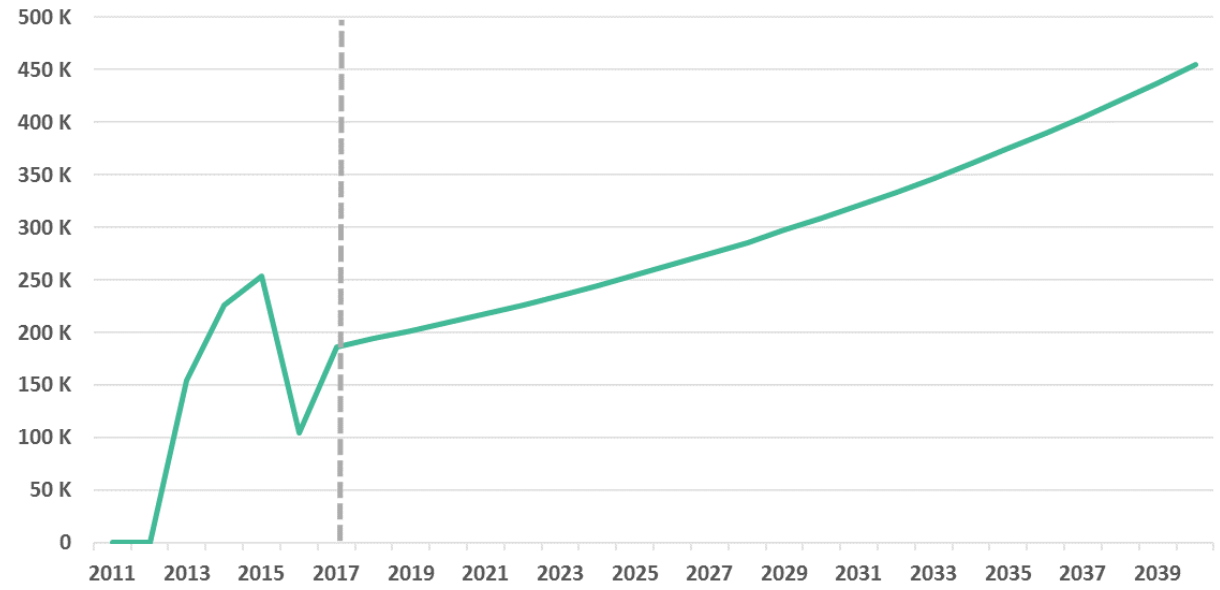
Source: City of Yakima, 2016; BERK, 2017

Airport

Airport: Dedicated Revenues

The Airport Capital Fund (Fund 422) historically received an average of $1.98 per capita annually in non-transfer and non-grant revenues between the ownership years of 2013 and 2016. There were no revenues in years 2011 and 2012 The assumed dedicated revenues per capita used in the model are $1.98 annually. The model assumes inflation growth of 3% annually.

Exhibit 29. Historical and Projected Airport Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 30 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 30. Projected Airport Dedicated Revenues (2017 – 2040), YOE$

Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$1,240,000	$6,020,000	$7,260,000

Source: City of Yakima, 2016; BERK, 2016

Airport: Total Estimated Capital Fund Revenues

Exhibit 31 shows total estimated dedicated revenues available for airport capital projects over the planning period. Additionally, Yakima has a 2016 fund balance of about $48,000 in its airport capital fund. These funds are also available to cover airport projects during the 2017 – 2040 period.

Exhibit 31. Projected Dedicated Airport Revenues Allocated for Capital (2017 – 2040), YOE$

Total Airport Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$1,240,000	$6,020,000	$7,260,000	**$7,310,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there was almost $1.7 million in grant revenues Air Terminal capital spending. The City will need to consider what sources are available to fill potential funding gaps in the future.

Airport: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Airport revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 32. Estimated Airport Revenues and Costs (2017 – 2022), YOE$[1]

Airport	Revenue Gap
Estimated Fund Revenues	$1,240,000
2016 Fund Balance	$48,065
Total Funds Available	**$1,290,000**
Capital Costs[2]	$9,620,000
Estimated Dedicated Funding Surplus/(Deficit)	**($8,330,000)**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

Parks and Recreation

Revenues for parks capital projects and land acquisitions come from state and federal grants, contributions, and inter-fund distributions. In November of 2014, citizens approved a City Charter Amendment to dedicate $750,000 per year for parks capital improvements.

The Tahoma Cemetery in Yakima is part of the Parks Department. Revenues include charges for grave lots and other services. Expected 2017 resources in the Cemetery Fund were $300,426, with expected

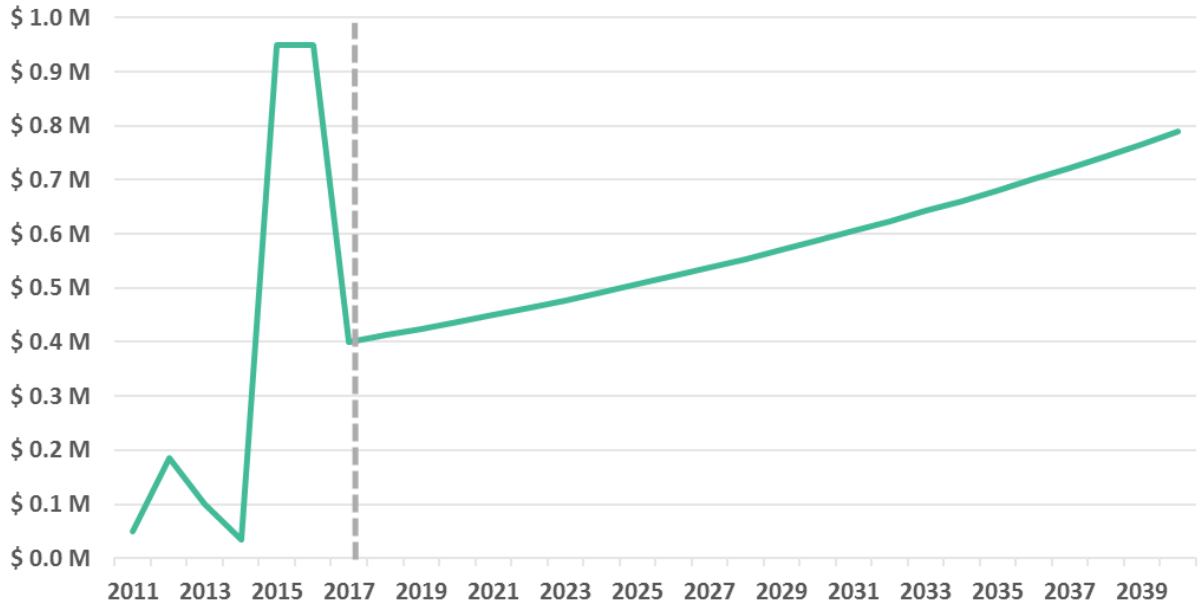
expenditures of $281,000. These costs and revenues include capital and operations. The financial situation for the cemetery is monitored by Parks (City of Yakima, 2016).

Parks: Operating Transfers

The City of Yakima contributes funds to the Parks and Recreation Capital Fund through operating transfers. Historical transfers-in range in size from $50,000 to $950,000 but do occur every year. Average annual transfers between 2011 and 2015 were $264,000. Historically, it has been the policy of the City to transfer $100,000 from the Operating Fund to the Parks Capital Fund (City of Yakima, 2016).

The $950,000 transfer was an outlier compared to the prior years of historical data, and was used specifically for the SOZO project debt service. There has been a historical policy to transfer $100,000 from the operating fund, but a $400,000 annual transfer is expected to pay off debt service on the SOZO project through 2035. As a result, the model assumes an annual transfer of $400,000. No growth in transfers beyond inflation (3%) was assumed.

Exhibit 33. Historical and Projected Parks Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 34 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 34. Projected Parks Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$2,590,000	$11,190,000	$13,780,000

Source: City of Yakima, 2016; BERK, 2016

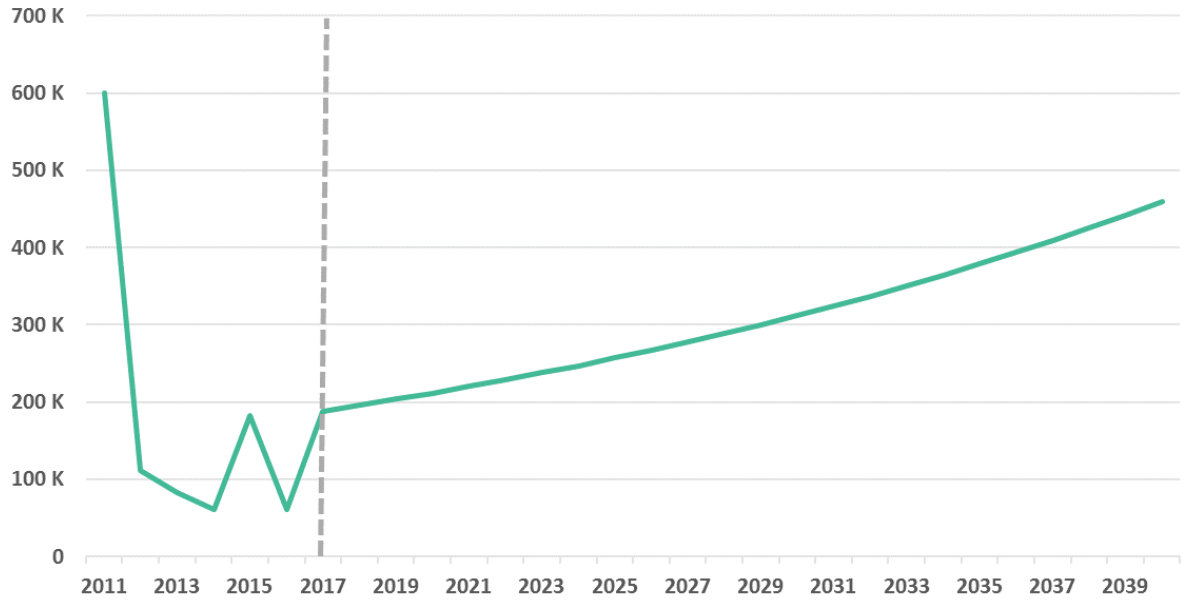
Parks: Grants

State grants have historically been received from the Washington State Recreation and Conservation Office (RCO) and are supplemented by community donations. Since parks grants are competitive on a state or national level, this analysis estimates these revenues on a per capita basis, using the assumption that over time a jurisdiction generally receives its "fair share" of available grant revenues. Since 2011, Yakima has received around $2.26 per capita annually in combined grant and donation revenues. Given

the fluctuating nature of grants, and a large outlier grant in year 2011, a value of $2.00 per capita was used to project potential future grant revenues. The analysis assumes no additional growth beyond inflation.

Exhibit 35 shows historical revenues to the left of the dotted line and an estimated future revenue trend to the right of the dotted line. An average annual dollar amount is assumed in each year for this analysis. In reality, annual revenues will vary greatly due to the lumpy nature of grant funding and are likely to resemble more of a peaks and valleys trend as shown in the historical data. While the annual average cannot fully represent future receipt of grant dollars, it approximates how many total dollars may be received over a period of time.

Exhibit 35. Historical and Projected Parks Grants and Contributions Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 36 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 36. Projected Parks Grants and Contributions Revenues (2017 – 2040), YOE$

Parks Grants and Donations	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$1,250,000	$6,073,000	$7,323,000

Source: City of Yakima, 2016; BERK, 2016

Parks: Total Estimated Capital Fund Revenues

Exhibit 37 shows total estimated dedicated revenues available for parks capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $1.2 million in its parks capital fund. These funds are also available to cover parks projects during the 2017 – 2040 period.

Exhibit 37. Projected Dedicated Parks Revenues Allocated for Capital (2017 – 2040), YOE$

Total Parks Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances

Estimated Dedicated Revenues	$2,590,000	$11,190,000	$13,780,000	**$15,030,000**
Estimated Grant Revenues	$1,250,000	$6,080,000	$7,330,000	**$7,330,000**
Amount Committed to Debt Service	$2,400,000	$5,200,000	$7,600,000	**$7,600,000**
Available Revenues	$190,000	$5,990,000	$6,180,000	$14,760,000

Source: City of Yakima, 2016; BERK, 2016

Parks: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Parks revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 38. Estimated Parks Revenues and Costs (2017 – 2022), YOE$[1]

Parks	Revenue Gap
Estimated Fund Revenues	$190,000
2016 Fund Balance	$1,240,543
Total Funds Available	**$1,430,000**
Capital Costs[2]	$18,678,691
Estimated Dedicated Funding Surplus/(Deficit)	**($17,248,691)**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

Streets

This section considers all revenues dedicated to capital projects for streets. The assumptions used in the Capital Facility Plan revenue analysis differ from those used in the Transportation Plan, which results in some differences in the projected revenues. These projections are meant to act as a guide based on historical revenues, and are not meant to represent reality.

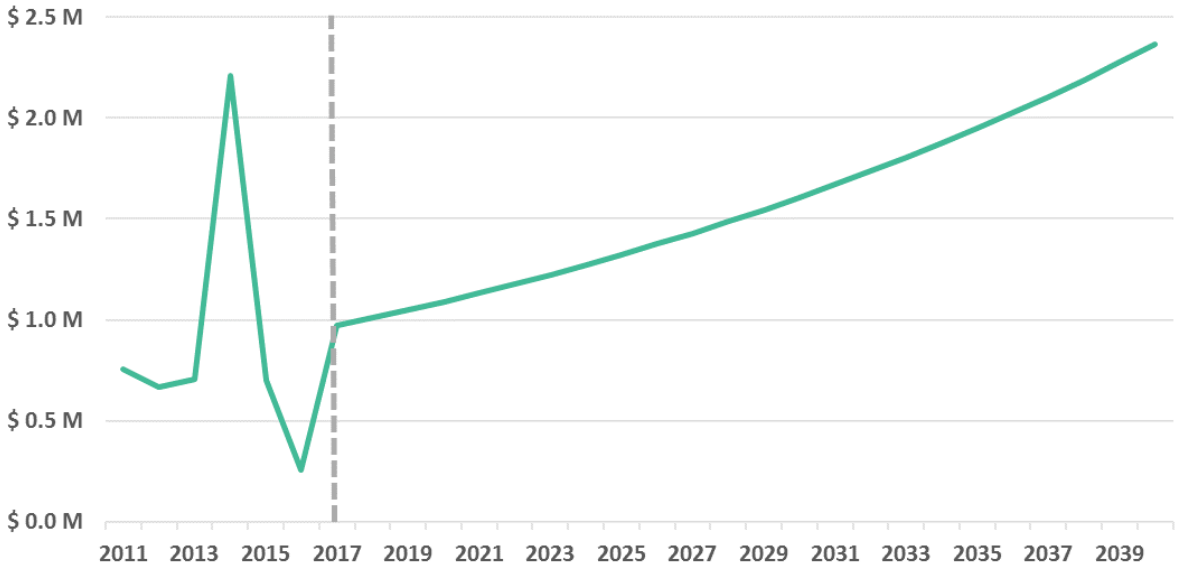
Streets capital revenues in Yakima are funneled into the two funds, described below:

- **Fund 142 – Arterial Street Capital**. This fund is used for street improvement projects that are included in the Transportation Improvement Program (TIP). The majority of the revenues to Fund 142 come from an allocation of the gas tax and the funds are used to provide a local match to gap funding sources, pay for debt service, or to fund certain projects in full.
- **Fund 344 – Street Capital**. This fund is used to accomplish the goal of investing at least $2 million annually on the restoration and reconstruction of Yakima streets as a response to 72% of voters supporting a City Charter amendment in 2013 that requires the City to invest at least $2 million annually. This has increased the City's Average Pavement Index since 2013.

Streets: Dedicated Revenues

The Arterial Streets Capital Fund (Fund 344) and the Arterial Street Fund (Fund 142) combined historically received an average of $10.88 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model is $10.00 annually. The model assumes inflation growth of 3% annually.

Exhibit 39. Historical and Projected Streets Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 40 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 40. Projected Streets Dedicated Revenues (2017 – 2040), YOE$

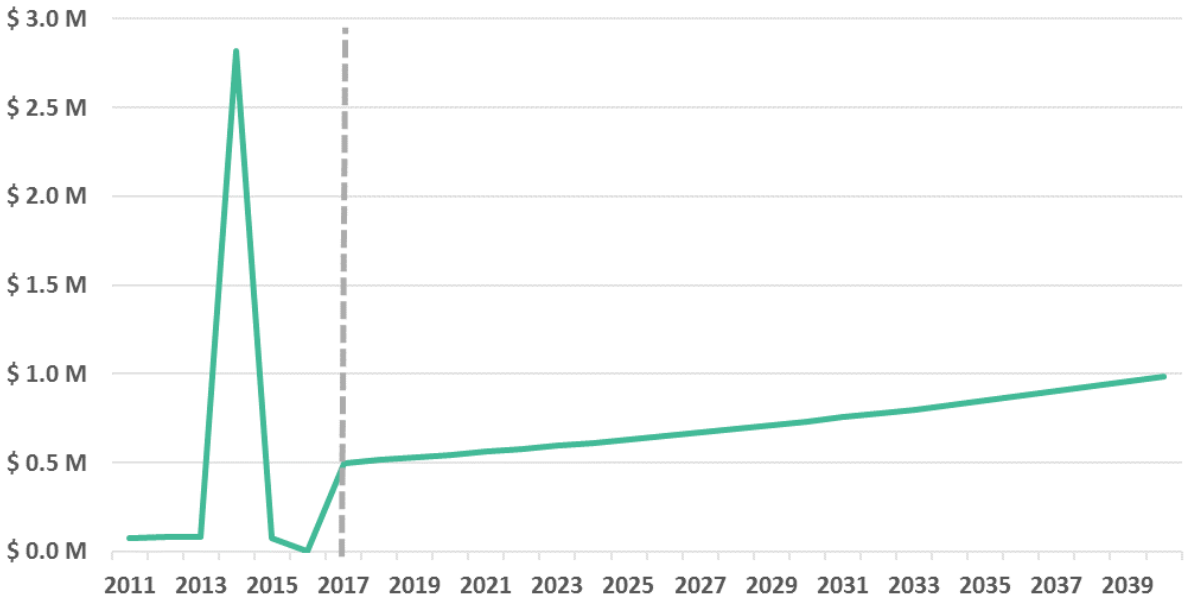
Streets Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$6,440,000	$31,280,000	$37,720,000

Source: City of Yakima, 2016; BERK, 2016

Streets: Operating Transfers

The arterial streets capital funds historically received an average of $627,300 annually in operating transfers between 2011 and 2015. The assumed operating transfer revenues used in the model are a conservative $500,000 annually, with 3% inflation growth. The conservative assumption is made due to an inconsistency in transfers and to acknowledge a large outlier transfer of $2.75 million in 2014.

Exhibit 41. Historical and Projected Streets Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 42 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 42. Projected Streets Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$3,240,000	$13,980,000	$17,220,000

Source: City of Yakima, 2016; BERK, 2016

Streets: Total Estimated Capital Fund Revenues

Exhibit 43 shows total estimated dedicated revenues available for streets capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $760,000 in its streets capital fund. These funds are also available to cover streets projects during the 2017 – 2040 period.

Exhibit 43. Projected Dedicated Streets Revenues Allocated for Capital (2017 – 2040), YOE$

Total Streets Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$9,670,000	$45,260,000	$54,930,000	**$55,700,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there was about $19.5 million in grant revenues dedicated to streets capital projects. The City will need to consider what sources will be needed to fill funding gaps in the future.

Streets: Six-Year Cost and Revenue Comparison

See the Transportation System Plan for information on Streets projects, costs, and funding gaps.

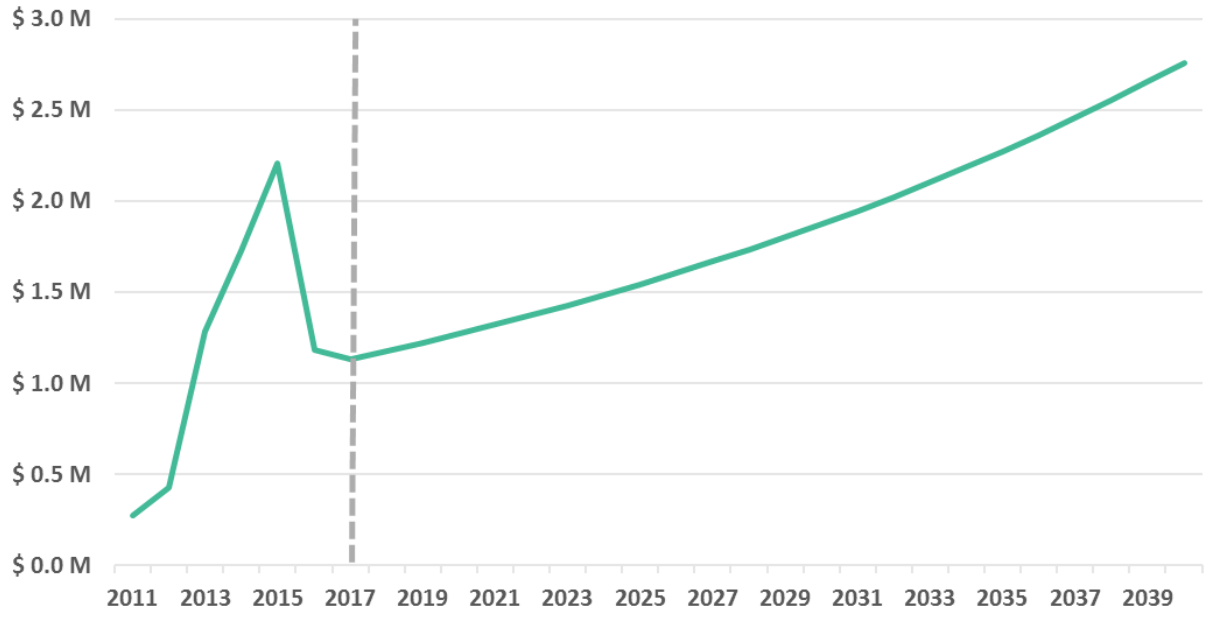
Transit

The assumptions used in the Capital Facility Plan revenue analysis differ from those used in the Transportation Plan, which results in some differences in the projected revenues. These projections are meant to act as a guide based on historical revenues, and are not meant to represent reality.

Transit: Dedicated Revenues

The Transit Capital Fund (Fund 464) historically received an average of $12.74 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model is $12.00 annually. The model assumes inflation growth of 3% annually.

Exhibit 44. Historical and Projected Transit Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 45 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 45. Projected Transit Dedicated Revenues (2017 – 2040), YOE$

Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$7,500,000	$36,440,000	**$43,940,000**

Source: City of Yakima, 2016; BERK, 2016

Transit: Total Estimated Capital Fund Revenues

Exhibit 46 shows total estimated dedicated revenues available for transit capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $4.7 million in its transit capital fund. These funds are also available to cover transit projects during the 2017 – 2040 period.

Exhibit 46. Projected Dedicated Transit Revenues Allocated for Capital (2017 – 2040), YOE$

Total Transit Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$7,500,000	$36,440,000	$43,940,000	**$48,650,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there was about $630,000 in grant revenues dedicated to transit capital projects, with another $800,000 in grants expected in 2016. The City will need to consider what sources will be needed to fill funding gaps in the future.

Transit: Six-Year Cost and Revenue Comparison

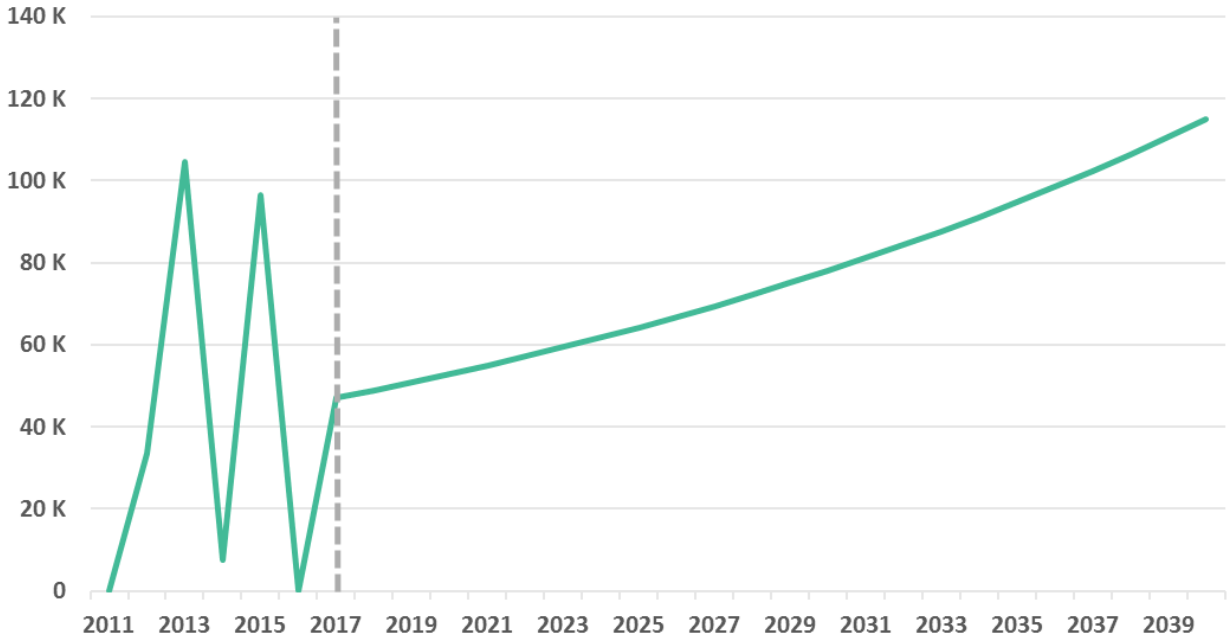
See the Transportation System Plan for information on Transit projects, costs, and funding gaps.

Stormwater

Stormwater: Dedicated Revenues

The Stormwater Capital Fund (Fund 442) historically received an average of $0.52 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model is $0.50 annually. The model assumes inflation growth of 3% annually.

Exhibit 47. Historical and Projected Stormwater Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 48 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 48. Projected Stormwater Dedicated Revenues (2017 – 2040), YOE$

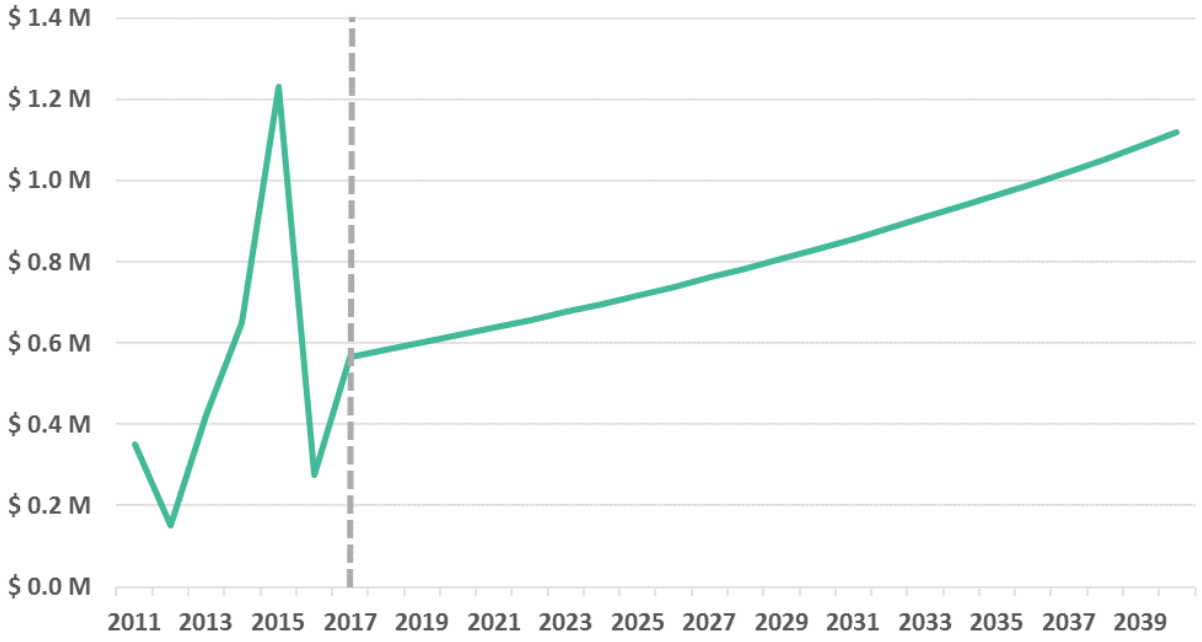
Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$320,000	$1,520,000	$1,840,000

Source: City of Yakima, 2016; BERK, 2016

Stormwater: Operating Transfers

The Stormwater Capital Fund historically received an average of $561,000 annually in operating transfers between 2011 and 2015. The assumed operating transfer revenues used in the model are a conservative $550,000 annually, with 3% inflation growth. The conservative assumption is made due to an inconsistency in transfers and to acknowledge a large outlier transfer of $1.2 million in 2015.

Exhibit 49. Historical and Projected Stormwater Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 50 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 50. Projected Stormwater Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$3,670,000	$12,590,000	$16,260,000

Source: City of Yakima, 2016; BERK, 2016

Stormwater: Total Estimated Capital Fund Revenues

Exhibit 51 shows total estimated dedicated revenues available for transit capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $4.7 million in its transit capital fund. These funds are also available to cover transit projects during the 2017 – 2040 period.

Exhibit 51. Projected Dedicated Stormwater Revenues Allocated for Capital (2017 – 2040), YOE$

Total Stormwater Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$3,980,000	$17,360,000	$21,340,000	**$24,390,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there were around $300,000 in grant and loan revenues for stormwater capital projects. The City will need to consider what sources will be needed to fill funding gaps in the future.

Stormwater: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Stormwater revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 52. Estimated Stormwater Revenues and Costs (2017 – 2022), YOE$[1]

Stormwater	Revenue Gap
Estimated Fund Revenues	$3,980,000
2016 Fund Balance	$3,044,907
Total Funds Available	**$7,020,000**
Capital Costs[2]	$453,200
Estimated Dedicated Funding Surplus/(Deficit)	**$6,566,800**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

Wastewater

The following section includes all revenues spent on capital. The city separates capital revenues for wastewater into three different capital funds:

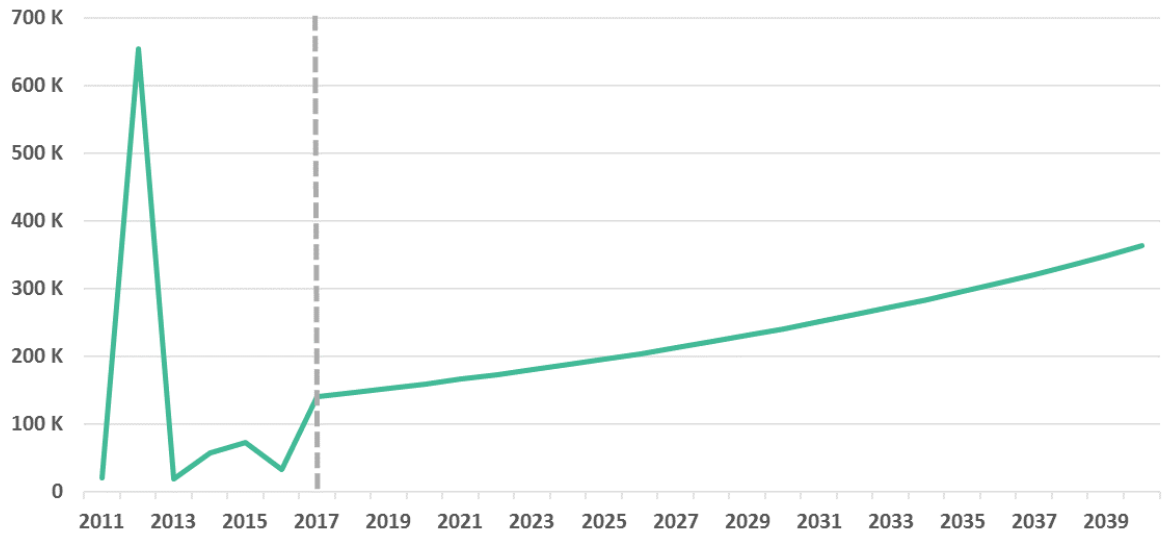
- **Fund 472 – Wastewater Capital Facilities**. This is a contingency fund for major facility repairs, industrial coating, or minor equipment replacement. This capital spending category may include required maintenance and replacement work.
- **Fund 476 – Wastewater Capital Construction**. This funds wastewater system planning and collection system capital improvements. Construction projects related to accommodating service area growth and upgrades to capacity, as well as repair and replacement of the existing system are paid out of this fund.
- **Fund 478 – Wastewater Capital Project**. Fund 478 directs funds to costs associated with the planning, installation, rehabilitation, expansion, and modification of the Wastewater Treatment Facility and the Rudkin Road Lift Station.

Wastewater: Dedicated Revenues

The Wastewater Facilities Capital Fund (Fund 472) and Wastewater Capital Construction (Fund 476) historically received a combined average of $1.49 per capita annually in non-transfer and non-grant revenues between 2011 and 2015. The assumed dedicated revenues per capita used in the model is $1.25 annually (based on the 2015 population for the wastewater service area), which is a conservative assumption accounting for high outlier revenues from the State Revolving Fund in 2012. The area that is provided with wastewater services does not include the whole city of Yakima, but does include the cities of Union Gap and Terrace Heights. The State Revolving Fund provides funding through the federal Clean Water Act's Clean Water State Revolving Fund program and is funded through the EPA to provide low

interest and forgivable loan funding for wastewater treatment construction projects, nonpoint source pollution projects, and Green project. The model assumes inflation growth of 3% annually.

Exhibit 53. Historical and Projected Wastewater Dedicated Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 54 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 54. Projected Wastewater Dedicated Revenues (2017 – 2040), YOE$

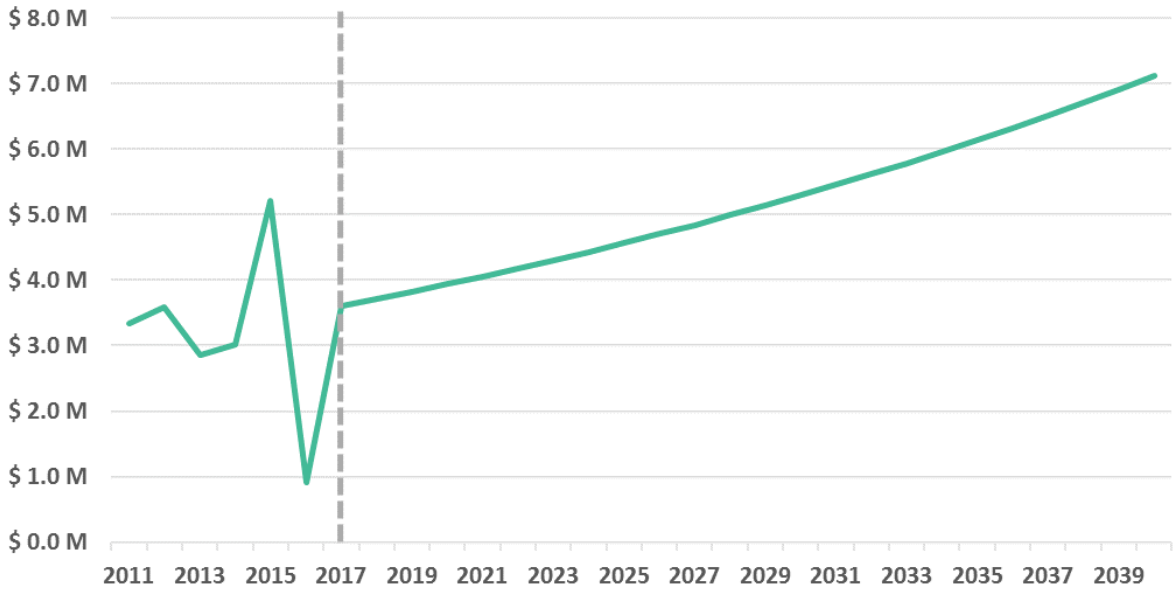
Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$950,000	$4,730,000	$5,680,000

Source: City of Yakima, 2016; BERK, 2016

Wastewater: Operating Transfers

The wastewater capital funds historically received an average of $3.6 million annually in operating transfers between 2011 and 2015. The assumed operating transfer revenues used in the model are a conservative $3.6 million annually, with 3% inflation growth.

Exhibit 55. Historical and Projected Wastewater Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 56 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 56. Projected Wastewater Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$23,320,000	$80,070,000	$103,390,000

Source: City of Yakima, 2016; BERK, 2016

Wastewater: Total Estimated Capital Fund Revenues

Exhibit 57 shows total estimated dedicated revenues available for wastewater and sewer capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $12.1 million in its wastewater and sewer capital funds. These funds are also available to cover wastewater and sewer projects during the 2017 – 2040 period.

Exhibit 57. Projected Dedicated Wastewater Revenues Allocated for Capital (2017 – 2040), YOE$

Total Wastewater Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$24,270,000	$105,510,000	$129,780,000	**$141,900,000**

Source: City of Yakima, 2016; BERK, 2016

In addition to the dedicated revenues, over the historical period observed (2011 – 2015) there were around $6.5 million in grants and loan proceeds to Fund 478 and almost $1.4 million in loan proceeds to Fund 476. The City will need to consider what sources will be needed to fill funding gaps in the future.

Wastewater: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated wastewater revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 58. Estimated Wastewater Revenues and Costs (2017 – 2022), YOE$[1]

Wastewater	Revenue Gap
Estimated Fund Revenues	$24,270,000
2016 Fund Balance	$12,117,199
Total Funds Available	**$36,390,000**
Capital Costs[2]	$181,680,000
Estimated Dedicated Funding Surplus/(Deficit)	**($145,290,000)**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

Water

The City of Yakima provides water services to portions of the City, which is supplemented by Nob Hill Water. Water capital is funded by transfers from the Water Operating Fund and grants. The fund pays for all capital projects that are related to drinking water and its resources, including treatment, wells, transmission, distribution, pumping stations, storage, fire suppression, and more.

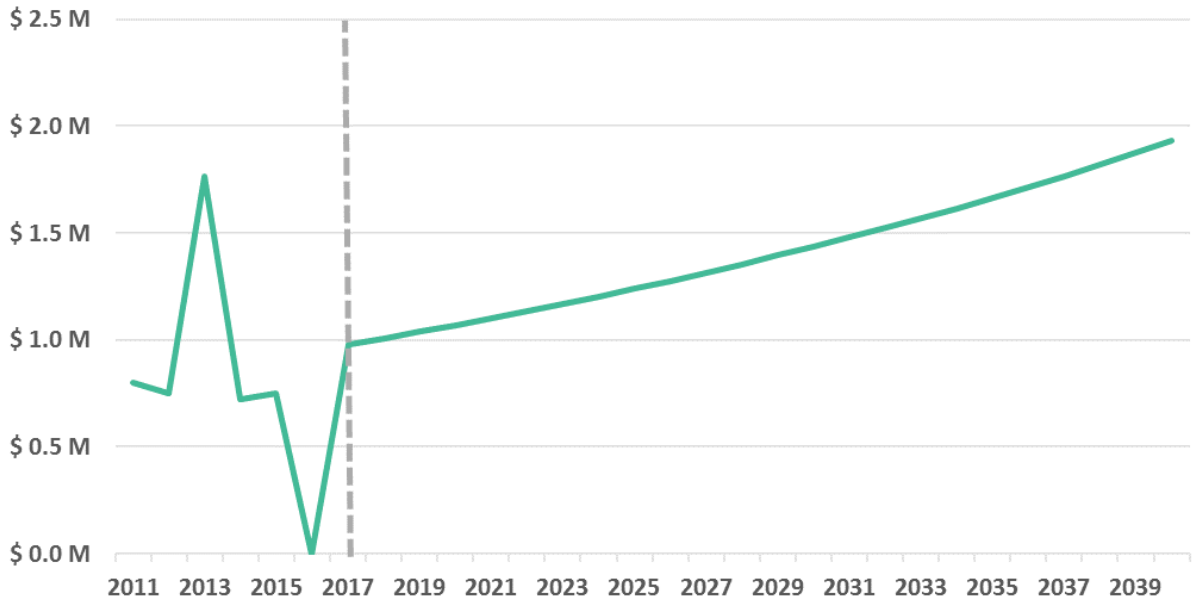
Funding sources for water capital projects include grants, transfers from the operating fund, loans, and bond financing.

Water sales have been down for several years, as of 2017, due to the economic downturn and water usage reductions because of conservation efforts. From 2013 to 2017, four years of planned rate increases were delayed. The 2017 budget proposes to increase rates by 5% in both 2017 and 2018 to make up for the delayed rate increases. This would allow for transfers to the Water Capital Fund to be reduced to $675,000 in 2017 and $400,000 in 2018. The average residential water customer would experience an increase of around $1.79 every two months in 2017 and $2.01 every two months in 2018. (City of Yakima, 2016)

Water: Operating Transfers

The City of Yakima contributes funds to the Water Capital Fund through operating transfers. Five-year Historical transfers-in range in size from $725,000 to $1.8 million. Average annual transfer between 2011 and 2015 was $958,000 and the model's assumed annual transfer is $950,000. There is an annual inflation rate of 3%.

Exhibit 59. Historical and Projected Water Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 60 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 60. Projected Water Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$6,330,000	$27,360,000	**$33,690,000**

Source: City of Yakima, 2016; BERK, 2016

Water: Total Estimated Capital Fund Revenues

Exhibit 61 shows total estimated dedicated revenues available for water capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $4.5 million in its water capital fund. These funds are also available to cover water projects during the 2017 – 2040 period.

Exhibit 61. Projected Dedicated Water Revenues Allocated for Capital (2017 – 2040), YOE$

Total Water Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$6,330,000	$27,360,000	$33,690,000	**$38,250,000**

Source: City of Yakima, 2016; BERK, 2016

Yakima receives state and federal grants to help fund water system capital projects. Grants tend to be project-specific in nature and do not occur on a consistent basis. The Water Capital Fund received $9.1 million in grants and loan proceeds between 2011 and 2015, and a grant of about $57,000 in 2015. The City will need to consider the types of gap funding available to meet its needs for water capital investments in the future.

Water: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Water revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 62. Estimated Water Revenues and Costs (2017 – 2022), YOE$[1]

Water	Revenue Gap
Estimated Fund Revenues	**$6,330,000**
2016 Fund Balance	$4,555,143
Total Funds Available	**$10,890,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$10,890,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

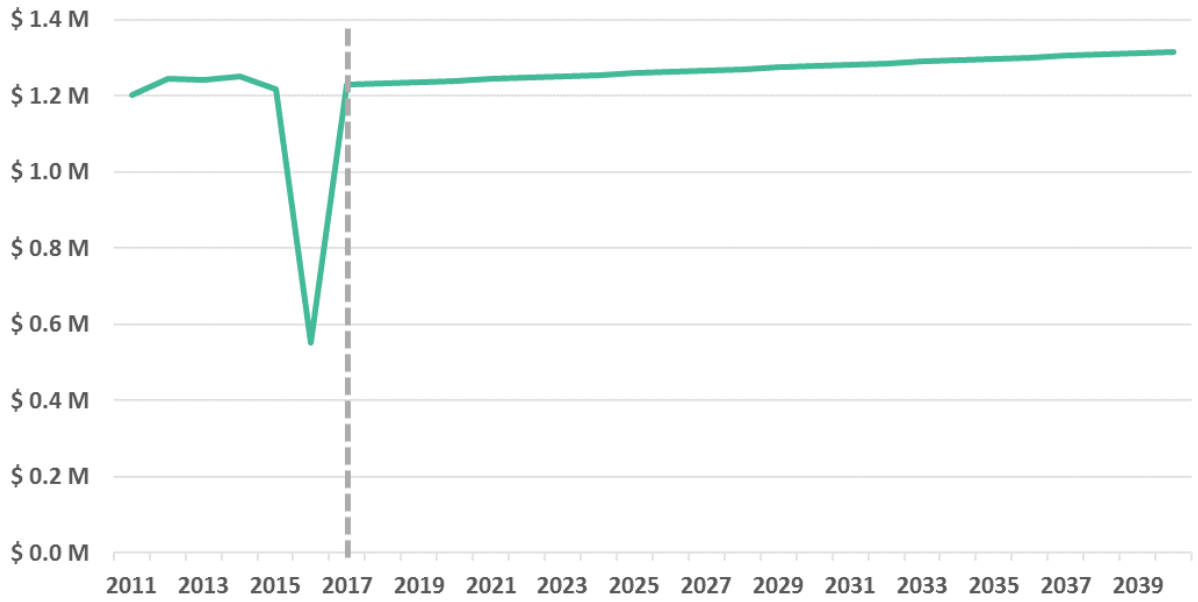
Source: City of Yakima, 2016; BERK, 2017

Irrigation

Irrigation: Dedicated Revenues

The Irrigation Capital Fund (Fund 479) historically received an average of $23.18 per capita served annually (based on the 2015 service area population) in non-transfer and non-grant revenues between 2011 and 2015. The service area for irrigation only includes a portion of Yakima, with the majority of service focused around the downtown area and the area just to the west. The assumed dedicated revenues per capita used in the model is $20.00 annually. The model assumes inflation growth of 3% annually.

Exhibit 63. Historical and Projected Irrigation Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 64 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 64. Projected Irrigation Revenues (2017 – 2040), YOE$

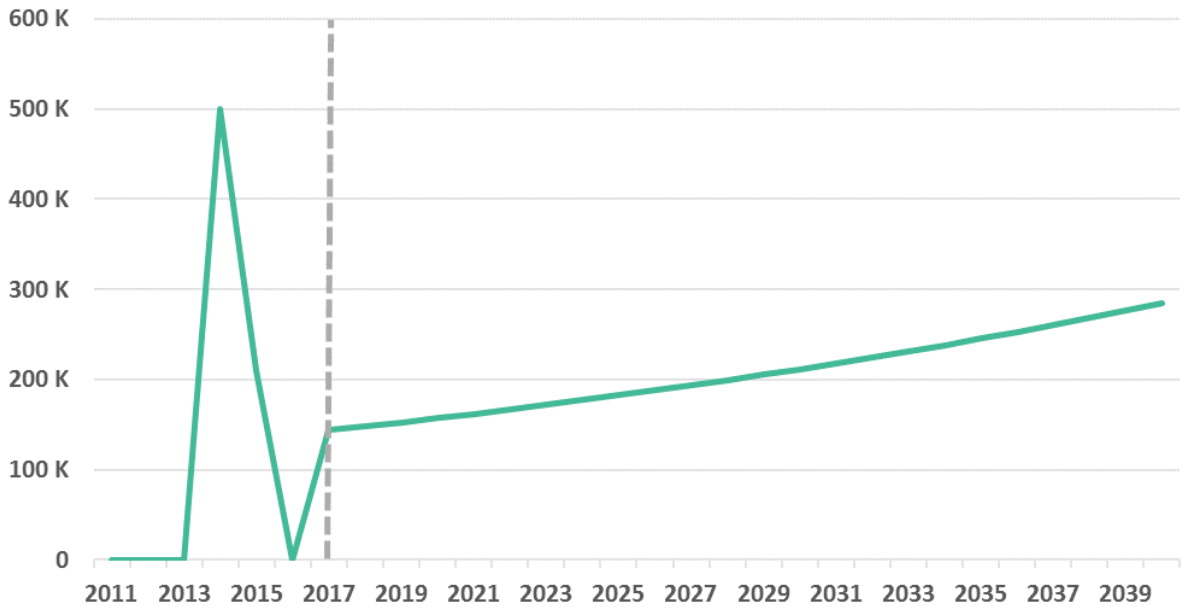
Dedicated Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$7,440,000	$23,120,000	**$30,560,000**

Source: City of Yakima, 2016; BERK, 2016

Irrigation: Operating Transfers

The City of Yakima contributes funds to the Irrigation Capital Fund through operating transfers. Five-year historical transfers occurred in 2014 and 2015, in amounts of $500,000 and $210,000. Average annual transfer between 2011 and 2015 were $142,000 and the model's assumed annual transfer is $140,000. There is an annual inflation rate of 3%.

Exhibit 65. Historical and Projected Irrigation Operating Transfers (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2016

Exhibit 66 summarizes projected revenues for the planning period as well as two subtotal time periods.

Exhibit 66. Projected Irrigation Operating Transfers (2017 – 2040), YOE$

Operating Transfers	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040
Estimated Revenues	$940,000	$3,210,000	**$4,150,000**

Source: City of Yakima, 2016; BERK, 2016

Irrigation: Total Estimated Capital Fund Revenues

Exhibit 67 shows total estimated dedicated revenues available for irrigation capital projects over the planning period, including grants, contributions, and operating transfers. Additionally, Yakima has a 2016 fund balance of about $2.5 million in its irrigation capital fund. These funds are also available to cover irrigation projects during the 2017 – 2040 period.

There have been some loan and grant revenues for irrigation in the past, but they are not a consistent source. In 2011 there was $225,000 in loan and grant money and in 2012 there was $85,000 in loan proceeds from the Department of Ecology.

Exhibit 67. Projected Dedicated Irrigation Revenues Allocated for Capital (2017 – 2040), YOE$

Total Irrigation Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$8,370,000	$27,150,000	$35,520,000	**$37,570,000**
Amount Committed to Debt Service	$2,650,000	$6,190,000	$8,840,000	**$8,840,000**
Available Revenues	$5,720,000	$20,960,000	$26,680,000	**$28,730,000**

Source: City of Yakima, 2016; BERK, 2016

Irrigation: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated Irrigation revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 68. Estimated Irrigation Revenues and Costs (2017 – 2022), YOE$[1]

Irrigation	Revenue Gap
Estimated Fund Revenues	$8,370,000
2016 Fund Balance	$2,049,953
Total Funds Available	**$10,420,000**
Capital Costs[2]	$13,100,000
Estimated Dedicated Funding Surplus/(Deficit)	**($2,680,000)**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

2.5 General Capital Revenues

Real Estate Excise Tax (REET)

Real Estate Excise Tax (REET) revenues are collected on property sales at the point of sale. They are required by law to be spent on capital projects. REET is based on the total value of real estate transactions in a given year, and the amount received annually can vary significantly based on fluctuations in the real estate market and trends in the economy.

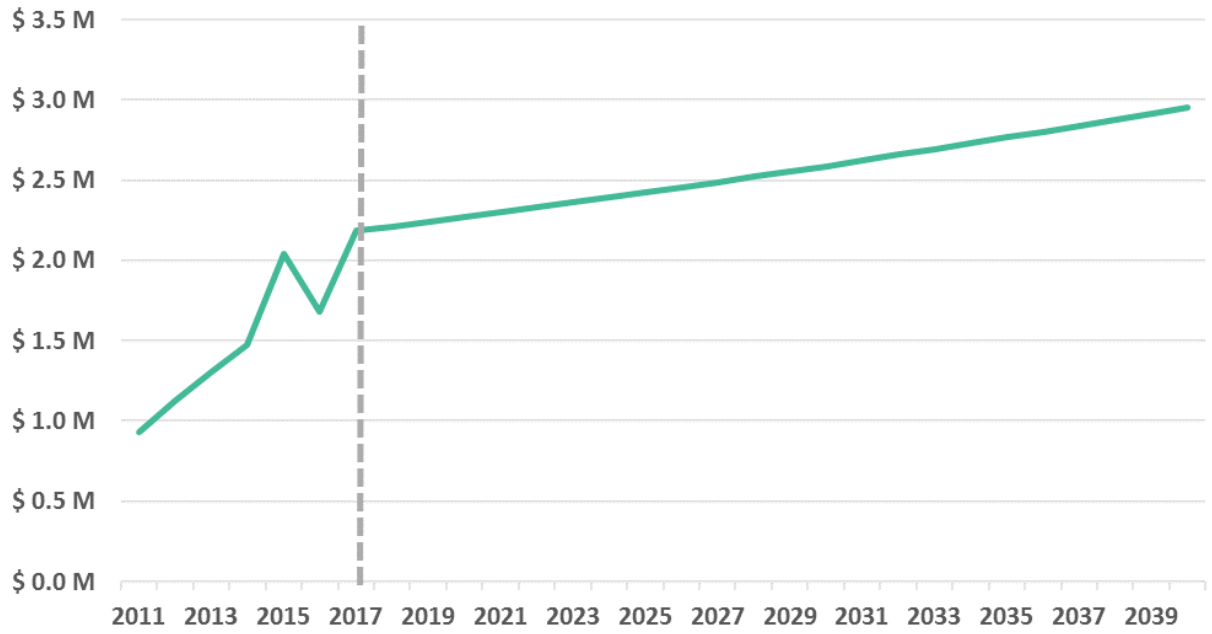
Yakima is authorized by the state to impose two separate REET levies. REET I and REET II each allow for a levy of 0.25 % on the assessed value of a sale, for a total tax of 0.5 % of total assessed value. All proceeds must be used for capital spending, as defined in RCW 35.43.040. REET II is more restricted than REET I, as it may not be spent on acquisition of land for parks, recreation facilities, law enforcement facilities, fire protection facilities, trails, libraries, or administrative or judicial facilities (RCW 82.46.035). REET II, specifically, can only be levied by those cities and counties that are planning under GMA. For REET II, the capital projects must be those specifically listed in RCW 82.46.035(5):

> *Public works projects of a local government for planning, acquisition, construction, reconstruction, repair, replacement, rehabilitation, or improvement of streets, roads, highways, sidewalks, streets and road lighting systems, traffic signals, bridges, domestic water systems, storm and sanitary sewer systems, and planning, constructions, reconstruction, repair, rehabilitation, or improvement of parks.*

Within the parameters defined by law, REET I and REET II can be spent at the discretion of the City of Yakima. A portion of REET revenues in Yakima are already committed to bond payments, but this analysis estimates that there will be additional revenues to spend for capital purposes.

Since home sales and values can fluctuate significantly depending on factors of the economy, this analysis assumes annual turnover of 4.0% for residential properties and 2.0% for commercial properties. Exhibit 69 shows historical REET revenues to the left of the dotted line and projected revenues to the right of the dotted line. Actual revenues will have some peaks and valleys due to the natural cycles of the real estate market and the economy.

Exhibit 69. Annual Real Estate Excise Tax Revenues (2011 – 2040), YOE$



Source: City of Yakima, 2016; BERK, 2017

Exhibit 70 shows the estimated total REET revenues for the next six years and for the 23-year planning horizon (2040). In 2016, REET I and REET II had an ending balance of just over $700,000, which is also available for general capital spending during the planning period. Existing debt service commitments are also shown.

Exhibit 70. Projected Real Estate Excise Tax Revenues (2017 -2040), YOE$

Total General Capital Revenues/REET	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$11,220,000	$50,160,000	$61,380,000	**$62,090,000**
Amount Committed to Debt Service	*$4,200,000*	*$10,500,000*	*$14,700,000*	***$14,700,000***
Available Revenues	**$7,020,000**	**$39,660,000**	**$46,680,000**	**$47,390,000**

Source: City of Yakima, 2016; BERK, 2017

General Capital: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated General Capital revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues.

Exhibit 71. Estimated General Capital Revenues and Costs (2017 – 2022), YOE$[1]

General Capital	Revenue Gap
Estimated Fund Revenues	**$7,020,000**
2016 Fund Balance	$705,887
Total Funds Available	**$7,730,000**
Capital Costs[2]	$0
Estimated Dedicated Funding Surplus/(Deficit)	**$7,730,000**

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

2.6 Total Capital Revenues

Exhibit 72 summarizes projected total capital revenues available over the planning period, including fund balances.

Exhibit 72. Projected Total Capital Revenues (2017 – 2040), YOE$

Total Capital Revenues	Subtotal 2017-2022	Subtotal 2023-2040	Revenue Total 2017-2040	Total with 2016 Fund Balances
Estimated Revenues	$80,510,000	$351,140,000	$431,650,000	**$437,370,000**
Amount Committed to Debt Service	*$9,250,000*	*$21,890,000*	*$31,140,000*	***$31,140,000***
Available Revenues	$71,260,000	$329,250,000	$400,510,000	**$406,230,000**

Total Revenues: Six-Year Cost and Revenue Comparison

This six-year comparison looks at the total dedicated revenue sources with its planned project costs for the six-year planning horizon of 2017 – 2022 to understand the difference between future dedicated capital costs and potential future revenues. As with most capital spending, estimated future capital costs are larger than future dedicated capital revenues. The comparison of total revenues and costs does not include Streets or Transit, which are analyzed in the 2040 Transportation System Plan.

Exhibit 73. Estimated Total Revenues and Costs (2017 – 2022), YOE$[1]

All Capital	Revenue Gap
Estimated Fund Revenues*	$56,460,000
2016 Fund Balance*	$25,180,000
Total Funds Available*	$81,640,000
Capital Costs[2] *	$317,090,000

All Capital	Revenue Gap
Estimated Dedicated Funding Surplus/(Deficit)	($235,450,000)

*Does not include Streets or Transit, which are analyzed under the 2040 Transportation System Plan.

[1]Year of Expenditure = YOE$

[2]Inflation Adjusted to YOE$ and therefore do not match costs in Section 4.

Source: City of Yakima, 2016; BERK, 2017

2.7 Policy Options and Other Funding Sources

- **Bonds**. The City uses Bonds to support capital facilities funding. Yakima has a rating of AA- from Standard and Poor's on its water and wastewater utilities, and its general obligation bonds. This rating is credited to careful staff preparation, good audits, high levels of fiscal responsibility, and comprehensive financial policies.
- **Establish Transportation Benefit District**. The City is considering creating a Transportation Benefit District that would fund the Street Construction Fund. Revenues are expected to be between $685,000 and $1.3 million, depending on a car tab fee of $10 - $20.
- **Impact Fees**. Impact fees are a financing tool allowed under state law that requires new development to pay a portion of the costs associated with infrastructure improvements that are related to the development. GMA allows agencies to implement a transportation, parks, fire, and school impact fee program to help fund some of the costs of capital facilities needed to accommodate growth. State law requires that impact fees be related to improvement that serve new developments and not existing deficiencies, that they're assessed proportional to the impacts of new development, that they're allocated for improvements that reasonably benefit new development, and that they're spent on facilities identified in the Capital Facilities Plan.
- **Local Improvement District/Road Improvement District (LID/RID)**. A LID or RID is a new taxing district that the City has the statutory authority to create. A district could be used to levy additional property tax to cover debt service payments on the sale of bonds purchased to finance projects within the district. Revenues from the levy must be used for local, clearly-defined areas where the land owners are being assessed the additional tax benefit. LID, by law, can be used for water, sewer, and stormwater projects. RIDs may be used for road funding and street improvements.
- **Other**. The City could lobby state legislators to restore some of the funding levels once available to local governments for road improvements. Although local jurisdictions receive a certain percentage of collected MVF Tax funds, a combination of factors such as decreasing gas prices and a reduction in both vehicle miles driven and vehicle fuel efficiency has resulted in local MVF Tax allocations that are generally not keeping pace with inflation. In order to restore funding levels, the City could encourage legislators to follow the recent gas tax increase with measures that raise the tax rate alongside cost inflation and increase the tax rate over time with fuel efficiency improvements.

2.8 Other Service Providers

Funding information for service providers other than the City of Yakima are summarized in the capital facility detail in Section 4.0.

3.0 COMPREHENSIVE CAPITAL FACILITY PLAN

3.1 Inventory

An inventory for each service provider is included in Section 4.0.

3.2 Level of Service Consequences

The CFP lays out the level of service (LOS) consequences of growth for the City through 2040. LOS consequences are summarized for each service. Exhibit 74 shows the LOS consequences for each facility and adopted LOS standard policies through 2040. The 2040 policy identified indicates the level of service that the City expects to be able to fund during the planning period.

Exhibit 74. Current LOS and Target LOS by City Service

Facility	Current LOS	2017 – 2040 LOS Policy
Public Buildings	• 2,400 square feet per 1,000 Population.	• No adopted policy. • To maintain existing level of service through 2036, the LOS policy would need to be 2,400 square feet per 1,000 population. • To maintain the current public building space without adding capacity through 2040, the LOS policy would need to be 1,900 square feet per 1,000 population.
Fire and Emergency Services	• Response time in 2015 was just over 8 minutes on average.	• Adopted LOS for response time is 8 minutes, 90% of the time.
Law Enforcement	• The current LOS for YPD is 1.6 officers per 1,000 population.	• Adopted LOS for YPD is 1.8 officers per 1,000 population.
Parks	• .64 acres per 1,000 population for neighborhood/mini parks. • 2.67 acres per 1,000 population for community parks.	• 2 acres per 1,000 population for neighborhood/mini parks. • 5 acres per 1,000 population for community parks.
Wastewater	• 342.8 pounds of organic loading per day per 1,000 population.	• 342.8 pounds of organic loading per day per 1,000 population.
Stormwater	• Maintain per Ecology Stormwater Management Manual for Eastern Washington or equivalent as determined by the Stormwater Management Program for the City of Yakima.	• Maintain per Ecology Stormwater Management Manual for Eastern Washington or equivalent as determined by the Stormwater Management Program for the City of Yakima.
Water	• 233 gpd per ERU.	• 233 gpd per ERU.
Irrigation	• 1.6 miles of pipe per 1,000 population.	• Minimum design pressure of 20 psi.
Air Terminal	• Reliable and safe air service at a facility that is compatible with the community. • Compliance with the Airport Master Plan 2015, or as amended.	• Reliable and safe air service at a facility that is compatible with the community. • Compliance with the Airport Master Plan 2015, or as amended.
Solid Waste	• Providing solid waste services that are efficient, cost effective and environmentally responsible.	• Provide solid waste services that are efficient, cost effective and environmentally responsible.

Facility	Current LOS	2017 – 2040 LOS Policy
	• 1.23 tons per household per year collected.	• Set level of service consistent with existing service of collecting 1.23 tons per household per year. • Set service standard for percent of solid waste diverted to recycling.

3.3 Projects

A list of planned projects for each service provider is detailed in the inventory section. The lists include summaries of six-year capital plans and, where available, projects for the long-term 2022 – 2040 planning period.

4.0 CAPITAL FACILITY DETAIL

4.1 Public Buildings

Overview

The City manages municipal and cultural buildings including City Hall, Capitol Theatre, and the Convention Center, of which the latter two are managed by the Capitol Theatre Committee and the Yakima Valley Visitors and Convention Bureau. The City identifies capital maintenance, replacements, and other needed investments in its City Budget that help develop the capital improvement program and identify available revenues. The City does not have a level of service standard for public buildings, and facilities are anticipated to be adequate to meet the needs of current population and future growth.

Inventory

Public buildings by City Council district are listed below. Most of the public buildings are in District 4, which includes the community's historic downtown.

Exhibit 75. Public Buildings Inventory (2016)

Facility	Location	Size (Sq Ft)
District 1		
Convention Center	10 N 8th St	68,344
YPAL	602 N 4th St	10,472
District 2		
ONDS Office	112 S 8th St	2,352
Probation Office	207 E Spruce	5,376
Henry Beauchamp, Jr. Community Center	1211 S 7th St	19,352
District 4		
City Hall	129 N 2nd St	61,230
Capitol Theatre	19 s 3rd St	55,700
Trolley Barn	404 S 3rd Ave	13,572
YPAC	124 S 2nd St	6,160
City Gas Island	302 N 1st St	15,000
District 5		
Public Works	2301 Fruitvale Blvd	93,565

Facility	Location	Size (Sq Ft)
Total		351,123

Source: City of Yakima, 2016; BERK, 2016

Level of Service

There is no established level of service (LOS) standard for public buildings in Yakima. Exhibit 76 shows potential LOS standards based on the assumption that the city is currently meeting an appropriate standard (2,400 square feet per 1,000), as well as an adjusted standard indicating what the LOS standard would need to be in order to continue to serve through 2040 with the current inventory (1,900 square feet per 1,000).

Exhibit 76. LOS Analysis – Public Buildings

Time Period	Yakima Population	Sq Ft to Meet Target LOS Standard	Current Sq Ft Available	Net Reserve or Deficit
LOS Standard = 2,400 Sq Ft per 1,000				
2016	93,410	224,184	227,079	2,895
2022	100,094	240,226	227,079	-13,147
2040	116,431	279,434	227,079	-52,355
LOS Standard = 1,900 Sq Ft per 1,000				
2016	93,410	177,479	227,079	49,600
2022	100,094	190,179	227,079	36,900
2040	116,431	221,219	227,079	5,860

Note: Calculations do not include the Convention Center or the Capitol Theatre in the inventory of Public Buildings square footage.

Source: City of Yakima, 2016; BERK, 2016

The City should designate an LOS standard for capital facilities deemed necessary for the operations of the City. The current effective level of service for public buildings is around 2,400 square feet per 1,000 residents. To maintain this level of service through 2040, an additional 38,000 square feet will need to be added to the public building inventory, with around 6,500 square feet added by 2022 if the standard is to be consistently maintained during the 6-year planning period. If LOS for public buildings were around 1,900 square feet per 1,000 residents, there would be capacity for public buildings through 2040, with an additional 6,000 square feet of capacity remaining.

Projects, Cost, and Revenue

There are currently no capacity or non-capacity projects planned for the six or 23-year period.

4.2 Fire and Emergency Services

Overview

The City of Yakima Fire Department (YFD) provides emergency and non-emergency fire, rescue and medical services to the City. The Fire Department operates under the mission of “provid(ing) all-risk emergency and non-emergency services to the community”; ”commit(ing) to serving with courage and compassion as stewards of public trust”; and, “leav(ing) a positive and genuine impact on all who call upon (the Department).” (Mission Statement, 2016).

As of January, 2015 the YFD provides services to the cities of Union Gap and Yakima County Fire Protection District 11 (Broadway) through an interlocal agreement (YFD, 2016).

YFD does not provide EMS transport. Two private ambulance operators, ALS and AMR, provide these services to those needing transport (Soptich, 2016).

Inventory

The facilities used by YFD include 6 active stations, 2 inactive stations, a maintenance shop, and a drill facility. In total, the Department operates out of 67,255 square feet with 9 engines, 1 ladder truck, and various other fleet vehicles that support the Department's work. The facilities host 104 FTEs and 12 reserve personnel. (Soptich, 2016)

Exhibit 77 summarizes the capital facilities for the YFD.

Exhibit 77. Current Facilities Inventory – Yakima Fire Department (2016)

Facility	Location	Size (SqFt)	Equipment
Station 91	401 North Front Street	12,540	2 Engines, ladder truck, rescue, 2 command, brush, multiple staff units
Station 92	7707 Tieton Drive	8,032	Engine and brush
Station 93	511 North 40th Ave.	9,188	Engine, platform truck, rehab unit, utility
Station 94	2404 West Washington Ave.	6,568	Engine, tender, 2 ARFF units
Station 95 & Drill Facility	807 East Nob Hill Blvd.	10,939	2 Engines, tech rescue, utility
Station 96 by agreement	107 W. Ahtanum Rd. Union Gap	5,470	2 Engines and 1 bush unit
Maintenance Shop	2200 Fruitvale Blvd.	6,500	Maintenance truck
Race Station		4,988	General storage
Fruitvale Station	2200 Fruitvale Blvd.	3,000	
Total		**67,255**	

Source: Deputy Chief Mark Soptich, City of Yakima Fire Department, personal communication, 2016

The Fire Department is staffed with a total of 115 employees, with the following range of positions:

- 1 Chief
- 2 Deputy Chiefs
- 2 Administrative Positions
- 8 Day Positions
- 90 Firefighters
- 12 Reserve Positions

Level of Service

Fire facilities have capital needs based on facility location and staffing. These two factors feed into a unit's response time, which is how LOS is generally measured. Response time is defined as the amount of time between the initial call for assistance and the arrival of the full first alarm response to an incident. The department also measures turnout times (the time between a call and when apparatus are mobilized) and travel times (the time before the first engine company arrives) (YFD, 2016). The length of response time is mitigated by distributing stations throughout the city strategically, the type of equipment available at each of the facilities, and the level of staffing.

Exhibit 78 shows the response time policies and the 2015 recorded average response time, as well as how often the Department met the policy.

Exhibit 78. Response Times – Yakima Fire Department

Measure	Policy	2016 Average (seconds)	% of Time Policy Was Met in 2015
Fire Suppression			
Turnout Time*	120 seconds, met 90% of the time	110	64%
Travel Time **	240 seconds, met 90% of the time	238	58%
First Full Alarm Assignment***	480 seconds, met 90% of the time	429	69%
EMS			
Turnout Time	90 seconds, met 90% of the time	85	62%
Travel Time	240 seconds, met 90% of the time	208	71%

Note: The Fire Department also measures turnout and response times for special operations, aircraft rescue and firefighting, and wildland fires.

*Time between the initial call for assistance and the departure of the initial response apparatus.

**Time of travel between the turnout and arrival of the first engine company or EMS response.

***The time it takes for arrival of the full complement of a first alarm response to a fire suppression incident.

Source: City of Yakima Fire Department, 2016 Annual Report, 2017

The current adopted level of service for response time is 8 minutes. In 2016, the department met this level of service 69% of the time, with an average response time of just over 8 minutes. However, the 2016 Annual Report indicated that there has been an increase in number of calls and type of responses, which has changed the scope of service needed by YFD (YFD, 2016). As calls and incident types increase, the department could experience pressure on its ability to provide services at the identified LOS standard, leading to a need for changes to the operations and facilities.

Projects, Cost, and Revenue

There is currently one project planned for 2017, which is the construction of an apparatus and equipment storage building at Station 95 with an estimated cost of $407,000.

In 2014, the Fire Department commissioned a local architectural firm to provide a cost estimate for remodeling and modernizing the city's 2 circa 1973 fire station facilities. At the same time, an evaluation was completed on failing concrete and asphalt surfaces at all 5 city-owned fire station facilities. Together, the estimate totaled approximately 10 million dollars - with nearly 1 million of that estimate representing

the concrete and asphalt projects. Small projects relating to the identified needs have been undertaken, but otherwise there have been no additional steps taken.

4.3 Law Enforcement

Overview

Yakima's Police Department (YPD) occupies its main facility in Downtown Yakima, the Law and Justice Center, which is shared with courts, legal, and corrections. The department has 185 uniformed and support personnel (Seely, 2016). The Department responds to almost 80,000 calls for service each year, and does patrol, detective, and special operations work with officers working in the Gang Unit, K-9 Patrol Unit, Narcotics K-9's, SWAT, Traffic, Narcotics, and School Resource Officers (About YPD, 2016).

The City Jail, which began operations in 1996, has 13 employees (three Corrections Sergeants and ten Corrections Officers). The full-service jail facility has capacity for 78 prisoners. (YPD, 2015)

Inventory

The Department is in need of a new facility downtown and a satellite facility in the west side precinct in order to efficiently provide police services to a growing city. The ideal location was found to be near 64th and Nob Hill or Tieton Drive. The current overall space need was found to be 70,500 square feet, in a Space Needs Assessment prepared in 2014. This contrasts the existing 26,000 square feet that YPD is currently operating out of (see Exhibit 79). (Seely, 2016)

Exhibit 79. Current Facilities Inventory – Yakima Police Department (2016)

Facility	Location	Size (SqFt)
Law and Justice Center	200 S 3rd St.	26,000
Total		**26,000**

Source: Captain Jay Seely, City of Yakima Police Department, personal communication, 2016

Level of Service

LOS standards for law enforcement operations in Yakima are based on the ratio of officers to population. The number of officers employed relates to the capital investments of the Department, since increasing the staffing levels will have implications for the space and equipment used by the officers. The LOS policy is generally impacted by location, socio-economy characteristics, demographics, size of a city, and other local dynamics.

The current LOS policy for YPD is 1.8 officers per 1,000 residents (see Exhibit 80). Using the LOS of 1.8 officers per 1,000 residents, the department currently has a deficit of 20 officers. Since population growth will lead to increased demand for police services, with current staffing levels there would be a deficit of 62 officers by 2040 (when population is expected to increase to over 110,000). Given that YPD is already operating out of a constrained space, the addition of 60 officers will add to the need for new and expanded capital facilities.

The effective LOS in Yakima is currently just under 1.6 officers per 1,000 residents. With this LOS, the current deficit is one officer. If this LOS is considered acceptable, 38 additional officers would need to be added by 2040. Although the addition of 38 new officers would require less new facility space and vehicles than the LOS of 1.8 officers per 1,000, significant capital investments would still be needed.

Exhibit 80. LOS Analysis – Yakima Police Department

Time Period	Yakima Population	Officers to Meet Target LOS Standard	Current Officers Available	Net Reserve or Deficit
LOS Standard = 1.8 Officers Per 1,000 Population				
2016	93,410	168	148	-20
2022	100,094	180	148	-32
2040	116,431	210	148	-62
Effective LOS Standard = 1.6 Officers Per 1,000 Population				
2016	93,410	149	148	-1
2022	100,094	160	148	-12
2040	116,431	186	148	-38

Source: Captain Jay Seely, City of Yakima Police Department, personal communication, 2016

Projects, Cost, and Revenue

There are no short- or long-term capital projects currently identified for law enforcement. It has been identified that the police department needs a new facility in the downtown area as well as a standalone facility in the west side precinct to ensure efficient police services as the city continues to grow. The Space Needs Assessment conducted in 2014 by Loofburrow/Wetch Architects and Moyer and Associates found that there is a current need for 70,500 square feet of space (significantly larger than the current 26,000 square feet). In addition, the best location for a west side precinct was determined to be 64th Avenue near Nob Hill or Teiton Drive with a facility size between 15,000 and 20,000 square feet.

To date, a search of potential existing buildings to be remodeled in the downtown area was completed. Three buildings were identified, but engineering studies determined that costs associated with bringing those buildings up to code would be too great. The 2014 study included a $100 million recommendation to expand the existing police facility footprint. Since the process occurred in 2014, no additional steps have been taken. The department's future strategy includes investing in a larger facility and a west side precinct, but no projects have been budgeted or planned for.

4.4 Parks

Overview

The City of Yakima Parks system includes Parks, Pathways, a Golf Course, a Cemetery, and Parkways. The facilities are managed by Yakima's Parks & Recreation Division. Parks & Recreation serves within the city limits. The Tahoma Cemetery, which is part of the Parks Department, has been in business since 1889 and was added to the Washington Heritage Register of Historic Places in 2004.

Inventory

Yakima has 401.82 acres of parks and recreation facilities. Exhibit 81 provides a list of parks facilities in Yakima, broken down by district and classified by park type. Park types include Regional, Neighborhood, Community, Mini, Pathway, Parkway, Golf Course, and Cemetery.

Exhibit 81. Parks Inventory by District (2016)

Facility	Location	Park Type	Size (Acres)
District 1			**12.23**
Milroy Park	16th and Lincoln	Neighborhood Park	3.63
Cherry Park	4th and Cherry	Mini Park	0.5
McGuinness Park	14th and Swan	Mini Park	1.91
Miller Park	4th and E	Neighborhood Park	3.96
Walter Ortman Parkway	Willow St: 10th-6th	Pathway	0.7
5th Ave Roundabout	5th and Fruitvale	Mini Park	0.13
Naches Ave Parkway		Parkway	1.4
District 2			**104.6**
Kiwanis Park	Fair and Maple	Community Park	34.3
Yakima Area Arboretum	I-82 and Nob Hill	Community Park	60
MLK Park	9th and Beech	Neighborhood Park	4.01
SE Community Park	8th and Arlington	Neighborhood Park	3.63
S 2nd Park	2nd and Race	Mini Park	0.52
Naches Ave Parkway		Parkway	1.84
Fair Ave Islands	Fair Ave near Kiwanis Park	Mini Park	0.3
District 3			**114.33**
Gardner Park	Pierce and Cornell	Neighborhood Park	9.13
Perry Soccer Complex	16th and Washington	Community Park	10
Tahoma Cemetery	S 24th Ave	Cemetery	60
Kissel Park	32nd and Mead	Community Park	17
Fisher Golf Course	40th and Arlington	Golf Course	18.2
Sozo Sports Complex			
District 4			**32.28**
Raymond Park	1st and Arlington	Mini Park	2.17
Lions Park and Pool	5th and Pine	Neighborhood Park	4.38
Portia Park	12th and Yakima	Mini Park	0.52
Larson Park	12th and Arlington	Neighborhood Park	4.4
Rosalma Garden Club	16th and Tieton	Mini Park	0.45
Franklin Park	21st and Tieton	Community Park	17.66
Tieton Terrace Park	26th and Walnut	Mini Park	0.42
S 6th Parkway	6th and Tieton	Parkway	0.17
Naches Ave Parkway		Parkway	2.11
District 5			**53.1**
Elks Memorial Park	8th and Hathaway	Community Park	12.66
Chesterley Park	40th and River Rd	Community Park	31.2
Powerhouse Canal Pathway	Powerhouse Rd	Pathway	8
Summitview Park	11th and Summitview	Mini Park	0.76
River Rd Pump Station	40th and River Rd	Mini Park	0.48
District 6			**16.81**
Gilbert Park	49th and Lincoln	Neighborhood Park	11.62

Facility	Location	Park Type	Size (Acres)
Gailleon Park/Harman Center	65th and Summitview	Neighborhood Park	4.5
N 44th Parkway	N 44th: Lincoln to Uplands	Parkway	0.69
District 7			**68.47**
Randall Park	48th and Viola	Community Park	40.24
West Valley Community Park	80th and Wide Hollow	Community Park	26.2
Fairbrook Islands	Fairbrook Addition	Mini Park	2.03
Total			**401.82**

Source: City of Yakima, 2016; BERK, 2016

Exhibit 82 lists the total park acreages by park types.

Exhibit 82. Park Acres by Park Type (2016)

Park Type	Acres
Mini Park	10.2
Neighborhood Park	49.3
Community Park	249.3
Pathway	8.7
Parkway	6.2
Golf Course	18.2
Cemetery	60.0
Total	**401.8**

Source: City of Yakima, 2016; BERK, 2016

Additional information about parks and recreation in Yakima, including more specific information about park properties, is available in the *2017 Yakima Parks and Recreation Comprehensive Plan*.

Level of Service

The Yakima Parks and Recreation Department level of service analysis is included in Exhibit 83. Only the Neighborhood and Community Parks are assigned levels of service standards.

Exhibit 83. Parks Level of Service

Time Period	Yakima Population	Acres to Meet Target LOS Standard	Current Acres Available	Net Reserve or Deficit
LOS Standard = 2 acres per 1,000 for Neighborhood/Mini Parks				
2016	93,410	186.8	59.5	-127.4
2022	100,094	200.2	59.5	-140.7
2040	116,431	232.9	59.5	-173.4
LOS Standard = 5 acres per 1,000 for Community Parks				
2016	93,410	467.1	249.3	-217.8
2022	100,094	500.5	249.3	-251.2
2040	116,431	582.2	249.3	-332.9

Source: City of Yakima, 2016; BERK, 2016; City of Yakima 2025 Urban Area Comprehensive Plan, 2006

Based on a 2-acre per 1,000 population standard for Neighborhood/Mini Parks, the City of Yakima has a current deficit of park lands, and will have a deficit of 173 acres by 2040 if no additional Neighborhood

Parks are added. Based on a 5-acre per 1,000 population standard for Community Parks, the City has a current deficit of 217 acres and will have a deficit of over 300 acres by 2040 if no additional Community Park lands are added.

Projects, Cost, and Revenue

Exhibit 84 contains a list of parks capacity and non-capacity capital projects planned through 2040.

[The Parks and Recreation Comprehensive Plan is currently under update and this project list is subject to change.]

Exhibit 84. Parks Projects (2016$)

Category / Project Description	Revenue Sources	Cost 2017 - 2019	Cost 2020 – 2022	Cost 2023 - 2040	Total Cost
Category I (Capacity)					
Land Acquisition	Bonds/ Grants/ Donations / Parks Capital	0	6,000,000	0	6,000,000
Outdoor Pool	Bonds/ Grants/ Donations/ Parks Capital	5,000,000	0	0	5,000,000
Land Acquisition	Bonds/ Grants/ Donations/ Parks Capital	0	3,000,000	0	3,000,000
Spray Park - W.V. Community	Grants/ Donations/ Parks Capital	0	400,000	0	400,000
Category II (Non-Capacity)					
Replace Playground - McGuinness	Donations/ Grants/ Parks Capital	125,000	0	0	125,000
Replace Playground - Cherry	Donations/ Grants/ Parks Capital	100,000	0	0	100,000
Basketball Court - Cherry	Donations/ Grants/ Parks Capital	0	75,000	0	75,000
Picnic Shelter - MLK Jr.	Donations/ Grants/ Parks Capital	50,000	0	0	50,000
Replace Parking Lots - Randall	Donations/ Grants/ Parks Capital	150,000	0	0	150,000
Replace Walkways - Randall	Donations/ Grants/ Parks Capital	100,000	0	0	100,000
Replace Filtration System - Lions Pool	Donations/ Grants/ Parks Capital	150,000	0	0	150,000
Restroom - MLK Jr.	Donations/ Grants/ Parks Capital	175,000	0	0	175,000
Replace Playground - MLK Jr.	Donations/ Grants/ Parks Capital	0	125,000	0	125,000
Replace Playground - Gardner	Donations/ Grants/ Parks Capital	125,000	0	0	125,000

Category / Project Description	Revenue Sources	Cost 2017 - 2019	Cost 2020 – 2022	Cost 2023 - 2040	Total Cost
Playground - Raymond	Donations/ Grants/ Parks Capital	0	100,000	0	100,000
Replace Playground - Chesterley	Donations/ Grants/ Parks Capital	125,000	0	0	125,000
Replace Playground - Miller	Donations/ Grants/ Parks Capital	0	125,000	0	125,000
Basketball Court - S/E Community	Donations/ Grants/ Parks Capital	75,000	0	0	75,000
Picnic Shelter - S/E Community	Donations/ Grants/ Parks Capital	0	50,000	0	50,000
Picnic Shelter - Kissel	Donations/ Grants/ Parks Capital	0	50,000	0	50,000
Irrigation Filtration System - Tahoma Cemetery	Donations/ Grants/ Parks Capital	25,000	0	0	25,000
Replace Bulkhead - Lions Pool	Donations/ Grants/ Parks Capital	0	100,000	0	100,000
Replace Slide - Franklin Pool	Donations/ Grants/ Parks Capital	250,000	0	0	250,000
Playground - Larson	Donations/ Grants/ Parks Capital	0	125,000	0	125,000
Replace Picnic Shelter - Larson	Donations/ Grants/ Parks Capital	0	50,000	0	50,000
Resurface Walkways - W.V Community	Donations/ Grants/ Parks Capital	0	100,000	0	100,000

City of Yakima Parks and Recreation Department, 2016; BERK, 2016

4.5 Transportation: Streets and Transit

Streets and Transit

See the 2040 Transportation System Plan under separate cover.

Street Lights

The 2040 Transportation System Plan also includes projects related to street lights. Street lights are one of many of Yakima's expenses each year. The City of Yakima maintains 4,925 street lights. The approximate cost for power consumption is around $300k per year which works out to about $61 per light per year. The City is in the process of converting street lights to energy-saving LED lights. There is no adopted level of service standard.

4.6 Wastewater

Overview

The Yakima Regional Wastewater Treatment Plant (YRWWTP) processes wastewater from homes and businesses in Yakima, as well as Union Gap, Terrace Heights, and Moxee. The plant currently receives a

monthly flow of around 13 millions of gallons per day (MGD) on average, with peak flows during irrigation season when infiltration adds around 4 MGD to the warm weather flows. Current plant capacity is rated near 22 MGD.

There are pockets of land in the City that are not served by sewers due to the land being vacant, challenging physical conditions, or past development allowed on septic systems. The City lacks a system-wide sewer plan to identify the specific locations of new trunk lines, engineering, and the cost of new lines.

The City conducted a sewer system plan update in 2016, which considers future land use and growth. Although the YRWWTP has capacity for anticipated growth, the System Plan focuses on maintenance and expansion of the conveyance system. See the Capital Facility Plan Appendix for additional information.

Inventory

Yakima has a total capacity of 21.5 million gallons per day at the Wastewater Treatment Plant, which is in District 2. Exhibit 85 shows an inventory of the system, including the treatment plant, pipe miles, lift stations, and maintenance appurtenances. In 2009, the facility was upgraded to remove gas chlorination disinfection and install ultra violet disinfection capabilities. Continued upgrades will allow for the re-use of resources, expanded capacity, improved environmental performance, and reduced electrical costs (City of Yakima, 2016).

Exhibit 85. Inventory of Wastewater Facilities (2016)

Yakima Wastewater System Facilities	Sanitary Sewer Pipe (miles)	Industrial Waste Pipe (miles)	Lift Stations (count)	Maintenance Appurtenances (count of manholes, etc.)	Maintenance Appurtenances (mile of pipe)	Wastewater Treatment Plant, (MGD capacity)
District 1	29	2	1	463	16	-
District 2	39	2	3	633	16	21.5
District 3	48	0	0	1,022	21	**-**
District 4	45	2	2	769	17	**-**
District 5	48	1	2	1,098	23	-
District 6	61	0	2	1,443	24	-
District 7	59	0	0	1,322	22	-
Outside of City	22	0	0	212	10	-
Total	**351**	**7**	**10**	**6,962**	**-**	**21.5**

Source: City of Yakima, 2016; BERK, 2017

Level of Service

The Yakima Regional Wastewater Treatment Plant (YRWWTP) has long-term capacity to serve at current levels. A 2014 evaluation of loading and capacity done by the Water and Irrigation Division, shown in Exhibit 86, indicated that there is capacity for hydraulic loading through 2074, organic loading through 2043, and solids loading through 2052. Capacity expansions are mandated when loading reaches 85% of the plant's rated capacity for a particular loading parameter for three consecutive months.

Exhibit 86. YRWWTP Unit Loading and Capacity Utilization Projections (2016)

	Hydraulic	Organic	Solid
2014 Maximum Month Total Loading	11.05 MGD	38,175 ppd BOD	25,037 ppd TSS

	Hydraulic	Organic	Solid
2014 Population	110,413	110,413	110,413
2014 Maximum Unit Loading	100 gpcd	0.35 lbpcd	0.23 lbpcd
Service Area Population at 100% Capacity	215,000	152,571	167,826
Year at 100% Capacity	2074	2043	2052
Permitted Maximum Month Loading	21.5 MGD	53,400	38,600

Source: City of Yakima, 2016; Mike Price, Wastewater/Stormwater Manager, City of Yakima, 2016

Exhibit 87 provides the LOS analysis for wastewater treatment, focusing on the capacity for treating maximum monthly pounds of organic material. The YRWWTP has capacity to treat up to 53,400 pounds of organic material. With current maximum monthly load levels of 342.8 pounds of organic loading per day per 1,000 population, the facility will have surplus treatment capacity of over 3,000 pounds in 2040.

Exhibit 87. Wastewater LOS Analysis

Time Period	Service Area Population[1]	lbs of Organic Treatment Capacity Needed to Meet Target LOS Standard	Current lbs Organic Treatment Capacity Available	Net Reserve or Deficit (lbs)
LOS Standard = 342.8 pounds of maximum monthly organic loading per 1,000 population				
2016	111,696	38,175	53,400	15,225
2022	121,102	41,390	53,400	12,010
2040	147,379	50,371	53,400	3,029

*The Wastewater service area population includes the City of Yakima, Union Gap, and Terrace Heights

Source: Source: City of Yakima, 2016; Mike Price, Wastewater/Stormwater Manager, City of Yakima, 2016

Projects, Cost, and Revenue

Although the YRWWTP has capacity to accommodate the additional service area population through 2040, it is anticipated that there will be conveyance and treatment capital projects. Future projects include an industrial waste bioreactor that treats food processing waste, the removal and use of phosphorous as fertilizer, recovery of methane biogas to operate WWTP systems, and conversion of biosolids into quality fertilizer (City of Yakima, 2016). In additional, more stringent National Pollutant Discharge Elimination System restrictions may contribute to capital needs if system upgrades are needed to comply with limits on discharge quality.

Exhibit 88 shows the planned wastewater projects through 2040.

Exhibit 88. Wastewater Planned Projects (2017 – 2040)

Project Category	Revenue Sources	Cost 2017 - 2019	Cost 2020 – 2022	Cost 2023 - 2040	Total Cost
Category I (Capacity)					
Conveyance	Fees/Bonds	4,000,000	9,000,000	70,000,000	83,000,000
Treatment	Fees/Bonds	6,000,000	5,000,000	70,000,000	81,000,000
Category II (Non-Capacity)					
Conveyance	Fees/Bonds	35,200,000	36,000,000	238,000,000	309,200,000
Treatment	Fees/Bonds	31,000,000	37,000,000	238,000,000	306,000,000

Source: City of Yakima, 2016

4.7 Stormwater

Overview

Yakima's stormwater collection area includes the City of Yakima, as well as some of the West Valley area outside of city limits. With hot, dry summer weather and cold, dry winters, the majority of the annual precipitation occurs between October and March. Runoff typically occurs during rapid warming events and is tied closely to the snowfall conditions in the Cascades. In accordance with the NPDES Western Washington Phase II Municipal Stormwater Permit the City requires development to provide on-site stormwater management to mitigate these impacts. Level of service standards require stormwater quantity and quality treatment to be consistent with the City stormwater manual. See the Capital Facilities Plan Appendix for additional information.

Inventory

Yakima has a total of 135 miles of storm pipe and 5,300 catch basins. The full inventory of stormwater facilities by Council District are listed in Exhibit 89.

Exhibit 89. Stormwater Facilities Inventory (2016)

Facility	Storm Pipe (miles)	Catch Basins (count)	UIC Wells (count)	Manholes (count)	Swales (count)
District 1	12.53	165	27	80	4
District 2	12.76	598	57	103	14
District 3	27.95	647	51	227	3
District 4	22.03	1,025	16	202	1
District 5	16.88	565	66	146	14
District 6	19.04	1,185	289	59	4
District 7	23.57	1,115	235	114	22
TOTAL	**134.76**	**5,300**	**741**	**931**	**62**

Source: City of Yakima, 2016; Mike Price, Wastewater/Stormwater Manager, City of Yakima, 2016

Level of Service

Level of service is regulated by the city's code and design standards that comply with state regulation. All new development must meet water quality, runoff, and erosion control requirements of the local and state regulations. In 2005, Yakima County and the Cities of Yakima, Union Gap, and Sunnyside entered an Interlocal Governmental Agreement for compliance under the Eastern Washington Phase II Municipal Stormwater Permit. The Stormwater Management Manual for Eastern Washington provides the design and management practices for facilities in compliance with federal, state, and local jurisdictional requirements.

As the City grows, developments will be required to install new conveyance and stormwater management systems. Maintaining level of service through 2040 will require maintaining the existing system and ensuring new facilities are constructed in accordance with the Municipal Stormwater Permit.

Projects, Cost, and Revenue

There is one stormwater improvement project planned at the North 49th Avenue drainage from from Englewood Avenue to Gilbert Park. The capital project is planned for the years 2017 through 2019, and will cost $440,000 (2016$).

4.8 Water

Overview

Water and irrigation services in Yakima are provided by the Yakima Water/Irrigation Division, which is owned and operated by the City of Yakima, and the non-profit Nob Hill Water Association (which is partially located within the City) (Nob Hill Water, 2016). Some areas are under served; water service is extended on request and new development pays for the extension of infrastructure.

Yakima Water/Irrigation Division

The City's water system generally serves central and eastern Yakima. The City's Water System Plan Update for 2017 estimates a service population of 70,800 in 2010 growing to 72,624 in 2015. Yakima Water/Irrigation Division is supplied by a surface water treatment plan on the Naches River and four active wells that are used for seasonal emergencies and to meet peak demands. The City has developed a draft Water System Plan Update (pending 2017) that is designed to meet the target growth and land use plan of this Comprehensive Plan. The Water System Plan Update estimates 233 gallons per day (gpd) per equivalent residential unit (ERU), and applies that to the projected land use and associated population growth. With the Comprehensive Plan Update, one-third of the expected population target is anticipated in the City's water service area and the rest in the Nob Hill Water Association service area.

Inventory

The City of Yakima Water/Irrigation Division is serving over 73,000 customers with the facilities identified in Exhibit 90. There are a total of 2,464 fire hydrants, 1,590,619 feet or pipe, and 6,755 valves.

Exhibit 90. Water Facilities Inventory – City of Yakima Water Division (2016)

Facility	Fire Hydrants (count)	Pipe (feet)	Valves (count)
District 1	283	169,883	830
District 2	394	247,456	1,159
District 3	504	307,576	1,429
District 4	406	245,620	1,167
District 5	554	350,506	1,539
District 6	56	45,165	203
District 7	115	75,025	339
Out Side City Limits	137	149,388	89
Total	**2,449**	**1,590,619**	**6,755**

Source: City of Yakima, 2016; David Brown & Mike Shane, Water Department, City of Yakima, 2016; BERK, 2017

Level of Service

The Yakima Water Division works to provide water to those in the service area, targeting capacity at or above the maximum day demand (MDD). The Yakima Water System Plan projects future water demand in order to identify needed system improvements, including supply, pumping, storage, and piping. The system considers the different demands associated with different land uses (such as single-family, multi-family, commercial, industrial, and government).

One measure used is the MDD since it helps with understanding what the maximum demand on the system may be at any given time. Exhibit 91 shows the projected MDD for 2015 through 2040. The current system capacity is 21.6 millions of gallons per day (MGD), and in 2040 there will be an additional 1.7 MGD of capacity beyond the projected MDD.

Exhibit 91. Water LOS Analysis – Millions of Gallons per Day (MGD)

Time Period	Service Area Population	Projected Maximum Day Demand (MGD)	Current Water Treatment Plant Capacity (MGD)	Net Reserve or Deficit
2015	73,722	18.4	21.6	3.2
2020	75,623	18.9	21.6	2.7
2025	77,573	19.3	21.6	2.3
2030	79,573	19.8	21.6	1.8
2035	81,625	20.3	21.6	1.3
2040	83,730	20.8	21.6	0.8

Source: City of Yakima, 2016; Draft City of Yakima 2017 Water System Plan, 2016; HDR, 2017; BERK, 2017

Projects, Cost, and Revenue

Currently the only capacity project planned for the water system is an Aquifer storage and recovery project, which includes work on two wells. The project is anticipated to occur in the 2023 – 2040 time frame and will cost $10 million (2016$). Non-capacity water capital projects for the 2017 – 2040 planning period are still pending.

Nob Hill Water Association

The West Valley area of Yakima is served by the Nob Hill Water Association. The Association's residential population, estimated at around 30,000 in 2015, is expected to grow at 1.4% throughout the planning period to a population of over 40,000 in 2040. This growth will have a proportionate effect on the Association's water demands. The Association's average day demand is expected to increase from 4.43 MGD in 2015 to 6.87 MGD in 2035. Its maximum day requirement is expected to increase from 6,160 gallons per minute (gpm) in 2015 to 9,550 gpm in 2035. The Association has sufficient water rights to serve its entire water service area through buildout, provided that it can continue to provide a majority of new developments with separate irrigation systems using water from the Yakima Valley Canal Company and Yakima Tieton Irrigation District. To formalize this strategy, the Association has entered into a Memorandum of Understanding with the irrigation providers, the City of Yakima, and Yakima County. The Water System Plan identifies a need to drill a new well in the 6-year planning period (2016-2022) and to add another well in the 23-year planning period. Other improvements include the need for standby storage and booster pump station improvements. The Water System Plan uses a standard of 309 gpd/ERU.

Inventory

The Nob Hill Water Association served over 28,000 customers in 2016, with some of the customers located within the City of Yakima. The Association has over 870,000 feet of water main lines (Nob Hill Water Association, 2015).

Level of Service

The Nob Hill Water System Plan has an average day demand that is expected to increase from 4,434,000 gallons per day in 2015 to 6,873,000 gallons per day in 2035. Its maximum day requirement is expected to increase from 6,160 gpm in 2015 to 9,550 gpm in 2035. Exhibit 92 shows the Nob Hill Water District's estimated population according to the Comprehensive Plan's analysis, as well as the Nob Hill System Plan's estimated population to serve. The System Plan estimates greater growth in the water district than this Plan does, indicating that the Water Association is sufficiently planned for future growth, and will have a surplus of capacity.

Exhibit 92. Nob Hill System Growth

Time Period	Yakima Population	Nob Hill System Plan Estimated Population to Serve	Net Reserve or Deficit
2015	28,151	31,000	2,849
2040	41,066	51,536	10,470
Difference	12,916	20,536	7,620
Growth Rate	1.52%	2.06%	0.54%

Source: (Gray & Osborne, Inc., May 2015); BERK Consulting 2017

Projects, Cost, and Revenue

Nob Hill Water had a 6.0% rate increase and the addition of new service fees in January of 2016 to help pay for new infrastructure, including a new well, new reservoir, and mainline replacements. The Comprehensive Plan determined that a new well will need to be drilled and a new reservoir will need to be constructed by 2022 for around $5 million. From 2012 to 2015, over 8,500 feet of main line was replaced (Nob Hill Water Association, 2015).

4.9 Irrigation

Overview

The City of Yakima was originally developed on irrigated farmland, with irrigation provided by several private irrigation systems. Eventually, urban development replaced farmland. The irrigation systems were left and suitably modified to irrigate lawns, gardens and small farms. To date, the City of Yakima Water/Irrigation Division maintains two water delivery systems; one for potable water and one for irrigation water (City of Yakima, 2012).

The separate, non-potable irrigation system is composed of more than 60 systems and sub-systems, and serves approximately 2,100 acres of developed land and 11,000 customers. It serves almost 50% of the total potable water service area. Some areas are served by deteriorating steel mains that require frequent repair. Service is provided by a staff of seven and one-half (7.8) employees which amounts to 0.709 FTE per 1,000 accounts. The level of service has increased to an acceptable level after the refurbishment of over 32 miles of pipe line. The City has invested over $15,000,000 into the irrigation system. The level of service has been developed providing minimum design pressure of 20 psi.

The Nelson Dam, an irrigation diversion structure, is in failing condition and is under review for the most cost effective refurbishment. This review is through a partnership with Yakima County Flood Control Zone District, Yakama Nation, Washington Fish and Wildlife, US Fish and Wildlife, US Bureau of Reclamation and National Marie Fisheries.

Inventory

The City of Yakima Water/Irrigation Division maintains over 85 miles of pipe and 545 valves. The inventory of facilities, identified by district, is identified in Exhibit 93.

Exhibit 93. Irrigation Facilities Inventory (2016)

Facility	Valves (count)	Pipe (miles)
District 1	127	18.1
District 2	88	13.9
District 3	71	9.8

Facility	Valves (count)	Pipe (miles)
District 4	71	19.4
District 5	151	14.7
District 6	0	0.0
District 7	37	9.4
Total	**545**	**85.4**

Note: District 6 is not served by City irrigation.

Source: City of Yakima, 2016; David Brown, City of Yakima Irrigation, 2016; BERK, 2017

Level of Service

The City of Yakima Water/Irrigation Division currently serves irrigation with a total of 85 miles of pipe for over 50,000 customers. The City has invested over $15 million in the irrigation system, which went toward refurbishing 32 miles of pipe line in order to bring the system up to an acceptable level of service. The level of service standard provides for minimum design pressure of 20 psi.

Currently, there are 1.6 miles of pipe per 1,000 customers served. Assuming this is an appropriate level of service, 6.24 miles of pipe will need to be added to maintain this level of service through the addition of new customers by 2040.

Exhibit 94. Irrigation LOS Analysis

Time Period	Yakima Population	Feet of Pipe to Meet Target LOS Standard	Current Feet of Pipe Available	Net Reserve or Deficit
LOS Standard = 1.6 miles of pipe per 1,000 served				
2016	53,297	85.27	85.35	0.08
2022	54,420	87.07	85.35	(1.72)
2040	57,246	91.59	85.35	(6.24)

Source: City of Yakima, 2016; David Brown, City of Yakima Irrigation, 2016; BERK, 2017

Projects, Cost, and Revenue

Current Council policy calls for the refurbishment of the irrigation systems, the cost of that alternative is bonded debt, loans and cash from rates. If a grant were to become available then the amount of debt to be borne by local constituents would be reduced. Routine operations and preventive maintenance activities for the supply, storage, pumping, and distribution components are discussed in the 1999 Irrigation Master Plan.

Exhibit 95 shows the irrigation planned projects, both of which are non-capacity projects that will be funded through a combination of bonds and rates.

Exhibit 95. Irrigation Planned Projects

Category / Project Description	Revenue Sources	Cost 2017 - 2019	Cost 2020 – 2022	Cost 2023 - 2040	Total Cost
Category II (Non-Capacity)					
Nelson Dam Refurbishment and diversion consolidation	Bond/Rates	$10,000,000	$0	$0	$10,000,000
Steel Pipe Replacement	Rates	$600,000	$1,800,000	$1,800,000	$4,200,000

Source: City of Yakima, 2016; BERK, 2017

4.10 Schools

Overview

The City of Yakima is primarily served by the Yakima School District and the West Valley School District. In May of 2015, Yakima School District had 15,768 students and 881 teachers. East Valley School District had 3,107 students and 179 teachers (OSPI, 2015).

Yakima School District

Inventory

Exhibit 96 provides a list of the Yakima School District facilities inventory.

Exhibit 96. School Inventory – Yakima School District (2016)

Facility	Location	Students (May, 2016)	Teachers (May, 2016)	Student-Teacher Ratio (May, 2016)
District 1				
Barge-Lincoln Elementary	219 E I St	628	41	15.3
Garfield Elementary	612 N 6th Ave	548	31	17.7
District 2				
Adams Elementary	723 S 8th St	713	44	16.2
Washington Middle	510 S 9th St	749	47	15.9
YV-Tech	1120 S 18th St	76	5	15.2
District 3				
Ridgeview Elementary	609 W Washington Ave	638	38	16.8
McClure Elementary	1222 S 22nd Ave	617	34	18.1
Nob Hill Elementary	801 S 34th Ave	496	26	19.1
Lewis and Clark Middle School	1114 W Pierce	825	44	18.8
District 4				
Hoover Elementary	400 W Viola	788	35	22.5
McKinley Elementary	621 S 13th Ave	471	27	17.4
Franklin Middle School	410 S 19th Ave	847	42	20.2
A.C. Davis High School	212 S 6th Ave	2101	108	19.5
District 5				
Roosevelt Elementary	120 N 16th Ave	537	31	17.3
Robertson Elementary	2807 W Lincoln Ave	532	29	18.3
Discovery Lab	2810 Castlevale Rd	206	13	15.8
Stanton Academy	802 River Rd	300	19	15.8
District 6				
Gilbert Elementary	4400 Douglas Dr	594	36	16.5
District 7				
Whitney Elementary	4411 W Nob Hill Blvd	543	31	17.5
Wilson Middle School	902 S 44th Ave	836	43	19.4
Eisenhower High School	702 S 40th Ave	1932	95	20.3

Facility	Location	Students (May, 2016)	Teachers (May, 2016)	Student-Teacher Ratio (May, 2016)
Total		**14977**	**819**	**18.3**

Source: Yakima School District, personal communication, 2016

Level of Service

Levels of service for schools are typically based on student capacity and student generation. Future growth is anticipated to require improvement or expansion of existing facilities. Assuming that the current service level of a student-teacher ratio of 18.3 is maintained, by 2040, 142 additional teachers will be needed to serve the additional students coming to the school district. In order to accommodate 142 additional teachers, more space will need to be added to the district's facilities to continue serving at the current level.

Exhibit 97. Yakima School District LOS Analysis

Time Period	Yakima School District Estimated Households*	Estimated Student Count**	Teachers to meet current LOS	Current Teachers Available	Net Reserve or Deficit
LOS Standard = 18.3 Student-Teacher Ratio					
2016	28,178	14,977	819	819	0
2022	30,186	16,044	877	819	-58
2040	33,081	17,583	961	819	-142

*Number of households based on a calculation using school district population estimates and the 2014 ACS household size of 2.73.

**Student generation rates per household are calculated based on the current ratio of .51 students per household in the school district.

Source: City of Yakima, 2016; Yakima School District, 2016; BERK, 2017

Projects, Cost, and Revenue

In 2017, around 38 cents of every dollar of property tax revenue in the City of Yakima will go to the Yakima School District. Another 18 cents of every dollar goes to State of Washington Schools.

Per pupil revenues and expenditures in the Yakima School District were about $10,000 in 2016. Per pupil revenues and expenditures in the West Valley School District were just under $9,000 in 2016 (OSPI, 2015).

West Valley School District

Inventory

Exhibit 98 shows the inventory of schools in the West Valley School District. The District has schools in District 6, District 7, and outside the city boundaries. There is a total of 843,000 square feet of school facilities.

Exhibit 98. School Inventory – West Valley School District (2016)

Facility	Location	Students (May, 2016)	Teachers (May, 2016)	Student/ Teacher Ratio	Size (SqFt)
District 6					

Facility	Location	Students (May, 2016)	Teachers (May, 2016)	Student/ Teacher Ratio	Size (SqFt)
Apple Valley Elementary	7 N 88th Ave	324	20	16.2	37,096
Wide Hollow Elementary	1000 S 72nd Ave	372	23	16.2	61,140
Summitview Elementary	6305 W Chestnut Ave	315	23	13.7	33,848
District 7					
West Valley Junior High	7505 Zier Road	840	45	18.7	127,977
West Valley Middle School	1500 S 75th Ave	778	40	19.4	108,415
Outside City Boundaries					
Cottonwood Elementary	1041 S 96th Ave	431	25	17.2	60,021
Mountainview Elementary	830 Stone Rd	183	17	10.7	30,600
Ahtanum Elementary	3006 S Wiley Rd	260	22	11.8	46,449
West Valley High School	9800 Zier Rd	1,040	51	20.4	239,691
Freshman Campus	9206 Zier Rd	398	21	18.9	97,547
Total		**4,941**	**287**	**17.2**	**842,784**

Source: West Valley School District, personal communication, 2016; OSPI 2015-2016

Level of Service

Level of service for schools is generally based on student capacity. Assuming that the current service level of a student-teacher ratio of 17.2 is maintained, by 2040, 152 additional teachers will be needed to serve the additional students coming to the school district. In order to accommodate 152 additional teachers, more space will need to be added to the district's facilities to continue serving at the current level.

Exhibit 99. West Valley School District LOS Analysis

Time Period	West Valley School District Estimated Households*	Estimated Student Count**	Teachers to meet current LOS	Current Teachers Available	Net Reserve or Deficit
LOS Standard = 17.2 Student-Teacher Ratio					
2016	8,513	4,941	287	287	0
2022	9,581	5,666	329	287	-42
2040	12,769	7,551	439	287	-152

*Number of households based on a calculation using school district population estimates and the 2014 ACS household size of 2.73.

**Student generation rates per household are calculated based on the current ratio of .59 students per household in the school district.

Source: City of Yakima, 2016; Washington State Office of Superintendent of Public Instruction, 2017; BERK, 2017

Projects, Cost, and Revenue

The 2016 – 2017 budget included around $22 million in capital projects. Additional West Valley School District capital projects are pending.

Exhibit 100. West Valley School District Projects, 2016 – 2017 (2016$)

Project	Cost
Central Office Modifications	$550,000

Project	Cost
Construction of New Buildings	$20,550,000
High School HVAC Replacement	$500,000
Mountainview Site Improvements	$355,000
Total Expenditures	**$21,955,000**

Source: West Valley School District, 2016

The West Valley School District had six outstanding bonds in 2016, which included a high school bond levy and construction bonds (Exhibit 101). The debt is paid with revenues from taxes.

Exhibit 101. Outstanding Bonds

Date of Issue	Amount of Original Issue	Amount Outstanding (Sept 1, 2016)
7/15/2016	$24,500,000	$1,400,000
1/1/2007	$27,800,000	$1,020,000
12/1/2012	$9,330,000	$8,975,000
6/1/2013	$9,225,000	$9,010,000
4/23/2014	$9,300,000	$9,020,000
1/6/2015	$13,575,000	$13,575,000
Total Bonds	$93,730,000	$43,000,000

Source: West Valley School District, 2016

4.11 Airport

Overview

The Yakima Air Terminal covers 825 acres and is owned and operated by the City. There are two active runways located at McAllister Field, which provide primary air transportation for the City and County. Many of the planned capital projects in the Master Plan address expansion and upgrades to meet FAA criteria.

Additional information about the Air Terminal can be found in the 2015 Airport Master Plan.

Inventory

Existing airport facilities at the Yakima Air Terminal include the following:

- Two active runways and a full parallel taxiway system
- Runway and taxiway lighting systems
- Visual and electronic navigational aids
- General aviation hangars and tiedown aprons
- A passenger terminal building
- Support facilities
- Airport offices

- Maintenance building (City of Yakima, 2015)

Level of Service

The facility assessment in the Yakima Airport Master Plan identifies that the passenger terminal will need to be expanded by 2020 or sooner to maintain an acceptable level of service for passenger air service. Commercial, cargo, and passenger air service is expected to continue to have a growth in demand.

The Master Plan identifies the mission of developing and maintaining an airport that serves the region with reliable and safe air service at a facility that is compatible with the community.

Projects, Cost, and Revenue

The Airport Master Plan includes a CIP through 2030, with implementation planned in the following phases:

- **Phase I**: Short-term five-year period from 2015 to 2020. Projects assigned to Phase I are shown on a year-by-year basis, consistent with the FAA's (CIP) format.
- **Phase II**: Mid-term five-year period from 2021 through 2025. Projects are allocated to specific years.
- **Phase III**: Long-term period from 2026 through 2030. These projects are grouped together (City of Yakima, 2015).

Exhibit 102 provides the identified air terminal projects from the Airport Master Plan and Exhibit 103 describes the identified funding sources for the Air Terminal CIP.

Exhibit 102. Identified Air Terminal Projects (2016$)

Category / Project Description	Cost 2017 - 2019	Cost 2020 – 2022	Cost 2023 - 2040	Total Cost
Category I (Capacity)				
West Itinerant Apron	$1,460,000	$0	$0	$1,460,000
East Itinerant Apron	$0	$1,160,000	$0	$1,160,000
Land Acquisition	$900,000	$0	$0	$900,000
Terminal Building	$0	$500,000	$15,000,000	$15,500,000
ARFF Vehicle	$1,000,000	$0	$0	$1,000,000
Category II (Non-Capacity)				
Lighting replacement and pavement marking	$221,890	$1,250,000	$0	$1,471,890
Lighting replacement project	$75,000	$500,000	$0	$575,000
SRE Blower	$1,040,000	$0	$0	$1,040,000
Security Gates	$650,000	$0	$0	$650,000
Wildlife hazard assessment	$0	$50,000	$0	$50,000

Source: City of Yakima, 2016; Airport Master Plan, 2015

Over the 20-year period, about $59 million of capital projects are planned. Funding sources for the projects include:

- **AIP Entitlement Grants and Discretionary Grants from the FAA**. Entitlement grants are granted using a formula based on the annual enplaned passengers at an airport. The Yakima Air Terminal is

also eligible to receive discretionary grants based on specific projects and the ranking method used by the FAA to allocate a specific grant.

- **WSDOT State Aviation Grants**. WSDOT Aviation provides project-specific grant funding. Typically, WSDOT Aviation requires a 50% match.
- **Passenger Facility Charges (PFCs)**. Commercial service airports may impose a passenger facility charge of up to $4.50 per passenger. PFCs can be used for AIP eligible projects, as well as debt service payments on eligible projects.
- **Private Financing**. Private businesses can finance improvements that benefit that business. Privately financed projects include hangers, cargo facilities, and privately used parking aprons.

Other airport revenues include direct revenues derived from fuel taxes, aircraft storage fees, and other facility use fees, such as landing fees and rental fees. Exhibit 103 shows the anticipated funding sources for the $61 million in total project costs for the 2015 20-year CIP.

Exhibit 103. Air Terminal Anticipated CIP Funding Sources for 20-Year CIP (2013$)

Project Type	Federal Funding	WSDOT Funding	Local Funding	Total Cost
Airfield Projects	$10,068,321	$250,000	$3,328,011	$13,646,332
Terminal Construction	$19,167,525	$0	$2,276,340	$21,443,865
General Aviation Projects	$6,690,022	$0	$814,786	$7,504,808
Pavement Management Projects	$15,087,258	$946,797	$2,200,999	$17,735,055
Total Projects	**$51,013,126**	**$1,196,797**	**$8,620,136**	**$61,330,059**

Source: Airport Master Plan, 2015

4.12 Solid Waste

Overview

The City of Yakima's Refuse Division provides weekly garbage collection to over 26,000 households located within the City of Yakima. Customers are charged weekly by the size of their bin, with additional charges incurred for items placed outside of the bin, overfilling bins, additional collection trips, yard waste, and temporary metal bins (City of Yakima, 2016). All refuse is collected by refuse and recycling division staff of the department of public works or a licensed collector or taken to the sanitary landfill for disposal (YMC 4.16, 2016). All solid waste collected is taken to Yakima County facilities in accordance with interlocal agreements and the Yakima County Solid Waste and Moderate Risk Waste Management Plan (January 2017).

Inventory

The refuse division has 20 employees and 22 refuse trucks. The Division operates 12.5 daily routes, which include 10 refuse routes and 2.5-yard waste routes. Customers can pay for 96-gallon refuse carts, 32-gallon refuse carts, and 96-gallon yard waste carts. Annually, around 32,000 tons is collected, with around 90% of the tonnage categorized as garbage and around 10% categorized as recycled yard waste.

Level of Service

The Solid Waste and Recycling Division operates under the mission of protecting the public health and safety of the City of Yakima and its residents through providing solid waste services that are efficient, cost effective, and environmentally responsible.

If the current rate of garbage per household is steady (about 1.23 tons per household), and there is an increase of about 5,985 households, there would be an increase of garbage of 7,365 tons, a 16.8% increase (see Exhibit 104).

Exhibit 104. Refuse LOS Analysis

Time Period	Yakima Households	Total Tons Removed to Meet Target LOS Standard	Approximate Amount Removed in 2015	Percent Increase from Current Refuse Tonnage Removed
LOS Standard = 1.23 Tons per Household Per Year				
2016	37,719	46,394	46,016	0.8%
2022	39,619	48,731	46,016	5.9%
2040	43,704	53,755	46,016	16.8%

Source: City of Yakima, 2016; BERK, 2017

Projects, Cost, and Revenue

Planned capital projects over the 2017 – 2040 period for the Solid Waste and Recycling Division are not yet identified.

The Solid Waste and Recycling Division is an enterprise fund so rates are set to ensure reliable, competitively priced service for the customers. An operating reserve of 12% (or 45 days) is maintained and reserves allow for replacement of trucks without interruption of service. At this time, no new trucks are planned to be purchased. Existing trucks will be replaced with newer trucks in accordance with their replacement schedule.

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