

Medford Comprehensive Plan

Chapter 8

Public Facilities

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8.1 Introduction

The fundamental purpose of the Public Facilities Element is to establish and maintain a general but timely view of where, when, and how public facilities and services will be provided to support planned urban growth within Medford’s Urban Growth Boundary. Each year, decisions are made to commit considerable funds for acquisition, construction, expansion, and repair of public facility systems. One important role of this *Comprehensive Plan* element is to describe the principles and criteria underlying these decisions and to integrate them with the overall land use planning process.

Public facilities elements are required by state law (ORS 1197.175 and OAR 660-011) for all cities with a population greater than 2,500. The Public Facilities Element implements Statewide Planning Goal 11, which is intended to assure that cities plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development. This element was written in accordance with Oregon Administrative Rules (OAR) 660-011 (Public Facilities Planning).

PUBLIC FACILITIES CATEGORIES

Public facilities and services are divided into two categories.

Category “A” includes:

- Water Service
- Sanitary Sewer and Treatment
- Storm Drainage
- Transportation Facilities

These are the key minimum physical facilities necessary for urban development and are those for which specific documentation is required by state rule.

Category “B” include:

- Fire Protection
- Law Enforcement
- Parks and Recreation
- Solid Waste Management
- Schools
- Health Services

Category “B” public facilities and services enhance and protect development within the city and are provided in response to development that occurs. Because of this they will generally be discussed in less intensive detail than Category “A” facilities. The division of public facilities into these two categories is useful when determining facility adequacy prior to development. Creation of these two categories complies with OAR 660-011. This

document identifies Category “A” facilities and the improvements to city infrastructure and services that are necessary to support land uses allowed by the *Comprehensive Plan*. Because this plan element also describes potential funding mechanisms, the plan is essential to long range financial planning of capital facilities, and provides general guidance for the cost and location of future facilities.

EXISTING PLANS

Medford has a number of separate plans for parks, streets, drainage, water, etc. These separate plans generally utilize similar future economic and population growth trends for the community and the region. However, some of them differ markedly in terms of their planning periods. They have varying lead times from original planning to construction dates. Some of the facilities, such as water and sewer systems, are expected to be operational in advance of population growth; while others that are not directly critical to health or safety are staged to coincide with or follow urban growth, for example, parks. One purpose of the “Public Facilities Element”, therefore, is to review these various plans in relation to each other, and to Statewide Planning Goal 11. Key information, as well as policy direction contained in these existing plan documents is also summarized in this plan element.

The information for this element comes from existing facility plans. In addition, interviews were conducted with the respective service providers and the information from the facility plans was updated, where appropriate. The facility plans used for this element are listed below.

- Water Service - Medford Water Commission Water System Facility Plan, 1999.
- Water Service - Medford Water Commission Water System Final Budget, 1998.
- Water Service - Robert A. Duff Water Treatment Facility Plan, 1997.
- Water Service - *Water Curtailment Plan*, 1992.
- Sanitary Sewer Treatment - City of Medford Facilities Plan, Water Quality Control Plant, 1992.
- Sanitary Sewer Collection – *Sanitary Sewer Collection System Master Plan*, 2019
- Sanitary Sewer Collection - Bear Creek Valley Sanitary Authority (now Rogue Valley Sanitary Sewer Services) Comprehensive Plan, 1990.
- Storm Drainage - Comprehensive Medford Area Drainage Master Plan, 1996.
- Parks and Recreation – Parks, Recreation & Leisure Services Plan, 2016.
- Schools - Medford School District Long-Range Facilities Plan, 2016.
- Solid Waste Management – Solid Waste Management Plan, Jackson/Josephine Counties, 1994.

These plans are, hereby, incorporated into this document and officially acknowledged upon adoption of the “Public Facilities Element”.

POPULATION

The City of Medford has grown steadily over the past 25 years. In 1980, the City's population count was 39,603 and by 1990 it increased to 46,951. The 2000 Census count for Medford was 63,154 people within the city limits of Medford. The Portland State University yearly estimate for Medford in 2009 was 77,240. The population forecast for 2026 is 111,025. These figures do not include the additional population located within Medford's Urban Growth Boundary but outside the city limits. This fringe area is most likely to be annexed to the City of Medford incrementally. These areas are mostly developed at lower densities than the lands inside the City. As annexations occur, these lands will require a substantial investment in urban services.

The "Housing" and "Economic" Elements of the *Medford Comprehensive Plan* make several observations about the City's land use. First, residential development constitutes the largest single land use and it consumes the most land per unit of population increase. Second, the relationship between residential, commercial, and industrial growth will continue indefinitely. The result is that the largest land use category is residential, followed by industrial and commercial respectively.

Population and employment growth increase the demand for public facilities and services. Each of the existing facility plans, described in this Public Facilities Element, utilize the population and employment growth projections outlined in *Medford's Comprehensive Plan*. Though created separately, each of the facility plans incorporated into this element use these projections as the basis for the planning of future Capital Facilities Projects.

SERVICE AREAS

Each facility system serves different geographic sub-areas of the City. While facilities such as parks and schools relate more to neighborhoods defined by population size and travel time/distance, systems such as sewers, water, and storm water drainage are more logically defined by topography, soils, and other natural constraints. Such disparities can interfere with coordination of planning for public facilities, affecting different client populations.

To help overcome these barriers, the "Public Facilities Element" is organized, where possible, in relation to a common set of geographic sub-areas. These sub-areas are the nine Drainage Basins as defined in the 1996 *Comprehensive Medford Area Drainage Master Plan*.

LIMITED SERVICE AREAS

The timely provision of essential urban facilities and services is a policy of the City of Medford. The City's ability to provide public facilities and services relates directly to the location and type of the new development being served. In cases, where the timely provision of essential urban facilities and services cannot be accomplished so as to

achieve minimum adequate service levels, then that portion of the city subject to inadequate facilities or services is designated a **Limited Service Area** and any or all development may be restricted until threshold levels of essential urban services can be achieved. Limited Service Areas are considered as priority areas for public facility planning subject to other growth and development factors. Timely provision of essential urban facilities and services mean that such services will be provided in adequate condition and capacity prior to or concurrent with development of the subject area.

URBAN AREA MANAGEMENT PLAN: THE UGB

The identification and adoption of the Urban Growth Boundary (UGB) was a lengthy process that involved numerous citizen groups, special districts, general-purpose governments, the Planning Commission, and the governing bodies of Medford and Jackson County. Medford's UGB, shown in **Figure 1**, defines the projected geographic limits for urban development. Some facility plans in this element provide for projects which will be needed to serve portions of the urbanizable area during the planning period but which will not reach capacity until well beyond the current planning horizon. Consequently, in some cases those projects can and will be built incrementally as development occurs, often as a condition of development. These increments will generally be a function of the development forecasts contained in this plan. In such cases, a public facility project, as defined in this element, may indicate a completion date beyond the planning horizon.

A management plan for the unincorporated urbanizable area was jointly adopted by Jackson County and the City of Medford. These joint urbanization policies are part of the City and County's acknowledged comprehensive plans. More information related to these policies can be found in the Urbanization Element of Medford's *Comprehensive Plan*.

JURISDICTIONAL LIMITATIONS

Obviously, not all public facilities and services providers that are addressed in this element are within the jurisdiction of the City of Medford. Specifically, Bear Creek Valley Sanitary Authority (sanitary sewer), Rogue Valley International–Medford Airport, Medford (549C) and Phoenix–Talent School Districts, and health care providers, are independent of the City. The Medford Water Commission is also a semi-autonomous body whose jurisdiction extends beyond the corporate limits of Medford. Solid waste management services and facilities are handled through franchise operations.

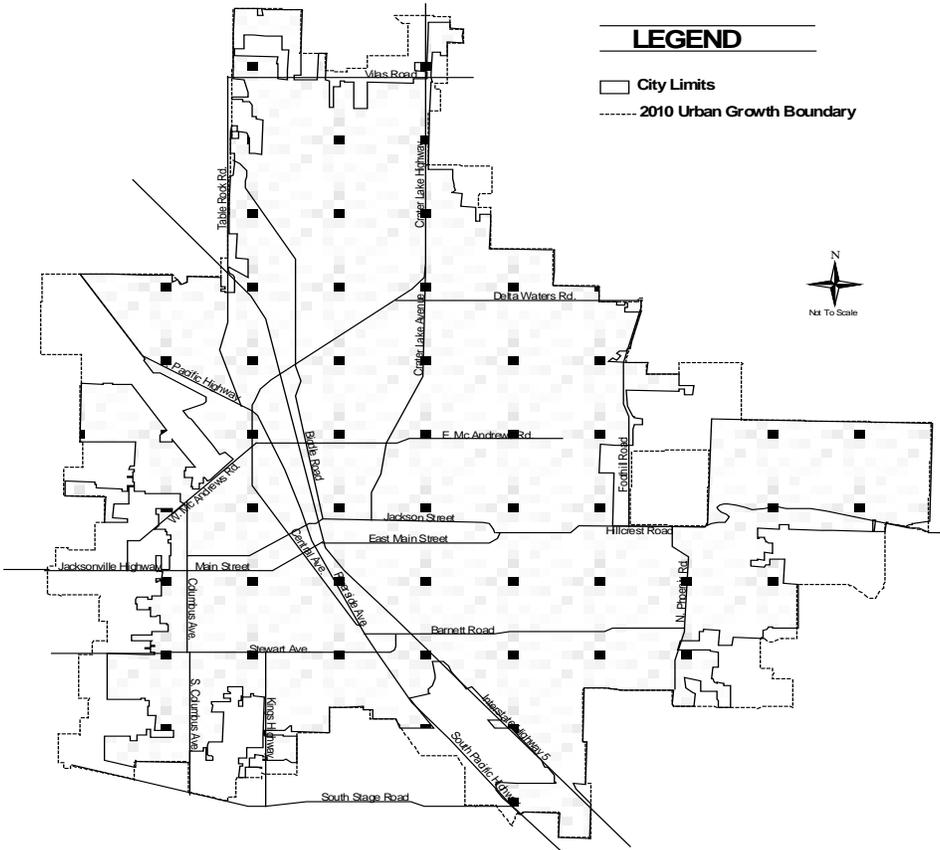
While this element offers a framework for the coordinated planning of urban facilities and services, it must be understood that the inclusion herein of plan summaries and project data from those providers not within City jurisdiction does not imply that the City can assume responsibility for implementation of extra jurisdictional plans or programs.

ORGANIZATION OF THE ELEMENT

This element is organized into four major sections.

- Section I presents background information that provides a basis for the remainder of the element.
- Section II provides a detailed description of the current state of planning and development for Category “A” facilities. Following each description, important conclusions based on these findings are presented, which are then used as the basis for the goals, policies and implementation strategies described.
- Section III sets forth critical information regarding Category “A” capital improvement projects that will ultimately be needed to serve the urbanizable area. These two sections together address the requirements of OAR 660-011, including the location, timing, estimated costs, probable funding sources and providers of future Category “A” facilities.
- Section IV analyzes the Category “B” facilities and their respective planning documents, with emphasis on levels of service, existing facilities and planned improvements.

Figure 1: City of Medford Urban Growth Boundary



CONCLUSIONS, GOALS, POLICIES, AND IMPLEMENTATION STRATEGIES

Each section of the “Public Facilities Element” contains its own conclusions, goals, policies, and implementation strategies. The conclusions are drawn from the information assembled and analyzed in each section. These conclusions are then used as a basis for the goals, policies, and implementation strategies.

GENERAL PUBLIC FACILITIES—CONCLUSIONS

1. The key physical facilities necessary to support urban development identified in Medford’s “Public Facilities Element” include: water service, sanitary sewer collection and treatment, and stormwater management. Specific documentation is required by state rules for these facilities.
2. Other facilities and services identified in Medford’s “Public Facilities Element” as necessary to support urbanization include: fire and emergency services, law enforcement, parks and recreation, schools, public health services, and solid waste management.
3. As a part of Medford’s *Comprehensive Plan*, the “Public Facilities Element” and the various public facility plans, are essential to the long range financial planning of capital facilities.
4. Capital improvement projects are coordinated with Medford’s “Public Facilities Element” and the various public facilities plans relative to the timing and location of public facilities.
5. In areas of the Medford Urban Growth Boundary where the timely provision of essential urban facilities and services cannot be accomplished so as to achieve minimum established service levels, a “Limited Service Area” is designated. Development within a designated Limited Service Area may be restricted until threshold levels of essential urban services can be achieved.
6. Medford’s Urban Growth Boundary is defined as the projected geographic limits of urban development needed for the planning period. Public facilities and services are planned to accommodate urban development within Medford’s Urban Growth Boundary as adopted in 1990.

GENERAL PUBLIC FACILITIES—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To assure that development is guided and supported by appropriate types and levels of urban facilities and services, provided in a timely, orderly, and efficient arrangement.

Policy 1-A: The City of Medford shall provide, where feasible and as sufficient funds are available from public or private sources, the following facilities and services at levels appropriate for all land use types within the City:

- Water service;
- Sanitary sewers;
- Stormwater management facilities;
- Fire and emergency services;
- Law enforcement;
- Parks and recreation;
- Planning, zoning, and subdivision control.

Policy 1-B: The City of Medford shall encourage other agencies that are responsible for the planning and/or provision of public facilities and services within Medford to coordinate public facility planning consistent with Medford's Comprehensive Plan. Such coordination should assure, to the greatest extent possible, the logical and efficient provision of the following public facilities and services:

- Public schools;
- Public health services;
- Justice service;
- Solid waste management;
- Energy and communication services;
- Transit services.

Policy 1-C: The City of Medford shall acknowledge its role as the principal provider of urban services within the City, and shall plan a phased improvement program that meets the service needs of individual areas of the City.

Goal 2: To assure that General Land Use Plan (GLUP) designations and the development approval process remain consistent with the City of Medford's ability to provide adequate levels of essential public facilities and services.

Policy 2-A: In cases where the timely provision of essential urban facilities and services cannot be accomplished so as to achieve minimum adequate service levels, that portion of the Medford urban growth area subject to inadequate services shall be designated a limited service area, and any or all development may be restricted until threshold levels of essential services can be achieved. Limited service areas should be considered as priority areas for public facility planning subject to other growth and development factors. "Timely provision of essential urban facilities and services" shall mean that such services can be provided in adequate condition and capacity prior to or concurrent with development of the subject area. "Essential urban facilities and services" shall mean sanitary sewers, water systems, stormwater management facilities, and transportation facilities. A determination of minimum adequate service levels for essential urban facilities and services shall be based on the following:

Sanitary Sewers—Sufficient to serve any proposed development consistent with

the General Land Use Plan (GLUP) designation. Sanitary sewer facilities shall be considered adequate if they are consistent with the adopted sewer plan document, as interpreted by the City Engineer.

Domestic Water—Sufficient to serve any proposed development with a permanent urban domestic water system capable of supplying minimum pressure and volume for projected domestic and fire control needs consistent with the General Land Use Plan (GLUP) designation. Water facilities shall be considered adequate if they are consistent with the adopted water system plan document, as interpreted by the Water Commission Manager.

Storm Drainage Facilities—Sufficient to serve any proposed development consistent with the General Land Use Plan (GLUP) designation. Stormwater management facilities shall be considered adequate if they are consistent with the adopted storm drainage plan document, as interpreted by the City Engineer.

Policy 2-B: The City of Medford shall strive to ensure that new development does not create public facility demands that diminish the quality of services to current residences and businesses below established minimum levels.

Implementation 2-B-1. Develop thresholds and performance criteria for use in development review to gauge ability of public services to sustain growth.

Implementation 2-B-2. Coordinate capital improvement planning for public facility infrastructure with the direction, extent, and timing of growth.

Implementation 2-B-3. Establish equitable methods for distributing development costs associated with providing water, sanitary sewer, and stormwater management services and facilities.

Implementation 2-B-4. Continue to require annexation to the City as a condition of extending urban services.

8.2 Category “A” Facilities

8.2.1 WATER SERVICE

EXISTING PLANNING AND FACILITIES

The City of Medford’s water system is owned, operated, and maintained by the Medford Water Commission (MWC). The MWC manages water systems within the City of Medford and White City, and supplies bulk water to the cities of Central Point, Eagle Point, Jacksonville, and Phoenix, as well as five local water districts.

The Medford water system was analyzed to determine the anticipated water requirements for the urbanizing area of Medford, the water districts, and cities it serves until the year 2025. As part of this study, a plan was developed to adequately serve the present and future inhabitants within this area. The *Water System Facility Plan (1999)* relates directly to Medford’s *Comprehensive Plan* and corresponding land use plan and population projections. The *Water System Facility Plan* provides an assessment of current water system conditions (source of supply, treatment, transmission, storage, and distribution) for adequate capacity to meet projected demands. The plan describes water quality management strategies that have been implemented to protect and improve the water source (watersheds) of the system.

The water system plan also describes established procedures designed to ensure compliance with current state and federal drinking water standards. A *Robert A. Duff Treatment Plant Facility Plan (1997)* has been completed to re-evaluate the entire treatment process design in light of the current regulatory focus and advancements in treatment technologies.

The *Water Curtailment Plan*, adopted in 1992, establishes procedures for meeting potable water needs in the event of a supply shortage resulting from occurrences such as drought, power failures, earthquake, flood, source disruption, hazardous material spill, etc. and is consistent with the City’s *Comprehensive Plan*.

Supply

Supply for the Medford water system is obtained from two sources: Big Butte Springs and the Rogue River. The current (2000) combined capacity is approximately 63 million gallons per day (mgd).

The Big Butte Springs water source is of very high quality and the only treatment required is disinfection by chlorination at the intakes. The springs are located 30 miles northeast of the city of Medford. The watershed supplying the springs is estimated to contain approximately 56,000 acres on the westerly slopes of Mt. McLoughlin. The springs supply 41 cubic feet per second (cfs) or approximately 26.4 mgd into the system.

Chlorine feed rates are approximately 0.6 parts per million (ppm). There is a possibility that further treatment may be required depending on interpretation of the Federal Safe Drinking Water Act (SDWA). The SDWA essentially requires filtration of all surface water sources. There may be future questions as to whether or not the springs should be classified as ground water under the influence of surface water. If full filtration were required for the Springs, the 1987 estimate for the capital expenditures of \$8 million to \$10 million to build such facilities would be significantly higher.

The Rogue River offers water that is also of high quality and very reliable. Due to flood control reservoirs upstream, summertime flows seldom fall below 1,200 cubic feet per second. Summer time water clarity is very good. Currently, this source is only used in summer as a supplement when demand exceeds the Big Butte Springs available capacity.

Treatment

Treatment of the Rogue River water is accomplished at the Robert A. Duff Treatment Plant on Table Rock Road. The plant was last expanded in the spring of 2000 to a filtration capacity of 45 mgd. At the time of the 1987 plan, the maximum daily plant production was about 15 mgd. However, in 1998, maximum production reached 27.1 mgd. It is a direct filtration plant that employs coagulation, filtration, and disinfection in the treatment process and treats the water for taste and odor control. The plant is only operated during the summer, but is capable of operating in the winter, if an emergency required it to do so. The Robert A. Duff Treatment Plant has an intake located on the Rogue River approximately 1,500 feet from the plant.

The oldest transmission line from Big Butte Springs was built in 1926. There presently are two 24-inch diameter transmission lines from the springs to Medford. An investigation conducted before the 1987 plan indicated the pipelines are in very good condition and should provide the system with at least 50 additional years of service. The water distribution system consists of over 312 miles of pipeline ranging in size from 2 to 24 inches in diameter. The majority of the distribution system is made of ductile or cast iron and is expected to have a life of over 100 years. The water distribution system has a very low leak frequency and unaccounted for water is less than five percent (5%) system wide. These figures indicate the excellent integrity of the overall distribution system.

Storage in the water system consists of several reservoirs totaling nearly 33 mg. The three Capital Hill Reservoirs hold 12.2 mg; the Bullis Reservoir holds 10 mg; the Robert Duff Treatment Plant has 4.9 mg of storage; and approximately 6 mg of storage is held in several smaller reservoirs ranging in size from 0.1 mg to 2.0 mg in the upper pressure zones. As development in the higher elevations to the east continues, more storage is being added. Developers are required to provide storage, satisfactory to MWC, in pressure zone 5 and above. Developers also must provide distribution facilities in pressure zone 5 and above to meet MWC standards when the development is constructed.

Though a detailed basin by drainage basin description of existing water supply, storage, and transmission facilities is not provided in this plan element, the Water System Plan adequately reflects such inventory information with detailed engineering data available from the Water Commission staff. A list of water system improvements, costs and funding sources is provided in Section III.

LEVEL OF SERVICE

The Medford Water Commission, and hence, the City of Medford has some flexibility in terms of meeting maximum water demand. One must keep in mind, however, that current and future water delivery capacity must serve the other customers in addition to the City of Medford. The MWC is currently requiring their municipal water customers to purchase Lost Creek Water Rights to meet their own individual needs. MWC has existing water rights on the Rogue River for 65 mgd. They are presently using 30 mgd. The overall treatment capacity for both sources currently exceeds 60 mgd. The maximum day demand was 52.3 mgd on August 4, 1998. The Robert Duff Water Treatment Plant can be expanded in 15 mgd increments to meet the area water needs (within water rights limitations). In 2000, a 15 mgd filter expansion was completed and an additional 15 mgd expansion will probably be needed around 2017, with future expansions as needed. When the entire system is fully utilized, the total capacity of the MWC water supply will be approximately 91.4 mgd. It is MWC policy to provide sufficient water to meet the maximum day and peak hour demands plus fire flow requirements established by the Medford Fire Department. The average per capita daily use is about 240 gallons when including all users.

Water Districts

The Medford Water Commission currently serves five water districts, all of which were formed more than 35 years ago. These include the Charlotte Ann, Kings Highway, Elk City, Jacksonville Highway, and Coker Butte water districts. Commission policy does not allow service to new districts or the expansion of an existing district. Conversely, district contracts require that property be released from a water district upon annexation to a city. Therefore, the districts have tended to decrease in size, leading to the dissolution of some districts. Since district customers become customers of the Medford Water Commission upon annexation or dissolution, whether or not they are within water districts is not important from the perspective of facility planning.

Pursuant to current land use laws, further development in most districts is limited until or unless the property is annexed to a city. The primary exception to this is the Charlotte Ann Water District. However, the amount of vacant land available within that district is dwindling, so long-term growth is expected to be modest. The Jacksonville Highway Water District also has some predominantly commercial areas within which development has continued. On the other hand, each of the districts contains property which is within the Urban Growth Boundaries of adjacent cities, and which may be subject to annexation to those cities. For that reason, Medford's Water Commission population forecasts predict declines within the populations of the water districts.

Conservation

Water management and conservation planning by urban water suppliers is guided by regulations adopted by the State of Oregon, OAR 690 Division 86. The rules specify that all municipal water suppliers are encouraged to prepare water management plans, but are not required to do so unless a plan is prescribed as a condition of a water use permit. As of 1999, the Medford Water Commission was not required to prepare a plan. However, as a condition of acquiring rights to Lost Creek Lake water, some of the communities served by the Commission have been required to do so. The cities of Phoenix, Jacksonville, and Talent have all prepared and submitted plans to the state.

Whether required or not, the Commission has embraced water management and conservation planning as a prudent activity, and considers it appropriate to participate in conservation planning with its customers. The Commission has made the commitment to begin conservation efforts, with the goal of facilitating improved efficiencies over time. By doing so, it is hoped that drastic conservation measures will not become necessary in the future, as it is likely that federal and state governments will increasingly mandate conservation measures. Furthermore, improved efficiencies are likely to be realized as a result of new technologies and more stringent product standards.

The Medford Water Commission has an adopted *Water Curtailment Plan (1992)* to meet minimum supply needs encountered during drought conditions, supply depletion, or emergencies such as facility breakdown or failure. With current total water rights exceeding 91 million gallons per day, the Medford Water Commission should be able to meet water demands through 2030 even without conservation.

FUNDING

The “Water Fund” is the general operating fund of the Medford Water Commission and is generated from the following sources:

- Water Revenue - Water revenue is the income received from the sale of water.
- Net From Service Work - This includes the net income from the sales of service connections and other miscellaneous work performed for customers and developers such as engineering work on subdivision water system improvements. The major portion of income from this source is from the sale of new service connections.
- Charges in Lieu of Assessment - These charges are collected at the time of extension of service to property that has never been assessed for benefit derived from a lateral water main. In some instances, these charges are assessed for the additional cost of trunk mains.
- Interest - This is the income from interest on the cash balances in the Water Fund that is invested in local banks or savings and loan institutions.
- System Development Charges - These charges are collected when new customers are added to the system. This is used to generate funds to build new

treatment plant facilities, or special service facilities that occur in higher pressure zones.

WATER SERVICE—CONCLUSIONS

1. Medford’s water supply and distribution system is operated and maintained by the Medford Water Commission, which serves a large portion of the Bear Creek Valley.
2. The Medford Water Commission main transmission lines are in good condition and should provide the system with at least 50 years of service with normal maintenance.
3. A filter expansion of 15 million gallons per day (MGD) was completed for the Medford Water Commission Water Treatment Plant in 2000, with pumping capacity to be expanded accordingly in the following years. Another 15 MGD expansion is scheduled for 2017. The 2017 upgrade can be moved forward if water use increases faster than anticipated.
4. The Medford Water Commission has begun water conservation efforts to facilitate improved conservation efficiencies over time.
5. The “Water Fund” is the general operating fund of the Medford Water Commission, and is generated from the sale of water, the income from the sale of service extensions and improvements, and system development charges (SDCs) applied to new customers.

WATER SERVICE—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To provide the City of Medford with high quality domestic water for consumption and fire protection, consistent with state, federal and industry standards.

Policy 1-A: The City of Medford shall assure that the water distribution system is designed and developed in coordination with the storage and transmission system, and phased to be consistent with Medford’s growth.

Implementation 1-A-1. Extend water service to areas within the Urban Growth Boundary in conjunction with annexation of those areas, and utilize the adopted *Water System Plan* as a factual basis in the land use decision-making process.

Policy 1-B: The City of Medford shall continue to encourage Jackson County to regulate development in the Big Butte Springs watershed to assure that wastewater and toxic substances do not endanger the source of the Big Butte Springs water supply.

Policy 1-C: The City of Medford shall support the continuing development of water conservation measures.

Implementation 1-C-1. Promote public education programs on water conservation.

Implementation 1-C-2. Establish guidelines for water conservation and actively promote use of water-conserving devices and practices.

Implementation 1-C-3. Develop water conservation measures to be imposed in the event that water supplies drop below acceptable levels.

8.2.2 SANITARY SEWER SERVICE

COLLECTION

Sanitary sewer facilities are a key concern of state and local policies relating to the management of urban growth. The acknowledged joint City-County Urban Growth Boundary and Urbanization Policies set forth policies governing extension of sewers both within and outside of the City and its UGB. These policies can be found in the Urbanization Element of Medford's *Comprehensive Plan*.

Existing Planning and Facilities

The majority of the sanitary sewer collection system within the UGB is owned and maintained by the City. Rogue Valley Sewer Services (RVSS) provides sanitary sewer interceptors for the UGB area and collection service to some areas. The City of Medford, along with White City, Central Point, Eagle Point, Jacksonville, Phoenix, and Talent discharge into the RVSS operated interceptor system, which transports the wastewater to the Regional Water Reclamation Facility (RWRF) located adjacent to the Rogue River outside Medford's UGB.

A Regional Sewer Agreement (RSA) allows for a division of responsibility for wastewater collection and treatment. RVSS operates and maintains the Interceptor System and the City operates and maintains the Regional Water Reclamation Facility. The participants in the RSA pay monthly wastewater treatment charges to the City and contribute, based on percentages set out in the agreement, to the operation and maintenance of the RVSS Interceptor System. RVSS and the City jointly agree upon the party responsible for the collection of wastewater for new developments.

The City of Medford's collection system consists of five pump stations and approximately 270 miles of pipeline ranging from 6 to 33 inches in diameter, and RVSS operates approximately 18 miles of trunk and interceptor pipeline and approximately 33 miles of collection lines within the UGB. This does not include the Lower Bear Creek Interceptor, the Upper Bear Creek Interceptor or the White City Trunk Sewer, all of which are operated by RVSS and extend beyond the UGB boundary.

The Medford collection system has been constructed in stages, as the populated area grew, with some sewers in the original town-site of Medford being over 100 years old. The original town site is the area west of Interstate 5 to Oakdale Avenue and between Jackson and Twelfth Streets. For years, the City has maintained the sewer collection system as needed. Starting in 2010, the City significantly increased replacement and relining of the collection system to extend anticipated life expectancy of the aging infrastructure.

The two major interceptors include the Upper Bear Creek Interceptor that transports wastewater from the southern UGB area, through town, past the airport and to the RWRP entirely by gravity. The existing line should handle the planned flows for the UGB with possible upgrades just south of the airport where grades are relatively flat. The Lower Bear Creek Interceptor picks up flow from the west side of town and the city of Central Point and transfers it down the Bear Creek Valley to Kirkland Road where a pump station pumps it to the RWRP.

Level of Service

The City of Medford has little flexibility in terms of the level of sanitary sewer collection it provides. City Code prohibits new on-site septic facilities. Hence, piped collection systems are installed with all new construction. Pump stations are required to service some areas, however, these are kept to a minimum to reduce operation and maintenance costs. Level of service minimums for a property to be considered for an unconditional zone change is that all downgradient pipes must show the hydraulic grade line is a minimum of three feet below manhole rims. Replacement pipe criteria when a new of replacement pipe is installed is based on depth over diameter (d/D) criteria. For pipes 12" and smaller, the d/D ratio shall be lower than 0.65, for pipes 15" and larger, the d/D ratio shall be lower than 0.75.

Capacity for Growth

The City of Medford does have some flexibility in terms of the amount of growth for which it can provide. Sewers are normally built with sufficient capacity to serve an area developed to the maximum density allowed by zoning. There is flexibility in terms of how far those sewers are extended. Sewers can be installed only in developed areas or they can be extended to undeveloped areas to provide for future growth. In 2014, the sanitary sewer collection system was at capacity in many portions of the City. In 2018, a Sanitary Sewer Master Plan was adopted to address collection system capacity needs to buildout the Urban Growth Boundary and Urban Reserves.

TREATMENT

Existing Planning and Facilities

The Regional Water Reclamation Facility (RWRP) is located on the former Camp White treatment plant site, which was acquired from the federal government in 1948. The site is located adjacent to the Rogue River approximately one mile downstream from Touvelle Park, and is confined on the north by the River and on the south by Kirkland Road. With the exception of the old White City lagoons directly to the west and potential wetlands mitigation sites, there are no neighbors, structures, or other features in the vicinity of the plant that would constrain plant expansion. The City owns approximately 1,100 acres at the facility site; of that, approximately 350 acres is for future expansion.

The RWRF preliminary treatment facility is designed for a peak wet weather flow (PWWF) of 60 million gallons per day (mgd). The system currently consists of both primary and secondary treatments. A detailed description of the treatment process and the associated equipment is available in the *City of Medford Sewer Master Plan, 1990*.

Level of Service

The RWRF has a long history of producing an effluent that is cleaner than the discharge permit requirements. The current National Pollution Discharge Elimination System (NPDES) permit requires a summer discharge of 10 parts per million (ppm) of biochemical oxygen demand (BOD) and suspended solids (SS) and a winter discharge of 30 ppm of BOD and SS. The plant summer discharge averages 5-7 ppm BOD and SS, and the winter discharge averages approximately 8-10 ppm of BOD and SS.

Capacity for Growth

The RWRF has sufficient capacity to handle forecasted population growth. Most equipment is designed for an average daily weather flow (ADWF) of 20 mgd and PWWF of 60 mgd. The average daily dry weather flow for 1997 was 16.7 mgd - about 84 percent of the ADWF capacity for most of the plant. In early January 1997, the area experienced a five-year storm event. During the storm, the plant handled flows that averaged 45 mgd, which is about 75 percent of the PWWF capacity for most of the plant. Recent wet winters have prompted investigation into projects that would further expand the capacity to accommodate higher peak wet weather flows.

Funding

Approximately 66 percent of the of the RWRF influent is due to customers in the Medford UGB. Hence, approximately 66 percent of the costs of improvements are the responsibility of the customers within the Medford UGB. The sanitary sewer collection and treatment system is funded with specific funds and user fees.

- Sanitary Sewer Utility Fee – This “user fee” funds maintenance of the sanitary sewer main lines, manholes, and pump stations.
- System Development Charges - These charges are collected when new customers are added to the system. This is used to generate funds to build and maintain treatment plant facilities.

SANITARY SEWAGE COLLECTION CONCLUSIONS

1. Medford’s sanitary sewer facility plans are coordinated with Rogue Valley Sewer Services (RVSS). The City of Medford and RVSS coordinate sewage collection efforts.
2. All areas within the City of Medford are served where possible with gravity sewers.

3. There is a low level of water inflow and infiltration into the newer sections of Medford’s sewage collection system. The inflow and infiltration, however, is higher in the older sections of the collection system.
4. Medford’s monthly “Sewer Utility Fee” provides funding for the maintenance of sanitary sewer lines, manholes, and pump stations.
5. A Sanitary Sewer Collection System Development Charge (SDC) helps pay for new sanitary sewage collection facilities.

SANITARY SEWAGE TREATMENT CONCLUSIONS

1. The City of Medford has sole responsibility for the operation of the Regional Water Reclamation Facility (RWRF) for regional sanitary sewage treatment.
2. The Medford urban growth area is responsible for approximately two-thirds of the Regional Water Reclamation Facility (RWRF) inflow.
3. The 1992 *Facilities Plan for the Water Quality Control Plant* developed a long-range capital improvement program to upgrade and expand the Regional Water Reclamation Facility (RWRF) to meet needs into the twenty-first century.
4. As of Spring 2000, the Regional Water Reclamation Facility (RWRF) had a dry weather flow capacity of 20 million gallons per day (MGD).
5. Ongoing capital improvements at the Regional Water Reclamation Facility (RWRF) are designed to maintain a three-year growth cushion to accommodate development throughout the region.

SANITARY SEWER—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Sanitary Sewage Collection

Goal 1: To provide appropriate sanitary sewage collection facilities to serve the Medford Urban Growth Boundary.

Policy 1-A: The City of Medford shall extend the sanitary sewage collection system within the City as development approvals occur, consistent with the Land Development Code and Engineering Division standards. Sewers outside the City but within the Urban Growth Boundary are constructed pursuant to the Joint Urbanization Policies and cooperative agreements with the Bear Creek Valley Sanitary Authority (now Rogue Valley Sanitary Sewer Services).

Policy 1-B: The City of Medford shall maintain and improve the existing sanitary sewage collection system through preventative maintenance and on-going replacement or rehabilitation of deteriorated lines.

Policy 1-C: Unincorporated property shall be required to annex into the City prior to receipt of City sanitary sewer service, or as set forth below. Each of the following conditions must be met to provide unincorporated property with

sanitary sewer service prior to annexation:

- 1) The property shall be located within the Urban Growth Boundary;
- 2) Existing sanitary sewer line operated by the City to which connection can be made in accordance with subsection (4) below is within 300 feet of the property;
- 3) The County has found that the septic system serving the property is failing and the County has required connection to a sanitary sewer system;
- 4) The extension of a sanitary sewer line to be connected to the City sanitary sewer line shall be subject to acceptance of an approved plan by the City Engineer.

Policy 1-D: When appropriate, the City shall assess the applicable codes and policies for clarification of the difference between an inspection fee and a system development charge, including reference to established system development charges.

Policy 1-E: The City shall operate sewer collection facilities to meet or exceed federal, state, and local standards.

Goal 2: Protect the security and longevity of the sewer collection system.

Policy 2-A: The City shall make reasonable attempts to protect the security of its sewer collection system. The City shall determine what information about the system should remain unavailable to the general public.

Policy 2-B: The City shall manage the sewer collection system through developing design standards, overseeing construction, operating, and maintaining the system such that service to areas in the Urban Services Boundary is adequate and reliable. Whenever possible, the City shall anticipate system interruptions, such as power outages, and design and operate the system to minimize the impact of such interruptions on its customers and the environment.

Policy 2-C: Unless specifically directed otherwise by the City Council, all facilities and equipment shall be maintained in accordance with manufacturers' specifications. The City shall adhere to maintenance and replacement schedules for all facilities and equipment.

Policy 2-D: The City shall maintain a complete inventory of all City-owned equipment, supplies, parts, and service vehicles used for maintenance of sewer facilities. The inventory should include planned replacement dates as applicable.

Goal 3: Ensure a sanitary sewer collection system that is environmentally sound and adaptive to a changing environment.

Policy 3-A: On a regular basis, the City shall update an Emergency Response Plan that focuses on problems created by major disasters (such as earthquakes, floods or windstorms). The plan should ensure that adequate emergency provisions and procedures are in place to provide sewer services to the extent possible during an emergency event.

Policy 3-B: The City shall prepare and maintain a Vulnerability Assessment & Hazard Mitigation Plan addressing risks associated with natural and human made hazards on the sewer. The plan should identify how the public and environment may be damaged by such a hazard, and provide detailed procedures for responding to such as act to minimize harm to the public. The Vulnerability Assessment shall not be made available to the public.

Policy 3-C: The City shall develop and maintain a Fats, Oils, and Grease (FOG) Control Program to address excessive buildup of FOG in the sewer.

Policy 3-D: The City will manage the sewer collection system, including monitoring and adapting plans, policies, and practices to collect and convey wastewater from its customers in a safe and sustainable manner in accordance with the City's Environmental element of the Comprehensive Plan.

Policy 3-E: Programs shall be implemented to prevent overflows of wastewater in the existing system, and requires all new construction to convey peak flows and storm events without overflowing the sewer during the design storm event.

Policy 3-F: New wastewater infrastructure will be sited outside of stream corridors, wetlands, and significant tree groves whenever feasible.

Sanitary Sewage Treatment

Goal 4: To provide appropriate sanitary sewer treatment facilities to serve the Medford Urban Growth Boundary.

Policy 4-A: The City of Medford shall continue to operate the regional sewage treatment facilities according to the 1969 interagency agreement with Bear Creek Valley Sanitary Authority (now Rogue Valley Sanitary Sewer Service), Jackson County, and other participating cities, until such time as a new agreement is adopted.

Policy 4-B: The City of Medford shall continue expansion of the Regional Water Reclamation Facility (RWRF) capacity sufficient to provide for continued urban growth. Facility expansion should be given a high priority in capital improvement

programming. In the event that necessary funding is not forthcoming, all options, including an appropriate interagency growth management program, should be explored in a timely manner, and implemented as necessary.

Sanitary Sewage Service

Goal 5: Coordinate with other agencies and municipalities to provide adequate sewer service when applicable.

Policy 5-A: The City shall support and participate in regional planning of sewer service with neighboring jurisdictions and sewer districts.

Policy 5-B: The City shall work closely with adjacent jurisdictions to coordinate sewer service issues related to regional growth, regulatory requirements and changes, and opportunities for regional projects.

8.2.3 STORMWATER MANAGEMENT

INTRODUCTION

Because it adds impervious areas to the landscape, urbanization disrupts the natural process of precipitation either infiltrating to become groundwater or running off into streams. This disruption causes increases both in the amount of runoff and in the speed at which runoff occurs. The effect is that flooding is much more likely to occur for any given amount of precipitation. The traditional approach to managing stormwater has focused on decreasing the likelihood of flooding and reducing the damage caused by flooding. More recently, federal and state regulations require that stormwater management programs also address water quality and natural resource protection objectives in addition to flood control.

SERVICE PROVIDER

Like the other cities in the Bear Creek Valley, the stormwater system in Medford employs the use of Bear Creek and its tributary streams. After runoff enters a tributary stream, it flows into Bear Creek, which flows into the Rogue River, and ultimately enters the Pacific Ocean. The area of runoff for each of Bear Creek's tributaries is its "basin" or watershed, many of which extend beyond the Medford Urban Growth Boundary (UGB). Consequently, in addition to the stormwater generated within the UGB, Medford must manage the flow generated beyond the UGB. Similarly, areas downstream of Medford must contend with Medford's runoff. **Figure 2** is a map of the drainage basins in the Medford UGB.

The role of the City in stormwater management is to reduce the risk of negative impacts to people; to residential, commercial, industrial, and institutional structures; to infrastructure, such as roads; and to the environment. The City employs a constantly evolving program of stormwater management practices and improvements designed to systematically reduce the risk. These methods may include improvements to stormwater conveyances, use of detention facilities, preservation of wetlands, and regulation of new construction in flood plains. The Medford Public Works Department is responsible for the City's stormwater management program, including evaluating and mitigating the system-wide effects of proposed development. A primary focus of the program is to control the stormwater in terms of both quantity and velocity. The City works with Jackson County in addressing the impacts of City development on County areas.

STORMWATER MANAGEMENT PLANNING

The most recent drainage plan for the Medford UGB is the *Comprehensive Medford Area Drainage Master Plan* (Brown and Caldwell, 1996), which replaced the *Medford Area Drainage Master Plan* (KCM, 1981). The *Comprehensive Medford Area Drainage*

Master Plan (DMP) addresses the UGB adopted in 1990. An update of the DMP will begin with a storm drain mapping project authorized by the City's 2002-2003 budget.

The objectives of the DMP include the following:

- To identify storm drainage improvements needed to satisfy existing system deficiencies and to meet future growth requirements.
- To develop an implementation plan that establishes priorities for construction of the required improvements.
- To recommend storm drainage management procedures to improve and protect water quality.
- To prepare a plan for reducing the impact of drainage improvements on wetlands and other wildlife habitats.
- To analyze the storm drainage maintenance program and recommend changes to improve system efficiency and minimize operating costs.

Recommendations for stormwater management procedures are described in Chapter 3 of the DMP and in its Appendices. Chapter 4 describes in detail the improvements recommended for each drainage basin to improve flood protection, water quality, and the overall efficiency of the system maintenance program. The need to implement the recommended management procedures has increased as water quality objectives for Bear Creek and the National Pollution Discharge Elimination System (NPDES) program (explained below) have both become more fully developed.

In conjunction with the preparation of the DMP, a Local Wetlands Inventory (LWI) was conducted in 1995 (*Local Wetlands Inventory and Oregon Freshwater Assessment Method Analysis, City of Medford, Woodward Clyde Consultants*). An update of the LWI and OFWAM will be completed in 2002. An inventory and assessment of the tributaries of Bear Creek was also completed in 2002 (*Medford Riparian Inventory and Assessment – Bear Creek Tributaries, Wetland Consulting*). The Riparian Inventory mapped all of the naturally occurring waterways in the Medford UGB. It also assessed them based on four functions: water quality, hydrologic control, wildlife habitat, and thermal regulation. The LWI provides a comprehensive inventory of wetlands and water bodies in the UGB. The wetlands were assessed according to the Oregon Freshwater Wetland Assessment Method (OFWAM) to determine the function and value of each wetland. The assessment is used to establish the “local significance” of a wetland relative to the resource protection requirements of Oregon state law (discussed below).

LEVEL OF SERVICE

One way the level of service provided by a city's stormwater management program can be measured is through “design storm probability”. Municipalities must strike a balance between the damages caused by a flood due to insufficient capacity and the cost of building and maintaining the stormwater management facilities. Another important

level of service measure is the amount of environmental damage caused by building and utilizing the conveyance system, since the runoff ultimately uses natural waterways.

Design Storm Probability

There is no theoretical upper limit to how much rain can fall, and hence, no limit of how much runoff can be generated. However, for any given runoff rate, the higher the rate, the less probable that, in any one year, a yet higher runoff rate will occur. That concept can be expressed another way: the higher the runoff rate, the more years it will be on the average before a yet higher runoff rate will occur. Engineers speak of events such as the “100-year storm” - an amount of runoff that has a one percent chance of being exceeded in any one year, or which, on the average, is exceeded once in every 100 years. Since there is no theoretical upper limit, it is not possible to manage a stormwater system to protect for every possible flood event. Instead, a “design storm probability” must be selected to establish the level of protection. Sizing the stormwater system to convey a 10-year storm with no damage to structures gives greater protection than sizing the system for a 2-year storm.

There is no clear-cut “best” design storm probability. Using a less probable design storm, such as the 100-year storm, increases public safety, but also increases the cost of constructing and maintaining the system. Cities in the U.S. use design storm probabilities ranging from the 2-year storm to the 100-year storm, with the most common design storms being the 10-year and 25-year. When a small stormwater facility overflows, the resulting damage is often slight. When rivers flood, the damage can be great. Because of this variation in the level of potential damage, it is often desirable to use different design storms for small stormwater systems than for large systems. For example, a 5-year design storm may be adequate for a small area, while a 100-year design storm is appropriate for larger streams and rivers. The federal flood insurance program for properties near larger streams and rivers uses a 100-year design storm. (For further discussion of the federal flood program and its effect in Medford, see the discussion below and the Disasters and Hazards section of the Environmental Element of the *Medford Comprehensive Plan*.)

Conveyance Type

The method of transporting runoff is dependent upon many factors, including the size of a drainage basin, its topography, and the amount of development (e.g., impervious surface). Medford’s nine drainage basins range in size from less than 1,000 acres to about 5,600 acres, with most extending outside the UGB. The drainage basins in the eastern portions of the community have considerable changes in elevation, while the western area is relatively flat. The amount of development varies from basin to basin, with corresponding levels of impervious surface coverage. The City uses a variety of conveyance types to transport the stormwater runoff, including underground pipes and open waterways. Current state regulations generally prohibit the “under-grounding” of existing waterways; however, previous piping practices have left a disjointed system of above and below ground systems. As noted above, all of the UGB’s natural tributary

waterways were inventoried and assessed in the *Medford Riparian Inventory and Assessment* conducted in 2002.

The City requires provision of on-site stormwater facilities in conjunction with new development, and, under certain circumstances requires off-site improvements. Generally, on-site stormwater detention is a preferred practice because it alters peak flows by making them smaller but over a longer period. It can also decrease the amount of runoff through infiltration, although much of Medford's geology is not conducive to high rates of infiltration.

Irrigation District Systems

Irrigation ditches and canals are sometimes utilized in Medford as part of the stormwater conveyance system. The City and the irrigation districts have developed joint agreements allowing such use, and stipulating the sharing of costs associated with maintenance and improvements to the system. Issues related to the use of irrigation canals are becoming more pronounced as more of the canals are piped in conjunction with urban development.

The irrigation districts having facilities located within the UGB include the following:

- *Medford Irrigation District*: Serves east and south Medford with the Main Canal
- *Rogue River Valley Irrigation District*: Serves north Medford with Hopkins Canal
- *Talent Irrigation District*: Serves a small portion of the extreme southern area with the Phoenix Canal

As noted in the DMP, linking irrigation water with natural waterways can pose a risk to water quality in the receiving streams. Irrigation return flows that are allowed to discharge to natural streams may contain pollutants, such as sediment, nutrients, pathogenic bacteria, and elevated water temperatures. Irrigation overflows typically enter receiving streams during the summer when natural flows are low and the dilution capacity is limited. Several tributary streams in the Medford UGB are captured by irrigation canals, often causing flooding problems during storms since the irrigation canals are not designed to convey stormwater. These situations also impact fish passage, since canals are not suitable fish habitat.

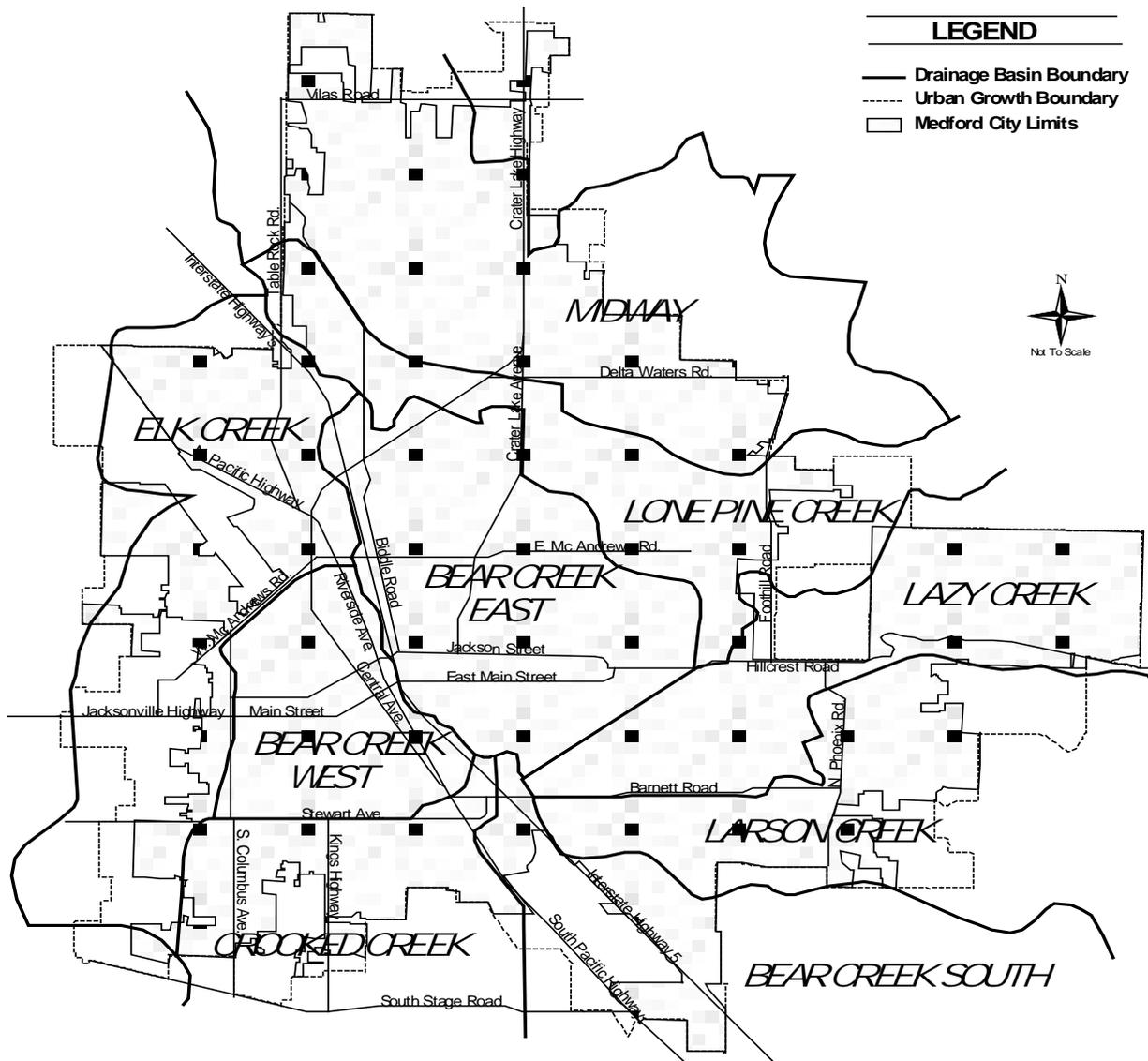


Figure 2: Medford Area Drainage Basins

EXISTING FACILITIES

The following describes the general characteristics, existing facilities, and capacities of each of the nine major drainage basins within the Medford UGB.

Midway Creek Basin

This basin lies in the northern portion of the UGB, with much of it outside the UGB. The basin, which is approximately 6 miles long with an average width of 1.5 miles, encompasses 3,400 acres of relatively flat topography, hydric soils, and numerous wetlands located in the lower portion. It includes the airport, commercial and industrial

lands adjacent to the airport, and residential land to the east of Crater Lake Highway. The Midway channel, which has been placed underground in many locations within the City, also flows through County areas northeast of Medford before joining Bear Creek well outside the UGB. As more of the basin is developed, increased runoff rates and amounts will potentially impact downstream properties.

Lone Pine Creek Basin

This 2,000-acre basin is fairly long and narrow - approximately 6.5 miles long and less than 1 mile wide. It is predominately designated for residential use. Several tributaries of Lone Pine Creek drain the upper portions of the basin. The Hopkins Irrigation Canal intersects Lone Pine Creek just east of Crater Lake Avenue, with a series of overflow structures at this junction. The East Main Irrigation Canal traverses the easterly portion of the basin. As the basin becomes built-out, the ability of downstream portions of the stream to handle the increased runoff will be strained. The DMP recommends construction of a large detention pond within the upper reaches of the basin to decrease peak downstream flows, and reduce the need for extensive changes to the main stem of the stream. It would also offer a method for water quality treatment.

Lone Pine Creek from below Biddle Road to its confluence with Bear Creek contains habitat for salmonid species, some of which are rare or endangered. This section is designated as “essential indigenous anadromous salmonid habitat” by the state.** As such, the waterway and the riparian area located 50 feet from the tops of the banks are protected by the City’s Riparian Corridor Ordinance.

Bear Creek East Basin

This relatively flat 2,400-acre basin consists of a fully developed area east of Bear Creek within the City. Though this basin includes several sub-basins that drain directly into Bear Creek, it has no major tributaries. The Hopkins Irrigation Canal provides for much of the stormwater conveyance system in the northeast portion of the basin. The basin has an extensive system of short pipe segments, many of which are undersized. Numerous upgrade projects are recommended by the DMP.

Lazy Creek Basin

This 2,700-acre basin, which is 5.5 miles in length and averages 1.5 miles in width, drains the east-central portion of the UGB. It contains the highest elevations in the UGB, with steep slopes extending up Roxy Ann Peak. Most of the basin is designated for residential use, with approximately half already developed. As residential development in upstream

**Essential salmonid habitat is defined as the habitat necessary to prevent the depletion of native salmon species (chum, sockeye, Chinook and Coho salmon, and steelhead and cutthroat trout) during their life history stages of spawning and rearing. The designation applies only to those species that have been listed as Sensitive, Threatened or Endangered by a state or federal authority.

areas continues, the amount and velocity of runoff will increase, potentially causing downstream flooding and erosion-associated problems. Erosion and its resulting sedimentation are a particular issue due to the steep hillsides slated for development. The flow of three major tributaries is combined into one channel near the intersection of Hillcrest Road and North Phoenix Road. The East Main Irrigation Canal bisects this basin, and the main channel of Lazy Creek flows into and through this canal via control structures just east of Fairway Circle. A large detention pond located in the area east of Hillcrest Orchards is recommended by the DMP. A site has been proposed in conjunction with the extension of East McAndrews Road.

Lazy Creek below Black Oak Drive to its confluence with Bear Creek in Bear Creek Park is reported by the Oregon Division of Fish and Wildlife (ODFW) to contain habitat for salmonid species. As such, this portion is likely to be designated as “essential indigenous anadromous salmonid habitat”, and eventually protected by the City’s Riparian Corridor Ordinance.

Larson Creek Basin

This 5,600-acre basin encompasses the southeast portion of the UGB, which has been primarily utilized for agricultural purposes, with most development occurring at the lower end of the basin. Much of Medford’s future residential development is planned to occur in this basin within the Southeast Plan Area, eventually containing up to 10,000 new residents. There are some slopes, many wetlands, and several stream corridors that remain in a mostly natural condition. The Southeast Plan requires 50-foot setbacks on both sides of the three main tributaries within the Plan Area east of North Phoenix Road. The East Main Irrigation Canal bisects the basin near North Phoenix Road. The Irrigation Canal captures two of the tributaries of Larson Creek, causing flooding during large storm events.

Larson Creek contains habitat for salmonid species, so the waterway and the riparian area located 50 feet from the tops of the banks are protected by the City’s Riparian Corridor Ordinance. It is designated as “essential indigenous anadromous salmonid habitat” by the state.

Crooked Creek Basin

This 4,600-acre basin encompasses the southwest portion of the UGB, extending several miles south of the UGB, with a length of 5 miles and a width varying from less than one mile to 3 miles. The majority of existing and proposed development is located within the UGB north of South Stage Road. Much of Crooked Creek has been enclosed in pipes, resulting in alternating sections of open waterway. During storms, overflow has occurred at the stream’s intersection with the Phoenix Irrigation Canal.

Bear Creek South Basin

This basin, which lies on both sides of Bear Creek, is a small area on the south edge of the UGB that drains directly into Bear Creek, which contains habitat for salmonid

species, some of which are rare or endangered. As such, the waterway and the riparian area located 50 feet from the tops of the banks are protected by the City's Riparian Corridor Ordinance. Bear Creek in this area is in a mostly natural state with extensive riparian areas and adjacent wetlands. Plans are underway to extend the Bear Creek Greenway Path through the area, as well as to develop a large city park.

East of Bear Creek and Interstate 5, the land in the basin is mostly residential, while the land west of Bear Creek contains the South Gateway Shopping Center and land zoned mostly industrial and commercial. The existing stormwater system consists of a few culverts under Interstate-5 and some diversion ditches. This area will be heavily impacted by the proposed relocation of the South Medford Freeway Interchange relative to infrastructure development and land use changes.

Bear Creek West Basin

This 1,400-acre basin includes several sub-basins that drain directly into Bear Creek, and consists of the urbanized and long-established area of residential and commercial development just west of Bear Creek. A large portion of the area is designated for residential use, but also includes major industrial and commercial zones including the Central Business District (downtown). No major tributaries flow through the basin. Most of the basin contains piped stormwater systems that are relatively old, and the high rate of groundwater infiltration into the system during the winter reduces available capacity. There are two major stormwater lines in the basin with smaller pipes being added in upstream areas. The DMP recommends extensive upgrades to the system, including a new major diversion pipe.

Elk Creek Basin

This 3,000-acre basin has an average length of 5 miles, an average width of one mile, and drains the northwest portion of the UGB. The majority of the area consists of residential land, with some light industrial, commercial, and agricultural land. The Hopkins Canal bisects the basin north of Ross Lane, and the Phoenix Canal forms the southern boundary. Most of the basin is flat with extremely poor drainage due to the high concentration of hydric soils. Presently, Elk Creek flows through roadside ditches, across fields, and through poorly defined channels creating a number of wetlands. A new 72-inch pipe intercepts the stream flow along Rossanley Drive and diverts the water to Bear Creek. A 78-inch pipe accommodates the stream flows north of Highway 99; this pipe has eliminated past drainage problems in the northern portion of the basin. Improvements to the channels are possible but will not remedy all problems.

REGULATORY EFFECTS ON STORMWATER MANAGEMENT

Although the primary goal for Medford's stormwater management program has been flood control, recent regulations have established other requirements that affect the City's program. The following is a summary of these regulations.

Statewide Planning Goals

The Statewide Planning goals that affect stormwater management planning include Goal 5 – Natural Resources, Scenic and Historic Areas, and Open Spaces; Goal 6 - Air, Water and Land Resources Quality; Goal 7 – Hazards; and Goal - 11 Public Facilities Planning. (Note that the Environmental Element of the Comprehensive Plan addresses Goals 5, 6 and 7 in more detail.)

Goal 5 – Natural Resources, Scenic & Historic Areas, and Open Spaces

Oregon Administrative Rules adopted in 1996 to implement Statewide Planning Goal 5 require local governments to inventory and evaluate certain resources, and develop land use programs that conserve and protect the “significant” ones. These resources that can be affected by stormwater management are: riparian corridors, including water and riparian areas and fish habitats; wetlands; wildlife habitat; and groundwater resources. Goal 5 requirements are met when the local government has adopted clear and objective standards that define the degree of protection for each resource. Medford has addressed Goal 5 provisions through a “safe harbor” protection ordinance for riparian corridors, which includes the adoption of a 50-foot setback from all fish-bearing streams. As noted previously, for wetlands, a local government must adopt a Local Wetlands Inventory (LWI) and develop a program to protect significant wetlands from grading, excavation, placement of fill, and most vegetation removal.

Goal 6 – Air, Water and Land Resources Quality

Statewide Planning Goal 6 requires that “all waste and process discharges from future development, when combined with such discharges from existing development, shall not threaten to violate or violate applicable state or federal environmental quality statutes, rules and standards.” These discharges include pollutants carried by stormwater. Goal 6 relies on federal regulations for direction and implementation, and requires jurisdictions to integrate compliance with federal and state water quality regulations in their comprehensive planning process. The federal Environmental Protection Agency (EPA) has set the guidelines for compliance through the Clean Water Act, and the Oregon Department of Environmental Quality (DEQ) has the authority and responsibility for its implementation.

Goal 7 – Areas Subject to Natural Disasters and Hazards

Compliance with Statewide Planning Goal 7, which addresses flooding, often includes measures that will help improve water quality. For example, in protecting against flooding, such as limiting development within floodways and reducing impervious surfaces that increase runoff, local governments also address water quality issues.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a federal program that allows property owners to purchase flood insurance. Participation in NFIP is based on an agreement between local communities and the federal government. In exchange for the availability

of flood insurance within the community, communities must implement measures to reduce future flood risks. NFIP establishes a local Flood Insurance Rate Map to show areas within the 100-year flood boundary, known as Special Flood Hazard Areas (SFHAs), which are subject to minimum floodplain management standards. The SFHA floodplain management standards have two purposes: 1) to prevent new development from increasing the flood threat, and 2) to protect buildings from future flood events. Cities must ensure that appropriate construction materials and methods have been used in new development and redevelopment in these areas. The Federal Emergency Management Agency (FEMA) may also designate a *floodway* in urban areas to avoid significantly increasing upstream flood elevations. A *floodway* is defined as the river channel and floodplain that must remain unobstructed in order to discharge the base flood without increasing flood levels by more than one foot. Under NFIP, communities must prohibit any development in the designated floodway that could cause an additional rise in the base flood elevation. More stringent requirements adopted at the state or local level would take precedence over the requirements outlined by NFIP.

Federal Clean Water Act

There are two key federal regulations regarding water quality that affect discharges into Bear Creek. Both of these regulations originate in the Clean Water Act, first adopted in 1972. The first regulation is the National Pollution Discharge Elimination System (NPDES) program, which addresses the effects of urbanization on stormwater runoff. The second regulation controls “total maximum daily load” (TMDL), which is the maximum amount of a pollutant that may be discharged into a stream without affecting water quality to a degree that limits “beneficial uses”. Beneficial uses, as defined in law, include recreation, fisheries, and irrigation. The most sensitive beneficial use in Oregon is salmon and steelhead habitat, so the standards are intended to protect this use.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) program is the fundamental regulatory mechanism of the Clean Water Act. The NPDES program requires anyone discharging a pollutant from a point source into the national waters to obtain an NPDES permit. Amendments also require the EPA to address discharges from urban stormwater. Accordingly, the EPA has initiated the urban stormwater permitting program because national stormwater data have demonstrated that urban stormwater is a leading cause of water quality degradation in the United States. In 1990, Phase I rules issued by EPA addressed stormwater discharges from cities with a population of 100,000 and over. The Phase I rules also regulated all stormwater discharges associated with certain commercial and industrial activity, and construction activity resulting in the disturbance of five acres or more of land. The permits required by the Phase I rules focused on the implementation of “best management practices” (BMPs) to improve the quality of stormwater discharges. Phase II rules require that by March 2003, the Oregon DEQ must regulate municipalities with an urbanized area population of at least 50,000 and an overall population density of at least 1,000 people per square mile. Phase II rules

also lower the threshold for erosion control of construction sites from five acres to one acre.

The Phase II rules require implementation of “minimum control measures.” The minimum control measures include:

- Public education and outreach on stormwater impacts;
- Public involvement and participation;
- Detection and elimination of illicit discharge;
- Construction site stormwater runoff control;
- Post-construction stormwater management in new development and redevelopment; and
- Pollution prevention and good housekeeping for municipal operations.

In terms of land use and development requirements, Phase II rules specifically call for ordinances to detect and eliminate illicit discharges, manage construction site runoff on sites of one acre and greater, and regulate post-construction stormwater runoff from new development and redevelopment. The rules provide guidance on structural and non-structural BMPs that can be used to regulate post-construction runoff. In addition, they call out the need for site plan review that considers potential water quality impacts.

TMDLs

Section 303(d) of the Clean Water Act requires each state to develop a list of water bodies that do not meet standards. Most cities in Oregon, including Medford, lay within the watershed of a 303(d) listed stream. Development activity and stormwater discharge in these watersheds can directly influence the water quality of a listed stream. The listed streams in the Medford UGB are: Bear Creek, Larson Creek, Lazy Creek, Lone Pine Creek, and Crooked Creek.

When a water body is placed on the list, the Clean Water Act requires a water quality management plan to reduce the offending pollutants, such as bacteria, temperature, pH, toxic compounds, etc. Some of the streams have exceeded state and county health hazards for fecal coliform. High levels of fecal coliform typically result from leaking septic systems, dog kennels, barn wastes, dumping from portable toilets and RV's, or any other activity that results in the discharge of fecal matter directly into storm drains or streams.

A primary component of the management plan is the calculation of the total maximum daily loads (TMDLs) for each of the pollutants in the water body. TMDLs describe the amount of each pollutant a waterway can carry and still comply with water quality standards. DEQ works with local jurisdictions so that the necessary steps, including changes to development code language, are taken to protect and enhance water quality. DEQ is developing TMDLs for every stream on the 303(d) list by the year 2007. Watershed management plans must specifically describe how non-point source control

activities will be managed in the watershed to comply with the established TMDLs. Designated Management Agencies (DMAs) such as the City of Medford are responsible for establishing load allocations for non-point sources.

DEQ has identified the following as contributors to non-point source pollution:

- Surface erosion from agricultural lands, construction sites, and unpaved roads;
- Storm runoff from paved roads and industrial/commercial sites;
- Removal of riparian vegetation and loss of thermal cover over streams;
- Placement of stream bank structures and fills;
- Water withdrawal;
- Animal and human waste contamination;
- Irrigation return flows; and
- Groundwater inflows.

Underground Injection Control Program

Oregon DEQ also administers the Underground Injection Control (UIC) Program, as mandated by the federal Safe Drinking Water Act. The UIC Program seeks to manage injection of fluids into the ground to protect groundwater for beneficial uses, such as drinking water. Underground injection systems distribute or inject fluids, such as wastewater or stormwater, below the ground's surface. Some stormwater infiltration devices such as French drains or dry-wells are considered underground injection systems and must be registered with the UIC program and meet certain requirements, such as not adversely impacting groundwater quality. An owner must be authorized to use an injection system either by registering the system and meeting general regulatory requirements or by obtaining a permit. Some types of injection systems, such as those injecting hazardous waste are prohibited. Local jurisdictions must address UIC regulations when adopting design standards for stormwater infiltration systems.

Endangered Species Act

The National Marine Fisheries Service (NMFS) has listed salmon and steelhead evolutionary significant units (ESUs) in Oregon as *threatened* or *endangered* under the Endangered Species Act (ESA), and the US Fish and Wildlife Service (USFWS) has authority to manage the recovery of these species. In Medford the "fish-bearing" streams (those containing salmon or steelhead habitat) are Bear Creek, and portions of Larson Creek, Lone Pine Creek, and Lazy Creek. The ESA prohibits "take" of a member of any species listed as *endangered*, and allows the same prohibitions for any species listed as *threatened*. The term "take" is defined in the ESA as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Take" has been defined to include intentional or negligent habitat modification that significantly impairs breeding, spawning, rearing, migrating, feeding, or sheltering, and which results in death or injury of a protected species. Loss or degradation of habitat resulting from land development can be considered a take, and the jurisdiction that permitted or allowed the offending development can be held liable. NMFS has

described certain precautions that, if followed, would preclude prosecution for take even if a listed species were harmed inadvertently. The intent is to provide local governments and other entities greater certainty regarding their liability for take. The NMFS 4(d) rule lists 12 criteria that will be used to determine whether a local program incorporates sufficient precautionary measures to adequately conserve fish. The rule provides for local jurisdictions to submit development ordinances for review by NMFS under one, several, or all of the criteria.

The criteria for the municipal, residential, commercial and industrial development and redevelopment are listed below:

- Avoid inappropriate areas such as unstable slopes, wetlands and areas of high habitat value
- Prevent stormwater discharge impacts on water quality
- Protect riparian areas
- Avoid stream crossings – whether by roads, utilities, or other linear development
- Protect historic stream meander patterns
- Protect wetlands, wetland buffers, and wetland function
- Preserve ability of permanent and intermittent streams to pass peak flows (hydrologic capacity)
- Stress landscaping with native vegetation
- Prevent erosion and sediment run-off during and after construction
- Ensure water supply demand can be met without affecting salmon need
- Provide mechanisms for monitoring, enforcing, funding and implementing
- Comply with all other state and federal environmental laws and permits

STORMWATER MANAGEMENT TECHNIQUES

The perception, management, and use of open channel systems within urban environments have changed considerably. Typically in the past, stormwater was managed in buried pipe conveyance systems. However, more current views of stormwater planning, as noted in the Drainage Master Plan (DMP), incorporate open systems, utilizing existing natural drainage patterns where feasible for conveying stormwater runoff. This method has the benefit of increasing the potential for wildlife habitat preservation. In addition, pollutants can be filtered out of stormwater utilizing vegetation within and beside the waterway and associated wetlands. Herbaceous wetland plants are more effective at filtering and absorbing pollutants than woody vegetation; and woody shrubs and trees are more effective at bank stabilization, and therefore more effective at preventing erosion. As noted in the DMP, many of the City's water quality problems are a result of inadequate erosion prevention. The DMP recommends that the City develop comprehensive erosion control guidelines in the form of a manual to aid developers and City staff. To improve water quality within the UGB, the DMP recommends a number of strategies, including development of sedimentation facilities, vegetated swales, and use of wetlands. Additionally, stream

bank restoration projects have been identified as having a significant water quality benefit.

Because the flat topography limits the effectiveness of the conveyance system, City design standards for the Elk and Midway Basins require that peak runoff rates be limited to 0.25 cubic feet per second (cfs) per acre of new development on individual commercial, industrial, and multiple-family lots or parcels. This is accomplished through on-site detention of the stormwater, either in above or below ground facilities. These detention facilities are privately owned and maintained.

City design standards for new development require accommodation of calculated 10-year storm flows in the upper portion of the watersheds. In the lower reaches of a watershed, stormwater systems must provide capacity for 25-year storm flows, if the calculated 25-year flow is greater than 200 cfs. In most cases, on-site detention is required to meet these standards.

Since 1998, the City has discretionarily conditioned new development within every drainage basin to provide stormwater detention to help mitigate the impacts of increased flows caused by the development. Post-development runoff control is a requirement of the National Pollutant Discharge Elimination System (NPDES), Phase II rules. The City is developing ordinances to require stormwater detention facilities in new developments, including land divisions and Planned Unit Developments. These facilities will be designed to provide for on-going maintenance so that they continue to perform as designed.

The ownership and maintenance of stormwater detention facilities can be private or public. The advantages of private ownership and maintenance, which can be handled by individual property owners or, for multiple properties, a property owners association, include the potential to have more frequent inspections and maintenance activities. They are likely to be developed and maintained more aesthetically. Private ownership and maintenance can also help in keeping down increases in citywide storm drainage utility fees. One advantage of publicly-owned and maintained detention facilities is that the City is already equipped and knowledgeable about maintenance needs; however, private parties can hire trained maintenance workers or facility managers. Public ownership can eliminate the need to create property owners' associations for multiple properties having a common facility. A factor to consider in determining private or public ownership and maintenance is whether public ownership of a facility provides a benefit to the whole community or to just a small segment.

Since the use of streams for conveying stormwater can also conflict with habitat preservation, site design methods are essential in controlling stormwater runoff. For example, reducing the amount of impervious surface materials through clustering of buildings and giving priority to the incorporation of open space in site design can decrease runoff by increasing retention and infiltration opportunities.

The transportation system can have a large impact on water quality. Roadways and parking lots create large areas of impervious surface that collect oil and other pollutants, and increase both the quantity and velocity of runoff. The connection between water quality and transportation planning is best made at the transportation project development level. Issues may include protecting or regulating development within floodways and identified Goal 5 resource areas.

Development regulations and programs can manage non-point pollutants by:

- Regulating site planning for new development and construction to better control drainage and erosion and to reduce and treat and retain stormwater runoff;
- Increasing riparian area buffer widths where appropriate to address TMDL requirements and other state and federal requirements;
- Regulating the location of permitted uses that may have higher than ordinary impacts on water quality, particularly those that generate, store or use hazardous waste or materials;
- Reducing street-related water quality and quantity problems;
- Increasing public awareness of techniques and practices private individuals can employ to help correct water quality and quantity problems;
- Increasing public awareness, minimizing the use, and encouraging the appropriate disposal of polluting substances that affect surface and groundwater resources;
- Regulating the cutting of trees and encouraging the reforestation and re-vegetation of appropriate areas;
- Requiring certain new construction and improvements to have an erosion control plan to protect water quality.

PLANNED STORMWATER FACILITIES AND PROGRAMS

The City of Medford projects capital improvements for five years. For the period of 2003 to 2008, stormwater management projects costing an estimated \$2 million are planned. For the 2003-2004 budget year, a storm drain mapping project is included, as well as acquisition of land for the Lone Pine Creek detention facility. A federal grant is being sought to fund a flood study for the Lone Pine Creek and Lazy Creek basins.

The DMP provides guidance for prioritizing improvements. Though a detailed summary of planned stormwater facilities is not provided in this section, the DMP describes such information. A list of stormwater system improvements, costs and funding sources is provided in Section III. As noted in the plan, many of the City's water quality problems are a result of inadequate erosion prevention needed to mitigate the impacts of urban development. Specific water quality facilities identified include the design of detention ponds to perform a dual role: flood protection and water quality treatment. A number of water quality treatment opportunities exist. Sedimentation facilities, vegetated swales, use of wetlands, etc., can be added to the stormwater system to improve water quality. Recently, stream bank restoration projects have been identified as having a

significant water quality benefit. The City is considering various types of facilities to meet future water quality objectives.

FUNDING

Storm Drain Utility Fund

The City of Medford utilizes a storm drain utility fee, established in 1984, to fund operation and maintenance of the stormwater system and capital improvements. Revenue collected from the utility fee is used to maintain the City's 110-plus miles of storm drain pipes, 55 miles of roadside ditches, and 25 miles of creeks and waterways. The goals of the maintenance program are to provide protection to citizens and infrastructure from flood damage, to improve water quality and preserve the hydrology of natural drainages, and to keep streets clean. The fund supports programs such as channel maintenance, street sweeping and leaf removal, cleaning inlets and drainpipes, and remote pipe inspection. Plans for capital improvements are based on the recommendations of the 1996 DMP. These funds significantly reduce the need for other funding sources, such as the City's General Fund, to be used for maintaining and improving the stormwater system.

The storm drain utility fee is a monthly charge to residents and businesses based on the amount of impervious area on a parcel, thus ensuring that those with a greater contribution of stormwater runoff pay the resulting cost. "Impervious area" includes roof area and paved or graveled area, such as parking lots and sidewalks. A single-family residence is considered to be one "Equivalent Residential Unit" (ERU) equal to approximately 3,000 square feet of impervious surface. The charge for one ERU in March 2002 was \$3.42 per month. The Storm Drain Utility Fee brought in an average of \$1.7 million per year in the early 1990's. Revenues generally increased about 3% each year due to growth. Expenditures were approximately 85% for operations and 15% for capital improvements. The City's 2002-2003 budget allocated 8.5 fulltime equivalent employees for storm drainage maintenance, although outside contractors are also used for some of the maintenance work. The City contributed \$1.7 million in 2001 to construction of the Elk Creek Diversion Pipe built in conjunction with the Oregon Department of Transportation's Highway 238 construction project.

Storm Drain SDC Fund

The Storm Drain System Development Charge (SDC) Fund is primarily supported through the collection of SDCs, which are fees usually charged at the time a building permit is issued or a land division plat is final. They relate to the additional load placed on infrastructure by new development or expansions. The Storm Drain SDC Fund is used for the design and construction of capacity improvements to the stormwater collection system, and cannot be used for maintenance. Storm drains constructed as part of street projects are sometimes funded by other sources. Developers required to size stormwater facilities to serve more than their own development are reimbursed for a portion of the over-sizing cost from this fund. Developer reimbursements for storm drainage projects are expected to cost approximately \$125,000 per year.

New development within a specified area of the City (the CDA – “Currently Developed Area”) does not have to pay Storm Drain SDCs. The CDA is defined as all parcels of less than one acre in size that were undeveloped and within the City on August 4, 1983. If a large portion of new development occurs within this area, the amount in the Storm Drain SDC Fund is reduced. In the early 2000’s, the Storm Drain SDC Fund brought in approximately \$200,000 per year. Revenues are expected to remain steady through 2005. A three-phase rate increase of 5% per year ended in 2002.

STORMWATER MANAGEMENT—CONCLUSIONS

1. The City of Medford operates and maintains the stormwater system, which utilizes Bear Creek and its tributary streams that eventually flow into the Rogue River, and ultimately to the Pacific Ocean. The watershed area for each tributary often extends beyond the UGB, so, in addition to the stormwater generated within the UGB, Medford must manage flow generated upstream. Similarly, areas downstream of Medford must contend with Medford’s runoff.
2. The most recent public facility plan for storm drainage in Medford is the *Comprehensive Medford Area Drainage Master Plan* (Brown and Caldwell, 1996). An update of the plan (mapping project) is included in the 2002-2003 and 2003-2004 City budget.
3. Municipalities such as Medford must strike a balance between the damages caused by flooding due to insufficient stormwater capacity and the cost of building and maintaining stormwater management facilities. A storm drainage “utility fee” provides funding to support the service of providing stormwater facilities (operation and maintenance). This fee is a monthly charge to customers based on the type of land use activity. A Storm Drainage System Development Charge (SDC) pays for new stormwater facilities needed as a result of new development.
4. Previous storm drain piping practices in Medford have left a disjointed system of above and below ground stormwater systems, and, therefore, discontinuous riparian and wetland areas. Medford’s wetlands, waterways and associated riparian vegetation are significant natural resources that contribute to the health, safety, and general welfare of the community. The stability of natural systems and community livability depend upon benefits provided by these resources. They provide protection from flooding and treatment of stormwater. Fish and other wildlife, some of which are endangered or threatened, also depend upon the water and habitat functions they provide.
5. Effective multi-objective management of Medford’s waterways, riparian areas, and wetlands will require the cooperative effort of various City departments, such as Parks, Planning, and Public Works, along with federal, state, and local agencies and organizations in addressing issues such as ownership, improvements, maintenance responsibility, public access, etc.
6. Much of Medford’s future residential development is planned to occur in the Larson Creek basin where there are slopes, oak woodlands, wetlands, irrigation canals, and several stream corridors that remain in a mostly natural condition.

- Stormwater management is a significant issue in this basin.
7. Development activities that include the reduction of open space and wetlands, removal of vegetative cover, addition of impervious surfaces, channelization of waterways, and terracing of hillsides can cause increases in peak stormwater flows and decreasing water quality. The result is a loss of natural stormwater storage and filtering capacity, which are important in preventing flood damage and maintaining water quality.
 8. Water pollution in Medford waterways results from both “point sources” and “non-point sources”. Wastewater from a point source comes from a discernable or discrete location. Non-point source wastewater is from overland flow and includes stormwater. Bear, Crooked, Larson, and Lone Pine Creeks are listed on DEQ’s 303(d) List of Water Quality Limited Streams. These streams are listed for temperature and bacteria. Bear Creek is also listed for habitat and flow modifications.
 9. Federal and state regulations require Medford’s stormwater management program to address water quality and natural resource protection objectives in addition to the traditional flood control objectives. The federal regulations that affect discharges into Medford’s waterways, originating in the Clean Water Act, are the National Pollutant Discharge Elimination System (NPDES) Stormwater Program, which addresses the effects of urbanization on stormwater, and the limitations on “total maximum daily load” (TMDL), which is the maximum amount of a pollutant that may be discharged without affecting water quality to a degree that limits “beneficial uses”. The City of Medford must implement procedures consistent with the policies and best management practices (BMPs) required by NPDES regulations. Medford will also be required to reduce pollutant loads as a result of the TMDLs to be set by the Oregon Department of Environmental Quality (DEQ). A significant portion of the load reduction will have to be achieved through changes in development and stormwater management practices.
 10. Bear Creek, Larson Creek, and Lone Pine Creek downstream of Biddle Road contain habitat for salmonid species, some of which are rare or endangered. As such, the waterways and riparian areas located within 50 feet from the tops of the banks are protected by the City’s Riparian Corridor Ordinance. These streams are also designated as “essential indigenous anadromous salmonid habitat” by the state. Portions of Lazy Creek may be added to this list based on ODFW fish surveys. Other waterways and riparian areas in Medford are not yet protected by local regulation.
 11. Development activities permitted by the City of Medford which result in harm to a threatened or endangered species, and fall outside the provisions for “incidental take” by the federal Endangered Species Act, could result in the City being held liable. Improperly treated and/or stored stormwater could compromise salmonid recovery and also lead to an illegal “take” of an endangered species.
 12. Medford’s Local Wetlands Inventory and Oregon Freshwater Wetland Assessment Methodology assessments are used to determine “locally significant

- wetlands”. State laws pertaining to Statewide Planning Goal 5 require protection of these wetlands through local analysis and regulation.
13. As development on slopes continues, the amount and velocity of runoff will increase, potentially causing downstream flooding and erosion-associated problems such as sedimentation. Poor development practices on hillsides can cause increased public expenditures for flood and erosion control, stormwater management, and water quality treatment. An increased amount of stream sedimentation leads to a loss of in-stream floodwater storage, resulting in widening of waterways and more flooding.
 14. Urban development can be designed in a manner that protects and enhances water quality through efficient site design and best management practices (BMPs), and mitigating measures can reduce the negative impacts on water quality and quantity. On-site stormwater detention and treatment is a preferred stormwater management practice. On-site management can alter peak flows by making them smaller but extending over a longer period. It can also decrease the amount of runoff through infiltration, although much of Medford’s geology is not conducive to high rates of infiltration. Stormwater treatment requires a range of programs to be effective, including appropriate alterations to development, on-site treatment, and limitations on increases in impervious surfaces.
 15. Compact development and efficient site planning can reduce water quality impacts by reducing the amount of impervious surface that would otherwise be created in a watershed. The impervious surfaces of the transportation system have negative impacts on stormwater quality by increasing both the quantity and velocity of runoff and by collecting oil and other pollutants that are flushed into streams when it rains. Setting appropriate street designs, setting standards that limit the amount of parking, and allowing pervious surfaces where practical are methods that can address the impact of the transportation system.

STORMWATER MANAGEMENT—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

(See also the Environmental Element of the Comprehensive Plan for related goals and policies.).

GOAL 1: To protect the citizens of Medford from the potential damage caused by flooding.

Policy 1-A: The City of Medford shall maintain a relevant stormwater management plan for all drainage basins within the Urban Growth Boundary, and implement it through upgrading existing facilities and providing new facilities identified in the plan through public and private development.

Implementation 1-A-1. Regularly update the stormwater management plan with the following information, particularly in conjunction with significant changes to the General Land Use Plan:

- Inventory of existing major facilities and assessment of condition
- Description/map of projects needed to support the General Land Use Plan for the planning period
- Estimate of timing and cost for the projects
- Estimate of ability to fund and funding mechanisms for the projects

Implementation 1-A-2. Maintain a stormwater management funding program, including use of system development charges, monthly service charges, developer-required construction in conjunction with new development, etc.

Implementation 1-A-3. Pursue cooperative stormwater management with Irrigation Districts having facilities in the Medford UGB.

Implementation 1-A-4. Through the development review process, require development and stormwater system improvements to comply with the standards in the current stormwater management plan.

Implementation 1-A-5. Through the development review process, secure real property or easement dedications prior to or at the time of development adequate for flood protection, conveyance of stormwater, channel access, and maintenance along waterways needed for public conveyance of stormwater.

Implementation 1-A-6. Require stormwater facilities to be designed to safely conduct less frequent, higher flows through or around facilities without damage to the facilities.

Policy 1-B: The City of Medford shall strive to reduce new development in flood plains in order to minimize potential flood damage through their use as open space, or for agricultural, recreational, or similar uses.

Implementation 1-B-1. Evaluate current local regulations that control development in flood plains and adopt amendments where needed to potential stormwater impacts on development in such areas.

Implementation 1-B-2. Provide incentives to encourage the use of planned unit developments and other flexible site design techniques for properties containing flood plains so that these areas can be designed for open space or recreational uses.

Policy 1-C: The City of Medford shall assure that stormwater is managed (infiltrated, detained and treated) on or as close as practicable to development sites in order to reduce the impact of new development on the stormwater management system and natural streams.

Implementation 1-C-1. Require stormwater to be infiltrated onsite to the greatest extent possible through a combination of provisions, such as site design standards, that reduce impervious surfaces and protect natural areas.

Implementation 1-C-2. Develop regulations that permit the appropriate use of porous surfacing materials such as porous asphalt, modular paving, lattice concrete blocks, and porous bricks.

Implementation 1-C-3. Require stormwater detention and treatment facilities for new development and pursue the development of area-wide stormwater detention and treatment facilities in existing developed areas, to decrease peak downstream flows and reduce the need for extensive changes to main stems of streams.

Implementation 1-C-4. Consider designing certain public parks to also serve as area-wide stormwater detention and treatment facilities, while meeting the recreational needs of the community.

GOAL 2: To achieve and maintain a high level of water quality in Medford's waterways and groundwater.

Policy 2-A: The City of Medford shall protect surface and groundwater resources, including current and potential wellhead areas, from pollution through a variety of regulatory measures relating to land use, transportation, and hazardous substance management.

Implementation 2-A-1. Inventory surface and groundwater resources, including current and potential wellhead areas (groundwater areas used for drinking water).

Implementation 2-A-2. Participate in regional stormwater programs that address the Bear Creek watershed.

Implementation 2-A-3. Develop and require the use of best management practices (BMPs) to prevent water pollution from activities that are potential pollution sources.

Implementation 2-A-4. Require the quality of stormwater leaving a site after development to be equal to or better than that leaving the site before development.

Implementation 2-A-5. Focus street and parking standards to protect and enhance water quality, such as minimizing street pavement widths, limiting the amount of parking, allowing pervious paving surfaces where practical, etc.

Implementation 2-A-6. Undertake activities to increase public awareness of techniques and practices private individuals, groups, and associations can employ to help correct surface and groundwater quality problems. These may include minimizing the use and the appropriate disposal of polluting substances, educating residents regarding the function of stormwater detention and other water quality facilities, etc.

Policy 2-B: The City of Medford shall strive to assure that both public and private

development complies with applicable state and federal water quality regulations.

Implementation 2-B-1. Develop a program to comply with the National Pollutant Discharge Elimination System (NPDES) Phase II permit requirements in a timely fashion.

Implementation 2-B-2. In response to the Total Maximum Daily Load (TMDL) determinations developed for the watershed by the Oregon Department of Environmental Quality, develop an implementation plan that includes appropriate pollutant load reduction strategies.

Implementation 2-B-3. Develop a program to comply with Oregon Department of Environmental Quality requirements related to Underground Injection Control.

Policy 2-C: The City of Medford shall utilize stormwater management strategies that sustain natural streams and wetlands consistent with Environmental Element – Water Quality Section - Goal 6 and its policies and implementation strategies.

Implementation 2-C-1. Inventory and map natural features in the Medford UGB important in stormwater management planning, including waterways, wetlands, and flood plains; lands abutting significant streams; lands with significant native vegetation (woodlands, wetlands, riparian vegetation, etc.); significant slopes; and groundwater areas used for drinking water.

Implementation 2-C-2. As part of stormwater management planning, actively address issues relating to species listed as endangered or threatened.

Implementation 2-C-3. Identify sensitive habitat areas and areas that are important for the protection of water quality for public purchase and ownership or for protection through conservancy programs.

Implementation 2-C-4. Require buffering, setback requirements, maintenance of tree canopy and vegetative cover, and other best management practices (BMPs) as necessary to enhance water resources and protect their functions.

Policy 2-D: The City of Medford shall strive to eliminate sediment entering waterways consistent with Environmental Element - Soils Section - Goal 8 and its policies and implementation strategies.

Implementation 2-D-1. Require stormwater control facilities to be designed so that the rate of discharge is equivalent to a site's pre-development stormwater discharge for a determined storm frequency or multiple frequencies.

Implementation 2-D-2. Map constrained slopes (over 15% slope) for the

purpose of creating a hillside protection overlay zone that requires utilization of special construction techniques before, during and after development that minimize erosion/sedimentation and stormwater runoff, particularly peak storm flows.

Implementation 2-D-3. Require development on slopes to be designed to preserve the vegetative cover (trees and vegetation) or mitigate its removal.

Implementation 2-D-4. Require land-disturbing activities associated with construction to employ comprehensive erosion control practices implemented in the form of an ordinance and a manual to aid developers and City staff.

Implementation 2-D-5. Require water quality control facilities to remove a specified portion of sediments (Total Suspended Solids) from the flow.

8.3 Category “A” Capital Improvement Program Summary

INTRODUCTION

Included in this section are **Tables A, B, B-1 and C**, which describe the planned category “A” public facilities, projects for water, stormwater management, and sanitary sewer collection and treatment. These tables include information relating to general project location, project construction timing, estimated capital costs, provider, and funding sources, as required by Oregon Administrative Rules (OAR 660-11). The following tables are the applicable Capital Improvement Plans for aforementioned category “A” facilities.

WATER SERVICE

The water system projects presented are as identified by the Medford Water Commission in the *1999 Water System Plan* that includes improvements through 2009. Like most of the other plans, the timing of the individual improvement could vary greatly based on the timing of development. Improvements include water storage in the eastern part of the UGB where development is occurring at higher elevations. The projects listed in **Table A** represent improvements outlined in the *1997 Robert A. Duff Water Treatment Facility Plan* that had not been completed as of 1999.

SANITARY SEWER COLLECTION AND TREATMENT

The 2019 *City of Medford Sanitary Sewer Collection System Master Plan* outlined short-term replacement of 34,500 feet of existing pipe to increase capacity for growth. The replacement pipe ranges in size from 12 to 24 inches, and has an estimated cost of approximately \$29 million. Additionally, the plan identifies long-term expansion needs for new sewer pipes to accommodate growing areas in the newly expanded Urban Growth Boundary (UGB) areas. See **Table B** for the Sanitary Sewer System Capital Improvements Plan through 2020. See **Table B-1** for the Sanitary Sewer Collection System. For a map of the planned projects, see Figure 7.3 in the SSMP.

STORMWATER MANAGEMENT SYSTEM

The stormwater system projects in **Table C** are taken from the *1996 Medford Area Drainage Master Plan* and the Capital Improvement Program from the City of Medford 1995 Budget. The projects from the DMP are in 1996 dollars and the projects from the 1995 Budget are in 1995 dollars. The projects are organized by drainage basin because the projects generally benefit the entire basin. Storm drainage improvements are examples of projects that benefit the existing population as well as future growth. Much of the existing storm drainage system is inadequate to serve the present population, so improvements are needed whether or not growth occurs. Funding for maintenance of

the storm drainage system comes from the storm drain utility fee, and the Storm Drain SDC Fund pays for new storm drainage facilities.

Table A: Water System Capital Improvements

Area Served by Drainage Basin	Project	Estimated Capital Cost		Provider	Funding Source
		Short Term 2000–2005	Long Term 2006–2020		
	Source of Supply				
Regional	BBS Property Purchase	\$200,000		MWC	Utility Rates
	Purchase 1000 Acre/ft. Lost Creek Lake Water	\$650,000		MWC	Utility Rates
	Watershed Red Area Property Acquisition	\$300,000		MWC	Utility Rates
	Collection and Treatment				
Regional	Robert A. Duff Water Treatment Plant				
	Duff Filters Expansion	\$2,675,000		MWC	SDC
	Duff Chemical Feed System w/Building & Scrubber	\$890,000		MWC	Utility Rates
	Design/Implement Duff Electrical Expansion	\$1,220,000		MWC	SDC
	Design/Implement Duff Flow Metering/Piping	\$120,000		MWC	SDC
	Design/Implement DBP Process Modification @ Duff	\$110,000		MWC	Utility Rates
	Design/Implement Duff Clearwell Baffles	\$50,000	\$430,000	MWC	Utility Rates
	Design/Implement Duff Earthquake Hardening	\$30,000	\$350,000	MWC	Utility Rates
	Design/Implement Duff High Service Pumping	\$430,000		MWC	SDC
Regional	Big Butte Springs				
		Estimated Capital Cost			
Area Served by Drainage Basin	Project	Short Term 2000–2005	Long Term 2006–2020	Provider	Funding Source
	Design/Implement BBS Intake/Piping Modifications	\$420,000		MWC	Utility Rates
	Disinfection Project @ BBS (Ozone)		\$5,000,000	MWC	Utility Rates
	Storage and Transmission				
Crooked Creek	Start/Complete SW Reservoir (2.0 mg) and Transmission	\$1,600,000		MWC	SDC
Lone Pine	Design/Build Lone Pine no. 3 Reservoir (1.0 mg)	\$1,170,000		MWC	SDC
Bear Creek East	Design/Rebuild Roof & Hardening of Capital Reservoir no. 3	\$550,000		MWC	Utility Rates
Larson Creek	Design/Build Cherry Lane Zone no. 2 Reservoir (1.5 mgd) and Transmission	\$100,000	\$1,450,000	MWC	SDC
Lazy Creek	Design/Build Lone Pine Zone no. 2 Reservoir (1.0 mgd)		\$1,170,000	MWC	SDC
Regional	Build Hanley Hill Reservoir (10 mgd)		\$3,800,000	MWC	Utility Rates

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Regional	BBS Transmission Main	\$182,000	\$125,000	MWC	Utility Rates
Regional	Main Replacements	\$1,412,000	\$1,500,000	MWC	Utility Rates
Lazy Creek	Hillcrest Road Main		\$270,000	MWC	Utility Rates
Elk Creek	Stewart Main Replacement	\$250,000		MWC	Utility Rates
Distribution and Control					
Lone Pine	Design/Build Lone Pine Pump Station	\$550,000		MWC	SDC
Larson Creek	Design/Build Barnett Pump Station		\$440,000	MWC	SDC
Bear Creek East	Upgrade Pierce Heights Pump Station	\$20,000		MWC	Utility Rates
Regional	Equipment Purchase	\$865,450	\$750,000	MWC	Utility Rates
	Service Replacements	\$1,015,000	\$1,000,000	MWC	Utility Rates
	Pump Station/Equipment Upgrades	\$356,900	\$600,000	MWC	Utility Rates
	Service Center Earthquake Hardening	\$90,000		MWC	Utility Rates
	Meters	\$733,300	\$750,000	MWC	Utility Rates
	Watershed Management	\$416,000	\$375,000	MWC	Utility Rates
	Distribution System GIS	\$365,000		MWC	Utility Rates
	In-house Computer				
	Hardware/Software upgrades	\$100,000		MWC	Utility Rates
	Distribution Telemetry Control Upgrade	\$150,000		MWC	Utility Rates
	Miscellaneous Improvements	\$1,445,650	\$1,500,000	MWC	Utility Rates
Estimated 1–5 year Capital Cost		\$18,466,300			
Estimated 6–10 year Capital Cost		\$19,510,000			
Total Long-Term Estimated Capital Cost		\$37,976,300			

Table B: Sanitary Sewer System Capital Improvements

Area Served	Project	Estimated Capital Cost		Provider	Funding Source
		Short Term 2000–2005	Long Term 2006–2020		
Collection					
Regional	Piping Improvements	\$115,000		City	Bond, SDC, Sewer Rates
	Non-Treatment Facility Improvements	\$120,000		City	Bond, SDC, Sewer Rates
Treatment					
Regional	Aeration Systems Improvements	\$196,000	\$1,400,000	City	Bond, SDC, Sewer Rates
	Drying Bed Improvements	\$4,780,000	\$0	City	Bond, SDC, Sewer Rates
	Secondary Clarifier Improvements	\$436,772	\$4,100,000	City	Bond, SDC, Sewer Rates
	Digester Improvements	\$6,000	\$2,000,000	City	Bond, SDC, Sewer Rates
	Grit System Improvements	\$850,000	\$550,000	City	Bond, SDC, Sewer Rates
	Headworks/Inlet Improvements	\$500,000	\$0	City	Bond, SDC, Sewer Rates
	Instrumentation Systems	\$0	\$100,000	City	Bond, SDC, Sewer Rates
	Cogeneration Facility Improvements	\$203,000	\$305,000	City	Bond, SDC, Sewer Rates
	Sludge Storage Lagoon Improvements	\$1,400,000	\$2,600,000	City	Bond, SDC, Sewer Rates
	Primary Treatment Facility Improvements	\$1,440,000	\$900,000	City	Bond, SDC, Sewer Rates
	Sludge Thickening Facility Improvements	\$6,000	\$2,000,000	City	Bond, SDC, Sewer Rates
	Research Projects	\$25,000	\$125,000	City	Bond, SDC, Sewer Rates
	Solids Disposal Systems	\$0	\$200,000	City	Bond, SDC, Sewer Rates
	Trickling Filter Improvements	\$0	\$1,750,000	City	Bond, SDC, Sewer Rates
	Disinfection Systems	\$0	\$2,000,000	City	Bond, SDC, Sewer Rates
	Miscellaneous Improvements	\$500,000	\$1,500,000	City	Bond, SDC, Sewer Rates
	Advanced Treatment System (ATS)	\$22,582,000		City	Bond, SDC, Sewer Rates
Estimated 1–5 year Capital Cost		\$33,159,772			
Estimated 6–20 year Capital Cost		\$19,530,000			
Total Long Term Estimated Capital Cost		\$52,689,772			

Table B-1: Sanitary Sewer Collection System Capital Improvements (For a complete list of projects, see Sanitary Sewer Collection System Master Plan (2019))

Project ID	Improvement Type	Description	Total Capital Improvement Cost(1)	Total Short-Term Priority 1 (2017-2021)	Total Short-Term Priority 2 (2022-2026)	Mid-Term (2027-2036)	Long-Term (2037 – Build-Out)	SDC Allocation	
								SDC Eligibility (%)	SDC Eligibility (\$)
PIPE PROJECTS									
P-1 to P-46	Gravity	Improvement and Capacity-Related Pipe Projects	\$ 29,894,000	\$ 6,569,000	\$ 6,895,000	\$ 10,376,000	\$ 6,054,000	49	\$ 15,353,000
Exp-1	Expansion	Alternative 2 - "Regional Sewers" to Expansion Areas	\$ 25,000	\$ –	\$ –		\$ 25,000	100	\$ 25,000
Exp-2	Expansion	Alternative 2 - Expansion pipes above 8-inch in diameter. 8-inch pipes are paid for by developers.	\$ 100,000	\$ –	\$ –	\$ 100,000	\$ –	100	\$ 100,000
Exp-3	Expansion	Alternative 2 - Expansion pipes above 8-inch in diameter. 8-inch pipes are paid for by developers.	\$ 25,000	\$ –	\$ –	\$ –	\$ 25,000	100	\$ 25,000
TOTAL PIPE PROJECTS			\$ 30,044,000	\$ 6,569,000	\$ 6,895,000	\$ 10,476,000	\$ 6,104,000	54	\$ 15,503,000
PUMP STATION PROJECTS									
PS-1	Pump Station	PMT Pump Station - 1024 Summit Ave. (No redundant pump)	\$ 50,000	\$ –	\$ –	\$ 50,000	\$ –	0	\$ –
PS-2	Pump Station	Service Center Pump Station - 821 Columbus Ave. (No redundant pump)	\$ 50,000	\$ –	\$ –	\$ 50,000	\$ –	0	\$ –
TOTAL PUMP STATION PROJECTS			\$ 100,000	\$ –	\$ –	\$ 100,000	\$ –		\$ –
GENERAL PROJECTS									
G-1	General	I/I Reduction Program - Basin M	\$ 675,000	\$ 675,000	\$ –	\$ –	\$ –	100	\$ 675,000
G-2	General	Master Plan Updates	\$ 300,000	\$ –	\$ –	\$ 300,000	\$ –	50	\$ 150,000
G-3	General	Master Plan Updates	\$ 300,000	\$ –	\$ –	\$ –	\$ 300,000	50	\$ 150,000
TOTAL GENERAL PROJECTS			\$ 1,275,000	\$ 675,000	\$ –	\$ 300,000	\$ 300,000		\$ 982,000
TOTAL (\$)			\$ 31,419,000	\$ 7,244,000	\$ 6,895,000	\$ 10,876,000	\$ 6,404,000		\$ 16,478,000
Total Annual (\$/year)			\$ 1,309,125	\$ 1,207,333	\$ 1,723,750	\$ 1,087,600	\$ 1,601,000		

Table C: Stormwater Management System Capital Improvements

Drainage Basin	Project	Estimated Capital Cost		Provider	Funding Source
		Short Term 2000–2005	Long Term 2006–2020		
Regional	Curb Inlet Replacements	\$105,000		City	Drainage Utility
	Misc. Projects	\$400,000		City	Drainage Utility
Midway	Canal Diversion Structures	\$21,000		City	SDC
	Channel Improvements		\$476,000	City	SDC & Developers
	Lower Main Channel Pipes		\$1,600,000	City	SDC & Developers
	Upper Main Channel Pipes	\$420,000		City	SDC & Developers
	Tributary Pipes	\$1,680,000		City	SDC & Developers
	King Center Storm Drain	\$380,000		City	SDC & Developers
Lone Pine Creek	Canal Diversions		\$17,000	City	Drainage Utility
	Culverts Along Main Channel	\$100,000		City	Drainage Utility
	Tributary Pipes	\$400,000		City	SDC & Developers
	Bear Creek to Biddle	\$200,000		City	SDC & Developers
Bear Creek East	Trunk System Replacements	\$4,650,000		City	Drainage Utility
	Hopkins Canal	\$430,000		City	Drainage Utility
	Spring-Sunrise Drainage	\$60,000		City	Drainage Utility
	Marie and Jackson	\$80,000		City	SDC & Developers
	Crown-Oregon to Barneburg	\$150,000		City	SDC & Developers
Lazy Creek	Detention Basin - Hillcrest Rd.	\$100,000		City	Drainage Utility
	Pipes in Developed Basin Portion	\$810,000		City	Drainage Utility
	Pipes in Undeveloped Portion	\$1,330,000		City	SDC & Developers
	Stanley St. Storm Drain	\$80,000		City	Drainage Utility
	Littrell to Lazy Creek	\$90,000		City	SDC & Developers
Larson Creek	Canal Diversions	\$12,000		City	SDC

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	Tributary Pipes	\$400,000	City	SDC & Developers
Bear Creek South & Crooked Creek	Canal Diversions	\$12,000	City	Drainage Utility
	Regional Detention Basin	\$800,000	City	Drainage Utility
	Main Channel Culverts	\$213,000	City	Drainage Utility
	Tributary Pipes in Developed Areas	\$375,000	City	Drainage Utility
	Tributary Pipes in Growth Areas	\$1,800,000	City	SDC & Developers
	Peach St. - South from Stewart	\$200,000	City	SDC & Developers
	Columbus Storm Drain Extension	\$100,000	City	SDC & Developers
Bear Creek West	Overflow Channels	\$120,000	City	Drainage Utility
	Pipe Construction	\$4,675,000	City	Drainage Utility
	NW Medford Storm Drain	\$580,000	City	SDC & Developers
	13th to 12th thru Peach St.	\$60,000	City	Drainage Utility
	W. Tenth to Bear Creek	\$200,000	City	Drainage Utility
Elk Creek	Pipe in Developed Areas	\$120,000	City	Drainage Utility
	Pipe in Growth Areas	\$4,675,000	City	SDC & Developers
Estimated 1–5 year Capital Cost		\$24,896,000		
Estimated 6–20 year Capital Cost		\$3,025,000		
Long Term Estimated Capital Cost		\$27,921,000		

8.4 CATEGORY “B” FACILITIES

8.4.1 FIRE AND EMERGENCY SERVICES

PLANNING GOALS

The Medford Fire Department Mission Statement provides the focus for the Departments planning efforts. The mission of the Medford Fire Department is *“To serve, educate, and protect citizens from the effects of hostile fire, medical emergencies, hazardous material exposure, and natural and manmade disasters.”* Many elements drive the mission, including, but not limited to:

- Effective emergency deployment and response
- Effective fire prevention
- Effective public education
- Maintaining water quantity/pressure levels to meet fire flow requirements as specified in the 1994 Uniform Fire Code.
- Maintaining a minimum ISO rating of Class III in the City and Class VIII in District 2

The Insurance Services Office (ISO) provides a rating system that ultimately determines the cost of fire insurance for property owners. The system rates fire protection services based on a variety of standards.

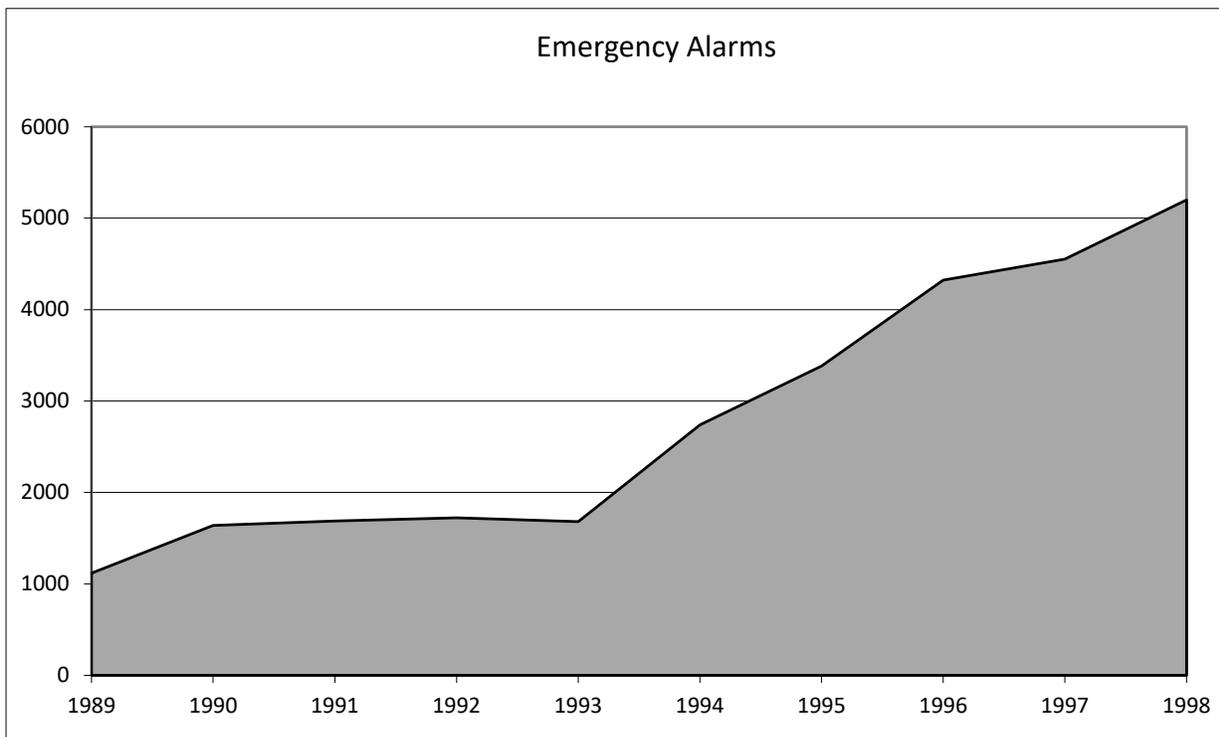
EXISTING PLANNING AND FACILITIES

The Medford Fire and Rescue Department provides full services to a population of approximately 80,000 located both within the Medford city limits (20 square miles), and in Medford Rural Fire Protection District no. 2 (25 square miles). The service area contains a mix of land types, from urban to rural and farmland. Fire District no. 2 contracts with the Medford Fire Department for the same services provided within the City. Property owners within either jurisdiction pay approximately the same tax rate to support the services. District no. 2 includes properties located both within and outside Medford’s Urban Growth Boundary. Properties annexed to the City are withdrawn from District no. 2 at the effective date of annexation. The following services are provided:

- Fire protection and suppression
- Emergency medical services
- Hazardous materials incident mitigation
- Rescue
- Disaster management
- Emergency planning
- Fire prevention
- Public education

The number of emergency responses by the Medford Fire Department has increased significantly in the past few years. See **Figure 3**. An increasing population residing within the service area, as well as the increasing number of people coming into the service area for work, shopping, education, recreation, etc., impacts the emergency response volume. Though medical and other emergency responses have increased, fire-related responses have decreased over time, averaging approximately 20 percent of total yearly emergency alarms.

Figure 3: Emergency Alarm Totals by Year



Planning Efforts

The Medford Fire Department conducts strategic planning sessions at the beginning of each year that include reviewing the previous year and establishing goals for the coming year. A strategic plan is then prepared, with time lines for completion of identified tasks, responsible parties, and resources required. To handle the increasing number of emergency responses, special computer software (Fire Station Location & Mapping Environment, FLAME) has been acquired. Deployment of resources, both human and mechanical, is managed through staff planning and decision implementation based on computer modeling that uses response time, population distribution, assessed valuation, and service area fire risk. The response statistics are generated from a database of reported emergency runs.

To plan for fire station locations that will deploy resources at the highest level of efficiency, the *Medford Fire Station Location Study* was prepared by Urban Planning

Associates in 1995. Fire Router computer software was used for fire station site analysis. A map containing details such as road speeds, one-way routes, grades, dead end streets, future streets, street type, etc., is combined with a database containing the current and projected population and the assessed valuation of the response area. Various scenarios can then be tested for established response time goals to identify fire station locations that generate the highest capability. Three such locations have been identified.

The Fire Department is also planning to participate in the International Association of Fire Chiefs Fire Department Accreditation Program. It is similar to the process that schools, universities, and health care facilities use to attain professional accreditation. It will assist the Fire Department in developing a concurrent strategic plan which, when complete, will form the framework for the Department’s direction for five to seven years.

The Medford Fire Department as a means of “pre-planning” maintains an inventory of plans of significant and/or complicated structural facilities. The plans are used for quick reference while en route to an emergency, as well as for general reference during extended operations. They provide information regarding building layout, stored hazardous materials and explosives, sprinkler locations, critical valves, machinery shut down procedures, etc. The existence of plans of select facilities is instrumental in the initial size-up, ongoing reconnaissance, and eventual control of an incident. New computer technology will provide still photos and video through a notebook computer operated at the site of an emergency.

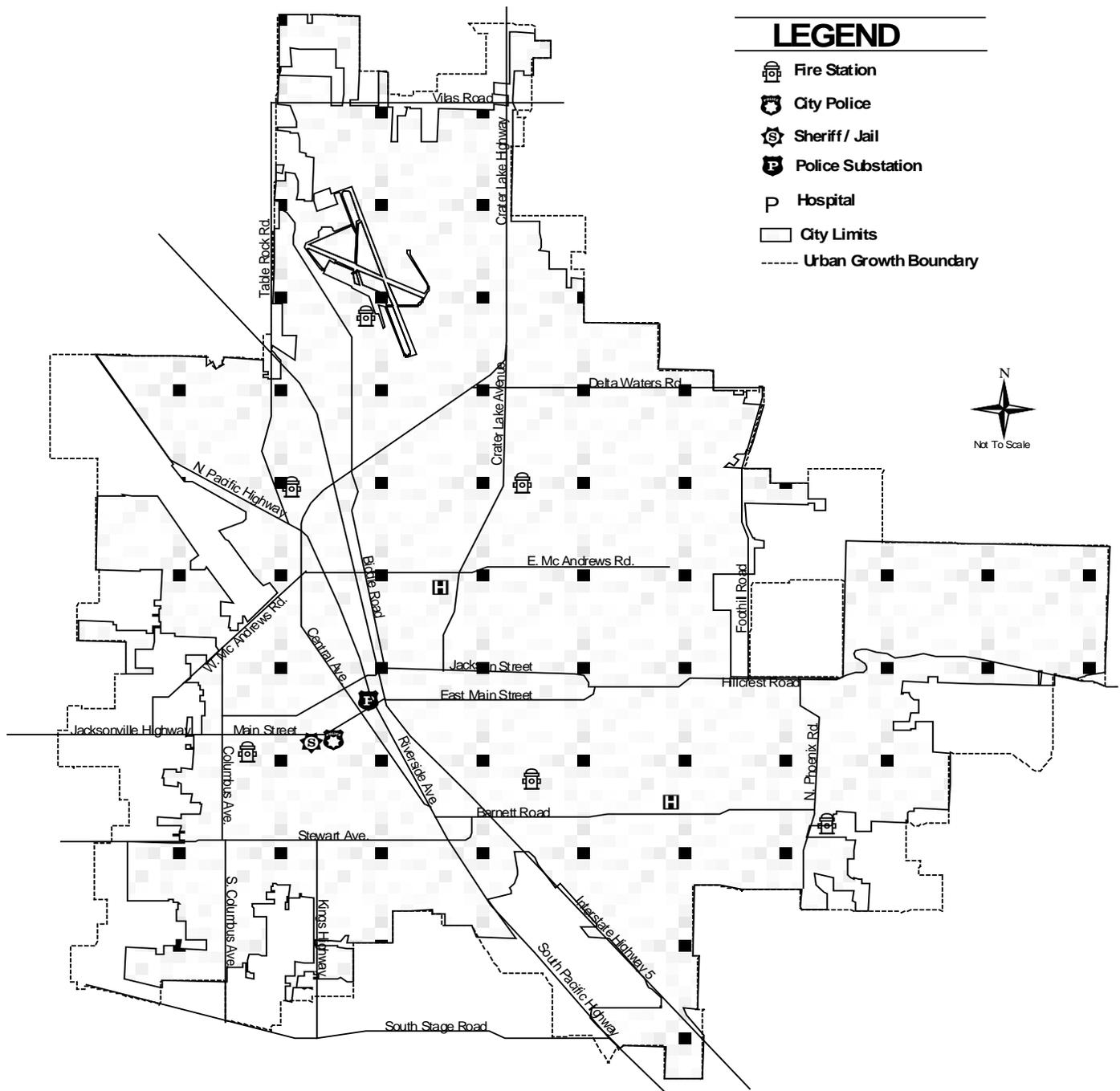
FACILITY INVENTORY

The Medford Fire Department currently responds from five locations:

City Hall Main Offices	411 West Eighth Street at Oakdale Street
Fire Station no. 2	1241 West Eighth Street at Lincoln Street (West)
Fire Station no. 3	530 Highland Drive at Siskiyou Boulevard. (East)
Fire Station no. 4	2208 Table Rock Road (Northeast)
Fire Station no. 5	2124 Roberts Road at Keene Way (Northwest)
Fire Station no. 6	3700 Barnett Road (Southeast)

The location of these fire stations, as well as other emergency service facilities, is shown in **Figure 4**.

Figure 4: Emergency Service Facilities



Department Organization and Staffing

The Medford Fire Department is composed of five divisions: Administrative, Operations, Planning, Training, and Fire Prevention. The Administrative Division is responsible for the budget process and helps coordinate the budget of Medford Rural Fire Protection District no. 2. It handles personnel issues, annexations to District no. 2, and the Emergency Management Plan. The City is an active member of the Jackson County

Emergency Management Committee. The City's Emergency Management Plan, when completed, will be integrated with the Jackson County Emergency Management Plan, and will include the Rogue Valley International-Medford Airport and District no. 2.

Medford Fire Department staffing levels have remained fairly constant over the past 20 years. As of 2000, the Fire Department employed approximately 75 employees; one fire chief, five staff chiefs, three shift commanders, 57 firefighters, four inspectors/investigators, and secretarial staff. Among the staff, 38 employees are emergency medical technicians (EMTs). Each 24-hour shift is staffed with a minimum of five engine companies. Each engine company has from three to five assigned personnel, including one Fire Captain, one Fire Engineer, and one to three Firefighters.

The Fire Department manages a training and human resource development program in order to increase effectiveness and safety, and to reduce injuries. These efforts are intended to continue a high level of fire company training in emergency medical services, hazardous materials response, commercial code enforcement, fire prevention inspections, and pre-fire planning, and to emphasize performance evaluations of fire companies. Key training program efforts continue to be directed toward accreditation to the Firefighter III level, company officer development, and promotion preparation. The Training Officer oversees the training, skills development, and skills maintenance requirements of Department personnel. Skills training occurs in areas such as firefighting, emergency medical services, rescue, and hazardous materials response. There are plans to train and equip certain firefighters to be deployed for specialty rescue situations such as structural collapse.

The Operations Division provides the 24-hour emergency services, fleet management, coordination of mutual aid, purchase and maintenance of apparatus, tools, and equipment, and coordination of radio systems and frequencies. It comprises most of the Department personnel. Emergency and routine services are provided from five fire stations. Staffing for fire stations is made up of three platoons on a rotating 24-hour shift, with 18 uniformed personnel and a supervisor at each.

The Planning Division is responsible for the management of various special projects such as strategic planning, computer/information systems such as GIS (Geographic Information System), Department accreditation, fire station site analysis and construction, computer aided dispatch (CAD), internal affairs, the Internet web site, public information, and pre-employment background investigations.

Under the direction of the Fire Marshal, the Fire Prevention and Investigation Division conducts code compliance inspections, fire cause and arson investigations, fire and safety education, fire detection/protection plan reviews, and special permit reviews. It has also initiated a Commercial Self-Inspection program for business owners. Site and plan review provides information for long-range public safety requirements and reduces hazards inadvertently created through design. This division also handles a summer weed-abatement program that requires mowing of weeds by property owners. The high volume of new construction in the City during the time period from 1988 to 1997 has

resulted in increasing demands on fire prevention services. In 1996, 3,000 fire safety building inspections were conducted, weed abatement was enforced on more than 500 lots, 67 fires were investigated, and 220 public education demonstrations were conducted.

The City of Medford is exempt from direct control by the State Fire Marshal. This permits amendment of the State Uniform Fire Code (UFC) as it applies locally. These local amendments can be more restrictive than the State UFC, but not less restrictive. For example, outdoor burning is prohibited within the city limits except for certain agricultural purposes by special permit. The sale and possession of personal fireworks are also prohibited within the city limits.

Response Apparatus Inventory

The Medford Fire Department uses four fire engines, one rescue engine, and one aerial ladder truck as its primary first-response apparatus. Ancillary apparatus includes two six-by-six wild land engines, two water tenders, two wild land pickup trucks, one shift commander utility vehicle, and one hazardous materials (Hazmat) response van. The Fire Department also maintains an inventory of three reserve fire engines.

LEVEL OF SERVICE

Response Time—The Fire Department’s emergency response time goal is to place the first arriving emergency unit on the scene within five minutes or less, and to place the second arriving unit on the scene within seven minutes or less for 90 percent of the population. The five and seven minute time frames include two minutes allocated for 9-1-1 call receipt, radio dispatch and activation of emergency responders, and firefighter preparation for response to the incident. Travel time is the remaining component of the response time. Traffic congestion adversely affects travel time. Analyzing 1992 population data, the response goal was met for only 68 percent of the population for a first response within five minutes or less, and for only 64 percent of the population for a second response within seven minutes or less.

The Medford/Central Point 9-1-1 Communications Center, which is located in City Hall and has a staff of 17, dispatches for the Medford Police and Fire Departments, Medford Rural Fire Protection District no. 2, Central Point Police Department, and the Airport Rescue and Fire Fighting Unit at the Rogue Valley International-Medford Airport. Fire and medical calls amount to less than 10 percent of the 9-1-1 calls.

A multi-year effort by several agencies to establish a new regional computer aided dispatch (CAD) program has been led by the City of Medford. Jackson County fire and police agencies and the Jackson County Jail, through a consortium known as the Jackson County Public Safety Agencies (JCPSA), participated in the development of the CAD specifications to meet the needs of all the agencies. Two CAD staff positions were established in the 1997-1998 budget. The purpose of the CAD program is to improve response times, provide computerized statistics, enhance record keeping, and provide

coordination among emergency agencies in Jackson County. The CAD system became operational in the spring of 2000. All emergency services are now dispatched through the system, which is integrated with Emergency 9-1-1 systems, resulting in the rapid processing of critical information, identification and assembling of response units, and dispatching of emergency crews. An exhaustive records management system (RMS) is included with the CAD, resulting in the ability to analyze current trends and effectiveness, and provide direction on how best to mobilize resources to meet the County's fire protection, medical, rescue, and general emergency needs.

Future Response Time—Response time goals as noted above are projected to remain the same in the future. The implementation of the CAD system is projected to shorten the deployment time, thus increasing the percentage of the population that can be reached within the five and seven minute windows. The continuing increase in population density (i.e., an increase in population with the service area boundary remaining roughly the same) will also result in a higher percentage of the population being reached within the response time goals.

Additionally, the fire station construction plan will strategically locate facilities to better respond to the increasing population. Without implementation of the fire station construction plan, within the year 2000, only 56 percent of the population would be reached in five minutes or less for first response, and 54 percent of the population in seven minutes or less for second response. The computer-optimized station locations, in conjunction with CAD, should enable first response to 82 percent of the population within five minutes or less, and second response to 73 percent of the population within seven minutes or less through the year 2000.

Types of Service—The fire and emergency services currently provided, including fire protection and suppression, emergency medical response, hazardous materials incident mitigation, rescue, disaster management, emergency planning, fire prevention, and public education, are projected to remain routine services delivered by the Medford Fire Department through the year 2015.

Service Deficiencies—It may become necessary to pursue a requirement for indoor residential fire sprinklers to enhance fire protection for properties in high-risk zones or located a greater distance from fire protection resources. High-risk zones are those areas outside of the five-minute response time area.

Mutual Aid—Mutual aid is a means to provide backup response when large-scale or multiple events overwhelm a community's on-duty forces and personnel available for recall. While mutual aid is usually readily available, it serves as a support function. Many agencies that respond in the Medford area may not provide the same types of apparatus, equipment, career personnel, or the same level of skill and capability as the Medford Fire Department. In addition, mutual aid forces are generally unable to meet response time goals for first and second response unless they have been pre-staged in a Medford Fire Department facility upon request. Establishing strong mutual and automatic aid agreements with surrounding jurisdictions is critical to the successful

outcome of certain emergencies. The Jackson/Josephine County Regional Mobilization Plan was developed in 1992 to aid in rapidly securing and utilizing these resources. This plan establishes mutual aid response procedures for all participating jurisdictions. Future efforts should include conducting training and familiarization drills with neighboring jurisdictions for specific fire problems or targeted hazards.

A fire having a “second alarm” enacts automatic aid through agreements with the Phoenix Fire Department and Jackson County Fire District no. 3. These forces report to Medford fire stations for additional coverage. The “third alarm” aid assignment is composed of units from the Phoenix Fire Department and Jackson County Fire Districts no. 3 and no. 5. Additional units from Jacksonville and the Oregon Department of Forestry can cover Medford fire stations when needed. A Structural Strike Team consisting of engines from five different Josephine County agencies can be called upon when necessary. Assistance is often obtained from the Medford Police Department to help with activities such as traffic control and evacuations.

The Medford Fire Department has an agreement with the local paramedic provider, Mercy Flights, to deliver firefighter rehabilitation services when needed. Mercy Flight’s basic program includes the provision of fluids, food, stretchers, monitoring equipment, etc. Utilizing pre-established guidelines, Mercy Flights monitors vital signs, core body temperature, hydration level, etc. They take an aggressive approach to the care, management, and eventual release of personnel back into the incident. Air-conditioned buses provided by the Rogue Valley Transportation District are sometimes used in the rehabilitation effort.

FUNDING

Fire protection and emergency services funding comprised 17 percent of the City’s 1999–2000 Budget. Medford’s Fire Maintenance Fund is supported by taxes on property in the City and in District no. 2. Voter-initiated state property tax reduction measures have decreased revenue for this fund by more than 8 percent since 1998. An Emergency Telephone Tax Fund was established in 1987 to receive emergency telephone excise tax money. This tax is imposed on every local telephone service user in order to fund dispatching. The City’s 1998–1999 Capital Improvement Program (CIP) included a \$1.3 million appropriation for the CAD program from the Regional CAD Fund. \$2.7 million was also appropriated to begin the fire station construction program and for the replacement of major fire apparatus, including a 1982 front line fire-pump truck and a 1973 ladder truck.

Future Facilities

A new facility, Fire Station no. 6, which is located in the Southeast area near the intersection of North Phoenix Road and Barnett Road, is now complete. This location was computer-optimized by the *Medford Fire Station Location Study*. As noted above, the process utilized computer software to analyze components such as future population, the street system, desired response times, etc., to pick the best location. It

was selected to meet the service demands of the increasing population in the southeast area of the community, including District no. 2.

The southeast area is the City's primary residential growth area, where approximately 1,000 acres of mostly vacant land added to the UGB in 1990, are scheduled for development over a 20-year period (to 2010). The *Southeast Medford Circulation and Development Plan*, which will accommodate more than 4,000 housing units and associated commercial and institutional development, was adopted by the City Council in 1998. The area immediately northeast of the intersection of North Phoenix Road and Barnett Road is proposed as a Town Center in which high-density residential, commercial, and institutional uses, such as the fire station, are to be concentrated.

General sites have been selected for the relocation of two existing stations. Fire Station no. 3 will be relocated into the downtown (West) area. This location supports both a large population (representing potential loss of life) and a high-assessed valuation (representing potential loss of property). Fire Station no. 2 (Southwest) will be relocated to the general area of Columbus Avenue and Cunningham Street/Garfield Avenue. This location would meet the service demands of the increasing population in the Southwest area, including District no. 2. The proposed location is near the intersection of two future arterial streets and a future school-park site. Southwest Medford has been one of the City's major residential growth areas since its Limited Services Area designation was lifted in 1994. Much of the development there has consisted of infill among scattered subdivisions developed prior to inclusion in the UGB.

FIRE AND EMERGENCY SERVICES—CONCLUSIONS

1. The Medford Fire Department delivers fire protection and emergency services within the City of Medford.
2. Although effectiveness and productivity in the delivery of emergency services, fire prevention, public education, and emergency planning continually increases, it is recognized that Medford's facilities, apparatus, equipment, and personnel will need to be upgraded to meet the increasing demands within the service area.
3. To provide optimal emergency response in Medford, new and relocated fire stations are planned according to population growth and development patterns, and changes in circulation patterns.
4. Medford's Fire Department response time goals (five-minute first response and seven-minute second response to 90 percent of the population) are projected to remain the same in the future.
5. To achieve the best Insurance Services Office (ISO) rating possible and maintain and/or reduce fire insurance costs within the service area, the City of Medford can take additional steps, such as completing the fire station construction plan and providing a residential sprinkler program for certain areas determined to be best served by this form of enhanced fire protection.
6. To deliver emergency services effectively and safely, the City of Medford must

- maintain a sufficient primary response and reserve fleet of fire protection apparatus and a sufficient inventory of tools and equipment, with funding that enables rotation and replacement of apparatus, tools, and equipment on a predetermined schedule.
7. The most current technology in emergency response dispatch and records management (Computer Aided Dispatch/Records Management System) is being utilized by the City of Medford to quickly gather and process information, deploy emergency response units, document response time information, and for strategic planning and decision making purposes.
 8. Funding for fire protection comes from the City of Medford’s “Fire Maintenance Fund.”

FIRE & EMERGENCY SERVICES—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To deliver fire an emergency services effectively and safely within the City of Medford.

Policy 1-A: The City of Medford shall strive to maintain primary response and reserve fleets of fire protection apparatus, tools and equipment inventory, and staff sufficient to deliver emergency services effectively and safely.

Implementation 1-A-1. Provide funding that enables the Fire Department to rotate and replace apparatus, tools, and equipment on a predetermined schedule.

Implementation 1-A-2. Implement the following replacement and rotation schedule for apparatus: Apparatus shall remain in front line status for no longer than 15 years, when it shall be rotated to reserve status and replaced with new apparatus. Reserve apparatus shall remain in reserve for no longer than five years, when it shall be disposed of. Prepare a replacement and rotation schedule for tools and equipment that includes rotating them into reserve status or removing them from service.

Policy 1-B: The City of Medford shall provide staffing for the Medford Fire Department sufficient for the effective delivery of emergency services and related business functions.

Implementation 1-B-1. Add additional fire companies when statistical information indicates that the existing companies cannot provide adequate emergency response or no longer meet the demands of routine business.

Implementation 1-B-2. Maintain emergency response and routine business function statistics for human resource planning.

Goal 2: To maintain and/or reduce fire insurance costs within the City of Medford by achieving the best Insurance Services Office (ISO) rating possible, within funding capabilities.

Policy 2-A: The City of Medford shall strive to increase its Insurance Services Office (ISO) rating while continuing to meet ISO requirements for the current ratings.

Policy 2-B: The City of Medford shall provide a residential sprinkler program for those specific areas determined to be best served by requiring this form of enhanced fire protection.

Implementation 2-B-1. Develop governing criteria for requiring installation of residential sprinkler systems in the form of a Municipal Code amendment for consideration by the City Council.

Goal 3: To achieve the Medford Fire Department response time goals within the City of Medford.

Policy 3-A: The City of Medford shall strive to provide fire stations in strategic locations as identified by the 1994 Medford Fire Station Location Study and any updates.

Implementation 3-A-1. Secure funding to move forward with the fire station construction plan.

Policy 3-B: The City of Medford shall strive to provide the most current technology in emergency response dispatch and records management to quickly gather and process information and deploy emergency response units, and to document response time information.

Implementation 3-B -1. Use a Computer Aided Dispatch/Records Management System (CAD/RMS) for strategic planning and decision-making. Establish funding to maintain the system and provide upgrades as technology changes or is mandated, including upgrades to software, hardware, and the underlying communications network.

Policy 3-C: The City of Medford Fire Department shall provide staff to adequately review development proposals for compliance with the Uniform Fire Code.

Implementation 3-C -1. Review development proposals to assure adequate and timely access for all necessary fire apparatus.

8.4.2 LAW ENFORCEMENT

LAW ENFORCEMENT SERVICES

The Medford Police Department provides full services to a population of 63,154 (2000 Census) people located within the Medford city limits (20 square miles).

PLANNING GOALS

The Medford Police Department Mission Statement provides the focus for the Departments planning efforts. The mission of the Medford Police Department is *“to provide fair, high-quality law enforcement to promote Medford community livability.”* Many elements drive the mission, including, but not limited to:

- Service to the community
- Emphasis on community policing
- Integrity
- Responsibility and accountability
- Professionalism
- Pride in and enjoyment of the profession

EXISTING PLANNING AND FACILITIES

The police department has developed a strategic plan that will form the basis for all future planning efforts.

The following recommendations are designed to provide guidance for decision making when the City is confronted with specific law enforcement issues arising from changing community conditions.

- Community-oriented policing is the preferable approach to providing law enforcement services. Only through strong citizen involvement in the Police/Community partnership can this be realized.
- The underlying socioeconomic conditions conducive to crime and disorder can be affected by City actions directed at preserving and enhancing a sense of community, and City decisions influencing land use patterns, mixes, densities, and design.
- The Police cannot be solely responsible for controlling and limiting crime and interpersonal conflicts; however, the Police will continue to be the primary agency capable of immediate response and crisis intervention.
- The uniformed Police Officer will continue to be a highly visible representative of City Government.
- The public will seek increased accountability of the Police in all aspects of law enforcement activities.

Facility Inventory

The Medford Police Department is located in Medford City Hall, 411 West 8th Street in the Downtown. There are three additional off-site locations: a small office substation located at the Downtown parking garage at Sixth Street and Riverside Avenue; offices located at the Santo Community Center, 701 North Columbus Street; and the Property Control Facility at the City of Medford Service Center, 821 North Columbus.

DEPARTMENT ORGANIZATION

The Medford Police Department has a number of divisions. The functions of each division are as follows:

Administration—Provides the planning, direction and control of all staff and programs of the Police Department.

Records Division—Serves as a central repository and retrieval system for all police records, citations and reports generated by police activity. Another function of this program is to gather and record statistical data for the Police Department utilizing computer, microfilm, and hard copy files.

Patrol—Provides basic initial protection of life and property to the citizens of Medford 24 hours a day, 7 days a week. The Patrol Division is charged with the responsibility of suppressing crime, enforcing traffic laws, suppressing disturbances, arresting or citing offenders and giving aid, relief and information to all citizens as circumstances dictate. The Patrol Division utilizes canine units, which aid the law enforcement capabilities of the department.

Operations Support Division—The mission of the Operations Support Division is to provide services in support of the activities of the Patrol Division. This program includes Police Officers assigned as School Resource Officers (SRO) and a Police Officer assigned as the department's Drug Abuse Resistance and Education (DARE) Officer. This program is also charged with the mission of directing and administering a variety of activities and programs that are elements of the department's Community-Oriented Policing (COP) and Problem-Solving style of policing which is replacing the traditional, reactive style of service delivery. Included in this program are Community Service Officers (CSO) and citizen volunteers.

Criminal Investigation Division—This division is responsible for complex cases that require extra time and specialized training. Cases include follow-up investigations of homicides, rapes, assaults, robberies, burglaries, arsons, narcotics, bad checks, frauds, embezzlement, and counterfeiting. One investigator is assigned to investigate gangs and their related activity. Two investigators are assigned to juvenile sexual/physical abuse cases.

JACNET—Jackson County Narcotic Enforcement Team provides the City's participation in the countywide narcotics enforcement team.

Administrative Support—This division is responsible for developing, organizing and managing administrative activities associated with the recruitment, selection and promotion of personnel in the department. In addition, this division is responsible for fiscal affairs and training of personnel.

Central Communications—The Medford/Central Point Communications Center (CCOM), located in Medford’s City Hall, establishes the link between the citizens of the Medford Central Point area and public safety services. Twenty-four hours a day, seven days a week a citizen may call for police, fire or medical aid by simply dialing 9-1-1.

LEVEL OF SERVICE

Staffing—The Police Department is comprised of 94 sworn officers, 41 non-sworn full time, and 12 non-sworn part-time personnel. As of 2000, the Police Department consisted of one police chief, two deputy chiefs, three lieutenants acting as division heads, and sergeants acting as duty commanders in line personnel functions. Level of Service from the 1999 FBI crime statistics indicate that the average Pacific Coast city with a population between 50,000 and 99,999 maintains a ratio of 1.4 officers per 1,000 population. Medford’s ratio was 1.56 officers per 1,000 population, which is just slightly more than the regional average. Variations from national (west coast) averages depend upon the community’s particular experience with situations requiring police involvement, and the community’s attitudes regarding those situations. In 2000, the Medford Police Department had 72 vehicles. These vehicles include: seven cars assigned to Administration; 49 assigned to Patrol; 7 assigned to the Operations Support Division; 13 assigned to the Criminal Investigation Division; three assigned to Jackson County Narcotics Enforcement Team (JACNET).

Response Time—The Police Departments emergency response time goal is three minutes. The Medford/Central Point 9-1-1 Communications Center dispatches for the Medford and Central Point Police Departments. Police calls amount to more than 90 percent of the 9-1-1 calls. The Center is funded in part (33 percent) by the Emergency Telephone Tax Fund. A multi-year effort by several agencies to establish a new regional computer aided dispatch (CAD) program is being led by the City of Medford. The purpose of the CAD program is to improve response times, provide computerized statistics, enhance record keeping, and provide coordination among emergency agencies in Jackson County. All emergency services are dispatched through the system, which is integrated with Enhanced 9-1-1. The result is a rapid processing of critical information, identification and assembling of response units, and dispatching of emergency crews. The CAD system became operational in the spring of 2000.

Future Response Time—Response time goals, as noted above, are projected to remain the same in the future.

Types of Service—The Law Enforcement services currently provided include, but are not limited to: traffic enforcement, criminal investigations, public assistance, school and DARE officers, Neighborhood Watch programs, first aid, and minor service calls.

Training – The City of Medford Police Department places a large emphasis on training of its officers and employees. Professional training occurs on a continual basis.

Service Deficiencies—There is a need for greater traffic enforcement, as this continues to be the number one complaint from Medford residents. Additional traffic enforcement will be accommodated with the installation of cameras designed to catch red-light violators. These cameras will be located at various intersections throughout the city, with initial installation occurring some time in 2001.

Mutual Aid—Mutual aid is a means to provide backup response when large-scale or multiple events overwhelm Medford’s on-duty forces and personnel available for recall. Many agencies that respond in the Medford area may not provide the same types of apparatus, equipment, career personnel, nor the same level of skill and capability as the Medford Police Department. In addition, mutual aid forces are generally unable to meet response time goals unless they have been pre-staged in the Medford Police Department facility upon request. Establishing strong mutual and automatic aid agreements with surrounding jurisdictions is critical to the successful outcome of certain emergencies. The Jackson/Josephine County Regional Mobilization Plan was developed in 1992 to aid in rapidly securing and utilizing these resources. Future efforts should include conducting training and familiarization drills with neighboring jurisdictions for specific crime problems or targeted hazard areas.

Currently, Medford’s Police Department assists smaller police agencies in southern Oregon with a Special Weapons and Tactics (SWAT) unit, major assault-death investigations, and accident reconstruction assistance.

FUNDING

Police protection accounts for approximately 14 percent of the City’s budget. The City’s general fund provides the majority of funding for Medford’s Police Department. As with fire protection, police facilities are added in response to particular growth demands. Aside from additional personnel and space to house them, the most identifiable increase in capital facility requirements related to urban growth is the proportional growth in need for additional patrol cars. Space to store and maintain this additional equipment will eventually be needed. Preliminary plans have been discussed to eventually utilize other City property to accommodate new public safety facilities.

LAW ENFORCEMENT CONCLUSIONS

1. Law enforcement services are delivered to Medford residents by the Medford Police Department.

2. Although effectiveness and productivity in the delivery of law enforcement, police protection, crime prevention, public education, and community policing continually increases, it is recognized that Police Department facilities, equipment, and personnel will need to be upgraded to meet increasing demands.
3. The Medford Police Department plans to continue an emphasis on community policing, which is designed to reduce and prevent crime by increasing interaction and cooperation between the Police Department and the people and neighborhoods served.
4. The Medford Police Department response time goal is three minutes, and is projected to remain the same in the future.
5. To deliver law enforcement services effectively and safely, it is important that the City of Medford maintain a sufficient inventory of vehicles and equipment. Funding must be adequate to enable rotation and replacement on a predetermined schedule.
6. Law enforcement accounts for approximately 30 percent of the City of Medford budget. The City's General Fund provides the majority of funding. Grant funds (i.e., Department of Justice Block Grants) support additional officers and community policing projects.

LAW ENFORCEMENT—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To provide a safe and secure environment for people and property in the City of Medford.

Policy 1-A: The City of Medford Police Department shall strive to provide rapid and timely response to all emergencies.

Implementation 1-A-1. Analyze and monitor current response times, and compare them to past experience, to determine the effectiveness of such factors as police staffing and community policing programs.

Implementation 1-A-2. Provide training to certify personnel in First Aid and Cardiopulmonary Resuscitation (CPR).

Implementation 1-A-3. Maintain, train, and equip special response teams for extraordinary or extremely hazardous emergency incidents.

Policy 1-B: The City of Medford Police Department shall strive to control and/or intervene in conduct recognized as threatening to life and property.

Implementation 1-B-1. Provide on-scene services to restore the peace

and prevent further injury to life or property.

Implementation 1-B-2. Identify evolving crime patterns; particularly those involving career criminals, and study methods to further enhance community-oriented policing.

Implementation 1-B-3. Enhance investigation and victim services abilities by providing advanced officer training.

Implementation 1-B-4. Continue and enhance property protection programs in the commercial and industrial sectors.

Implementation 1-B-5. Identify geographical areas or population groups experiencing noticeable crime victimization to improve effectiveness of crime prevention efforts, and commit resources, as appropriate, to these areas.

Policy 1-C: The City of Medford Police Department shall continue to provide investigative services directed toward successful prosecution of criminal offenders.

Implementation 1-C-1. Enhance the success of follow-up investigation and subsequent court presentation by providing quality preliminary investigations and case management.

Implementation 1-C-2. Document factors that help solve major crimes and monitor the effectiveness and efficiency of the investigative process.

Implementation 1-C-3. Continue and enhance the investigator/victim/witness relationship and maintain a cooperative liaison with the prosecuting attorney.

Policy 1-D: The City of Medford shall strive to coordinate law enforcement planning with local, regional, state and federal plans.

Implementation 1-D-1. Establish and maintain liaison relationships and, as appropriate, agreements for mutual aid, with local, state and federal emergency response and planning agencies.

Implementation 1-D-2. Participate in major disaster preparedness planning at all levels of government.

Goal 2: To increase and maintain public confidence in the ability of the City of Medford to provide quality law enforcement services.

Policy 2-A: The City of Medford Police Department shall strive to maintain an open channel of communication with community members.

Implementation 2-A-1. Assess community needs and expectations on an ongoing basis and report periodically to the City Council regarding citizen complaints and citizen commendations received by the Communication Advisory Committee.

Policy 2-B: The City of Medford Police Department shall strive to aid those who cannot care for themselves (intoxicated, addicted, mentally ill, physically disabled, the young, the old, etc.) and provide crisis intervention and conflict management as appropriate.

Policy 2-C: The City of Medford Police Department shall strive to reduce crime by strengthening the police/community partnership.

Implementation 2-C-1. Continue and enhance neighborhood-based crime prevention activities and programs (i.e., Neighborhood Watch) designed to reinforce positive juvenile behavior, prevent juvenile delinquency and encourage citizen involvement.

Implementation 2-C-2. Continue and enhance programs designed to prevent and reduce drug and alcohol abuse, as well as school violence, including joint education programs with city schools, such as the School Resource Officer program.

Implementation 2-C-3. Evaluate the potential for a Police Athletic League or other variety of police/youth programs to allow further police/juvenile interaction and to offer a positive action alternative to children.

8.4.3 PARKS, RECREATION, AND LEISURE SERVICES

The Parks, Recreation, and Leisure Services section of the Public Facilities Element (hereinafter called “Parks Element”) is a component of the City of Medford *Comprehensive Plan*.

This section is intended to comply with statewide planning policies and requirements that govern recreational planning, including Goal 8 (Recreational Needs), and OAR 660 Division 34. The primary purpose of this section is to (1) describe characteristics of the existing park system, (2) project the need for parks in Medford for the 10-year period between 2016 and 2025 based upon research and analysis of public wants and funding ability, and (3) provide the City with Goals and Policies, as Strategies to implement those policies.

This section summarizes core aspects of the 2016 Leisure Services Plan, which was adopted by City Council in October 2016 and is incorporated by reference into the Comprehensive Plan. The 2016 Leisure Services Plan creates a vision for an innovative, inclusive and interconnected system of parks and open spaces that promotes outdoor recreation, health and environmental stewardship as integral elements of a livable community. The Plan is a document that will guide City elected and appointed officials, management and staff when making decisions or taking actions regarding planning, acquiring, developing or implementing parks, open space, paths and trails, recreation programs or recreational facilities.

INTRODUCTION

The City of Medford Parks and Recreation Department is Southern Oregon’s largest provider of recreation services and is a nationally accredited agency through the National Recreation and Parks Association. The City currently provides over 2,500 acres of public parkland and recreation facilities distributed among 36 park sites and numerous open space parcels. This system of parks supports a range of active and passive recreation experiences. The Department is responsible for the maintenance and programming of the U.S. Cellular Community Park and the Santo Community Center, and its staff coordinate over 300 programs, services and events each year.

Medford’s shining star is the U.S. Cellular Community Park. This sport field complex is the largest synthetic turf sports park in the United States. Since its opening in 2008, the U.S. Cellular Community Park has generated over \$67 million in economic benefit for the Medford community. MPRD is well known locally and regionally for coordination of youth and adult sports leagues and tournaments. Medford also boasts the largest adult softball program in Oregon.

Medford is preparing for continued growth tied to the planned expansion of the urban growth boundary. As the City grows, new investments in parks and recreation will be

necessary to meet the needs of the community, support youth development, provide options for residents to lead healthy, active lives and foster greater social and community connections.

STATEWIDE PLANNING GOAL 8 – RECREATIONAL NEEDS

Oregon’s Statewide Planning Goal for Recreational Needs states:

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

Goal 8 requires recreation planning, including an inventory of needs and existing opportunities, and a long-range plan with an action program. It recommends that the highest priority be given to facilities that: meet the needs of high density population centers; meet the needs of persons of limited mobility and finances; conserve energy; minimize environmental deterioration; are available to the public at nominal cost; and meet the needs of visitors to the state.

Goal 8 recommends that unique areas or resources that also meet recreational needs be inventoried and protected, or acquired, with high priority given to enhancing recreational opportunities on the public waters of the state and Oregon Recreational Trails. The Bear Creek Greenway path is a designated “Oregon Recreation Trail”. Recreational plans should consider the carrying capacity of the air, land and water resources of the planning area, and actions should not exceed the capacity of such resources. It also recommends that parks and recreation planning take into account various techniques for acquisition, such as easements, cluster developments, preferential assessments, development rights acquisition, subdivision park land dedication that benefits the subdivision, etc.

The Parks Element includes an inventory of areas and resources unique to Medford including special use areas, natural open space areas, trails, paths, bikeways, and greenways.

OAR DIVISION 660, DIVISION 34: STATE AND LOCAL PARK PLANNING

660-034-0040 – Planning for Local Parks:

- (1) Local park providers may prepare local park master plans, and local governments may amend acknowledged comprehensive plans and zoning ordinances pursuant to the requirements and procedures of ORS 197.610 to 197.625 in order to implement such local park plans. Local governments are not required to adopt a local park master plan in order to approve a land use decision allowing parks or park uses on agricultural lands under provisions of ORS 215.213 or 215.283 or on forestlands under provisions of OAR 660-006-0025(4), as further addressed in sections (3) and (4) of this rule. If a local government decides to adopt a local park plan as part of the local comprehensive plan, the adoption shall include:

- (a) A plan map designation, as necessary, to indicate the location and boundaries of the local park; and
- (b) Appropriate zoning categories and map designations (a "local park" zone or overlay zone is recommended), including objective land use and siting review criteria, in order to authorize the existing and planned park uses described in local park master plan.

The City of Medford complies with ORS 660-034-0040(1)(a) and (b) through the adoption and implementation of a Parks and Schools designation on the *General Land Use Plan Map*, which depicts existing public parks and schools. There is no specific zoning district associated with this designation for schools. Instead, schools are permitted conditionally in all single-family residential zones, multi-family residential zones, commercial and light industrial zones. The corresponding zoning for parks is Public Parks (P-1).

CITIZEN INVOLVEMENT

Community engagement and input played an important role in establishing a clear planning framework that reflects current community priorities. Public outreach provided a baseline of demand and need, and outreach methods were varied and extensive, including:

- A mail- and online-based community survey
- Stakeholder discussions
- Community meetings
- mySidewalk online engagement
- Social media content & email blasts
- Parks & Recreation Commission meetings

Throughout the planning process for the 2016 Leisure Services Plan, the public provided information and expressed opinions about their needs and priorities for parks, trails and recreation facilities and programs in Medford. This feedback played an important role in updating policy statements and prioritizing the capital facilities project list contained within this Element.

Classifications & Standards

PARKLAND CLASSIFICATIONS

Parkland is classified to assist in planning for the community's recreational needs. The Medford park system is composed of a hierarchy of various park types, each offering recreation and/or natural area opportunities. Separately, each park type may serve only one function, but collectively the system will serve the full range of community needs. Classifying parkland by function allows the City to evaluate its needs and to plan for an efficient, cost effective and usable park system that minimizes conflicts between park users and adjacent uses. The classification characteristics are meant as general guidelines addressing the intended size and use of each park type. The following seven

classifications are in effect in Medford and are defined as follows.

- Community Parks
- Neighborhood Parks
- Linear Parks
- Greenways & Natural Open Space Areas
- Special Use Areas
- Beautification Areas
- Paths & Trails

Community Parks

Community parks are larger sites developed for organized play, containing a wider array of facilities and, as a result, appealing to a more diverse group of users. They are planned to provide active and structured recreation opportunities, as well as passive and non-organized opportunities for individual and family activities. Community parks are generally 15 to 50 acres in size, should meet a minimum size of 15 acres when possible and serve residents within a 2-mile drive, walk or bike ride from the site. In areas without neighborhood parks, community parks can also serve as local neighborhood parks.

In general, community park facilities are designed for organized or intensive recreational activities and sports, although passive components such as pathways, picnic areas and natural areas are highly encouraged and complementary to active use facilities. Community parks may provide pools, community gardens or indoor facilities to meet a wider range of recreation interests. Since community parks serve a larger area and offer more facilities than neighborhood parks, parking and restroom facilities should be provided. Fichtner-Mainwaring Park, U.S. Cellular Community Park and Hawthorne Park are examples of community parks.

Neighborhood Parks

Neighborhood parks are generally considered the basic unit of traditional park systems. They are small park areas designed for unstructured, non-organized play and limited active and passive recreation. They are generally 2-5 acres in size, depending on a variety of factors including neighborhood need, physical location and opportunity, and should meet a minimum size of 3 acres in size when possible.

Neighborhood parks are intended to serve residential areas within close proximity (up to ½-mile walking or biking distance) of the park and should be geographically distributed throughout the community. Access to neighborhood parks is mostly pedestrian, and park sites should be located such that people living within the service area can reach the park safely and conveniently. Neighborhood parks should be located along road frontages to improve visual access and community awareness of the sites. Connecting and frontage streets should include sidewalks or other safe pedestrian access. Additionally, street plans should encourage maximum connectivity and public access to park sites.

Generally, developed neighborhood parks typically include amenities such as pedestrian paths, picnic tables, benches, play equipment, open field area for informal play, sport courts or multi-purpose paved areas and landscaping. When neighborhood parks are

designed in conjunction with school sites, these sites typically include multi-use sport fields. Restrooms and parking are generally provided. Donahue-Frohn Mayer Park and Lone Pine School Park are examples of neighborhood parks.

Linear Parks

Linear parks are developed, landscaped areas that follow linear corridors such as street rights-of-way, creeks and other elongated features. This type of park usually contains a paved path, landscaped areas, viewpoints and seating areas. The Biddle Road Pathway is an example of a linear park.

Greenways & Natural Open Space Areas

Greenways are undeveloped lands primarily left in a natural state with recreation use as a secondary objective. Greenways provide for connected or linked open space corridors that can support broader ecological functions than stand-alone properties. Natural areas are individual or isolated tracts of open space that are not connected to a larger greenway network.

These conserved open spaces are usually owned or managed by a governmental agency and may or may not have public access. This type of land often includes wetlands, steep hillsides or other similar spaces. In some cases, environmentally sensitive areas are considered greenways and can include wildlife habitats, stream and creek corridors, or unique and/or endangered plant species. Greenways may serve as trail corridors, and low-impact or passive activities, such as walking, nature observation and fishing may be allowed, where appropriate. No standards exist or are proposed for greenways. The Bear Creek Greenway is an example of the greenway classification.

Special Use Areas

Special use areas include single-purpose recreational areas or stand-alone sites designed to support a specific, specialized use. This classification includes stand-alone sport field complexes, arenas, community centers, community gardens or sites occupied by buildings. Specialized facilities may also be provided within a park of another classification. No standards exist or are proposed concerning special facilities, since facility size is a function of the specific use. The portion of Railroad Park used by the train clubs would be an example of a special use area.

Beautification Areas

Beautification areas may include landscaped areas around buildings, entry ways, street islands and maintained strips along street rights-of-way and pathways. The landscaping in these areas may vary widely, ranging from low maintenance trees and mulch to high maintenance flowerbeds and facilities, such as fountains, picnic tables, hanging baskets, sculpture/artwork, gardens and signage.

Paths & Trails

Trails are non-motorized recreation and transportation networks generally separated from roadways. These corridors can be developed to accommodate multiple or shared

uses, such as pedestrians and bicyclists, or a single use. Recreational path and trail alignments aim to emphasize a strong relationship with the natural environment and may not provide the most direct route from a practical transportation viewpoint. The City has the foundation to a path and trail system with the Bear Creek Greenway. It connects Medford to adjacent cities from Ashland to Central Point, as well as parks within the City.

Four classifications exist within the Medford network: regional path, connector path, local/park path or trail and equestrian trail. These path and trail classes serve as the primary linkages across and through the City. The differences between the classifications are based on purpose, intensity of use and connections, rather than on width, material or user. The 2016 LSP contains detailed descriptions and characteristics for the four classifications.

FACILITY INVENTORY

Parks and open space represent the basic foundation of a healthy park and recreation system, providing opportunities for residents of all ages to meet, play, grow and thrive. Medford’s parks provide residents with a diverse array of active and passive recreational amenities and options. They are a place to come together with family and friends, to exercise and play, to learn and explore, and to engage with the City’s landscape, history and culture.

Medford provides and maintains a growing system of parks that supports a range of active and passive experiences. The park and open space inventory identifies the recreational assets within Medford. The City provides over 2,500 acres of public parkland and recreation facilities distributed among 36 park sites and numerous open space parcels. The following tables summarize the current land inventory in Medford.

Figure 1. Existing Inventory: City-owned Community Parks

Park Name	Status	Acres (Total)	Acres (Developed)
Bear Creek Park	Developed	62.44	61.03
Fichtner-Mainwaring Park	Developed	30.95	30.95
Hawthorne Park	Developed	14.22	14.22
Prescott Park (F)*	Undeveloped	15.00	0.00
U.S. Cellular Park	Developed	125.34	120.34
Total Community Park Acreage		247.95	226.54

(F): Future Park

* : Remainder of acreage for Prescott Park is noted in the Greenway & Natural Open Space category

Figure 2. Existing Inventory: City-owned Neighborhood Parks

Park Name	Status	Acres (Total)	Acres (Developed)
Alba Park	Developed	1.51	1.51
Cedar Links (F)	Undeveloped	5.42	0.00
Chrissy Park (F)	Undeveloped	10.00	0.00
Donahue-Frohnmayer	Developed	14.03	10.19
Earhart Park	Developed	1.69	1.69
Holmes Park	Developed	18.35	18.35
Howard Park	Developed	9.22	9.22
Jackson Park	Developed	10.50	10.50
Jefferson Park	Developed	4.93	4.93
Kennedy Park	Developed	8.11	8.11
Lewis Park	Developed	7.33	7.33
Liberty Park	Developed	0.23	0.23
Lone Pine Park	Developed	4.82	4.38
Midway Park (F)	Undeveloped	3.00	0.00
Orchard Hill Park	Developed	4.16	4.16
Oregon Hills Park	Developed	14.91	3.00
Pear Blossom Park 1	Developed	0.70	0.70
Pear Blossom Park 2	Developed	0.68	0.68
Railroad Park	Developed	2.18	2.18
Ruhl Park	Developed	1.22	1.22
Summerfield Park	Developed	1.56	1.56
Union Park	Developed	2.13	2.13
Veterans Park	Developed	1.74	1.74
Total Neighborhood Park Acreage		128.42	93.81

(F): Future Park

Figure 3. Existing Inventory: Special Use Areas

Park Name	Status	Acres (Total)	Acres (Developed)
Carnegie Building	Developed	1.48	1.48
Chrissy Park	Undeveloped	20.00	0.00
City Hall	Developed	3.06	3.06
IOOF Cemetery	Developed	19.32	19.32
Railroad Park	Developed	9.03	9.03
Santo Community Center	Developed	3.80	3.80
Service Center	Developed	2.35	2.35
Vogel Plaza	Developed	0.24	0.24
Total Special Use Acreage		59.28	39.28

Figure 4. Existing Inventory: City-wide Parks, Greenways & Natural Areas

Park Name	Classification	Acres (Total)	Acres (Developed)
Bear Creek Greenway (BCG)	Linear Park	22.10	
BCG: Hawthorne to USCCP	Greenway	9.40	
BCG: W McA - Hawthorne	Greenway	0.00	
Bear Creek Park	Greenway	37.40	
Biddle Road	Linear Park	7.10	
Chrissy Park	Greenway	136.10	
E. McAndrews	Linear Park	5.34	
Larson Creek Greenway	Linear Park	3.66	7.24
Larson Creek Greenway	Greenway	7.18	
Lazy Creek Greenway	Linear Park	1.08	
Lazy Creek Greenway	Greenway	2.07	
Lewis Park	Greenway	0.90	
Lone Pine Creek	Linear Park	1.66	
Lone Pine Creek Greenway	Greenway	1.23	
Midway Park	Greenway	8.70	
Oregon Hills	Greenway	11.91	
Prescott Park	Greenway	1,725.00	
Railroad Park	Greenway	24.20	
U.S. Cellular Park	Greenway	53.50	
Total Greenway & Linear Park Acreage		2,058.53	7.24

Parkland Walksheds

A gap analysis of the park system was conducted to examine and assess the current distribution of parks throughout the city to better understand where acquisition efforts should be directed. The analysis reviewed the locations and types of existing facilities, land use classifications, transportation/access barriers and other factors as a means to identify preliminary acquisition target areas. In reviewing parkland distribution and assessing opportunities to fill identified gaps, residentially zoned lands were isolated, since neighborhood and community parks primarily serve these areas.

Walksheds were defined for neighborhood parks using a ¼-mile primary and ½-mile secondary service area with travel distances calculated along the road network starting from known and accessible access points at each park. Walksheds for community parks were derived using ¼-mile, ½-mile, 1-mile and 2-mile travel distances to acknowledge that community parks serve a wider array of users and driving to such sites is typical.

Gaps in parkland distribution appear in nine main areas of the city:

- Central Medford, between North Medford High School and Wilson Elementary School
- Southwest Medford, near South Medford High School
- West Medford, generally near Rossanley Drive and N Ross Lane
- South Medford, east of I-5 from U.S. Cellular Community Park
- Southeast Medford, near N Phoenix Road in the Larson Creek area
- Southeast Medford, southwest of Hillcrest Road and Foothill Road
- Southeast Medford, northwest of Hillcrest Road and Foothill Road
- Southeast Medford, near Hillcrest Road between Prescott Park and Chrissy Park
- North Medford, near Abraham Lincoln Elementary School

Meeting the intent to provide a neighborhood or community park within a reasonable walking distance (e.g., ½-mile) will require both acquiring new park properties in currently under-served locations, improving multi-modal transportation connections to allow local residents to safely and conveniently reach their local park and re-evaluating the potential use of school sites as surrogates for local neighborhood parks. As the City of Medford continues to grow and acquisition opportunities diminish, the City will need to be prepared to take advantage of acquisition opportunities in strategic locations to better serve the community.

In years past, the City of Medford had an interlocal agreement with the Medford School District for access to certain school sites for off-hour and weekend usage as parkland. The agreement expired, and several school sites were removed from the parks inventory, which exacerbated existing gaps in parkland access. Several of the gaps areas

noted above can be served through the re-establishment of certain school sites as neighborhood parks during non-school hours. Specifically, the City should re-initiate conversations with the District for the renewed usage of, at least, the following sites to serve as proxy neighborhood parks and as a means to enhance public access to recreational lands within reasonable walking distances:

- Abraham Lincoln Elementary School
- Wilson Elementary School
- Roosevelt Elementary School
- Lone Pine Elementary School (to improve access from the west)

Resulting from this assessment, potential acquisition areas are identified for future parks and are noted in the Capital Facilities Plan component. The greatest documented need is for additional neighborhood and community parks to improve overall distribution and equity, while promoting active-use recreational spaces that can accommodate field sports, court sports and open play.

Level of Service Assessment

Medford's current level of service (LOS) is examined using the existing, adopted standard of 1.56 acres per 1,000 residents for neighborhood parks, 2.75 acres per 1,000 residents for community parks and 20 acres per 1,000 residents for greenways and open space. When current populations of the City is compared to the park acreage standards for measuring park land needs, the difference between existing acreage and "demand" for park acreage to meet the standard is considered the "need" in future acreage. The tables below highlight the measurements for the City's current level of service (LOS) at the existing standards.

In examining Medford's neighborhood park acreage, the City has reached 105% of its adopted standard for park acreage. This performance measurement weighs the existing acreage (128.4 acres) against the "demand" (121.1 acres) at the current population (77,655). A surplus of 7.28 acres exists today for neighborhood parks. As the regional industrial, medical and service center, Medford can expect significant population changes in coming years, especially with the proposed UGB expansion, planned developments in southeast Medford and proposed residential density increases. Using the current park land inventory and the projected increase in population, the level of service for neighborhood parks will decrease from 1.65 acres per 1,000 to 1.16 acres per 1,000. In order to reach the existing standard of 1.56 acres per 1,000 for neighborhood parks, Medford will need to acquire nearly 45 acres in the coming ten years.

Figure 5. Medford Level of Service Performance for Neighborhood Parks

Metric	Measurement			
Existing Level of Service (LOS) Standard	1.56 acres per 1,000 residents			
2015 Population	77,655 residents			
2026 Population Projection	111,025 residents			
Parkland Acreage (Neighborhood Parks)	Total		Developed	
City-owned & maintained	127.08	acres	93.81	acres
Total	128.42	acres	93.81	acres
Level of Service	2015	2026	2015	2026
Effective Level of Service based on total acreage (acres/1,000 residents)	1.65	1.16	1.21	0.84
Net LOS to Standard (acres/1,000 residents)	0.09	(0.40)	(0.35)	(0.72)
Performance to Standard	106%	74%	77%	54%
Acreage surplus (deficit)	7.28	(44.78)	(27.33)	(79.39)

The removal of 65.4 acres of school lands classified as neighborhood parks has reduced the City’s level of service, and the relationship with the school district should be re-assessed to include school sites into the inventory to help address both the acreage need projected for the future, as well as the parkland distribution need to fill the identified watershed gaps in the system.

The City currently is meeting its adopted service standard for community parks, as well, and has reached 116% of its adopted standard for park acreage. However, with projected population growth, the current surplus of 34.4 acres will turn to a deficit of 57 acres by 2026. Population growth will create a demand for an additional 91 acres of community parkland to meet this adopted standard.

Figure 6. Medford Level of Service Performance for Community Parks

Metric	Measurement			
Existing Level of Service (LOS) Standard	2.75 acres per 1,000 residents			
2015 Population	77,655 residents			
2026 Population Projection	111,025 residents			
Parkland Acreage (Core Parks - City + MUGA)	Total		Developed	
City-owned & maintained	247.95	acres	226.54	acres
Total	247.95	acres	226.54	acres
Level of Service	2015	2026	2015	2026
Effective Level of Service based on total acreage (acres/1,000 residents)	3.19	2.23	2.92	2.04
Net LOS to Standard (acres/1,000 residents)	0.44	(0.52)	0.17	(0.71)
Performance to Standard	116%	81%	106%	74%
Acreage surplus (deficit)	34.40	(57.37)	12.99	(78.78)

Community and neighborhood parks are the ‘work horse’ parks of the Medford park system, inasmuch as they provide the land base to accommodate a range of mixed recreational uses, park infrastructure (i.e., parking, restroom, etc) and the potential for sport fields. As such, the City’s priority should be to secure adequately-sized properties to design as neighborhood or community parks to maximize the recreational utility value of those sites for the future.

A similar approach was used to examine the level of service for the City’s greenways and natural open space. The performance to the standard is 127%, representing 1,978 acres of existing open space in relation to the demand at the adopted standard of 1,553 acres. If the open space inventory were held constant, the existing surplus of 424 acres will grow to a deficit of 242 acres by 2026, which represents a growth-based demand for an additional 667 acres of greenway and open space in the coming decade. The 2016 LSP eliminated the acreage standard for greenways and open space lands and recommended the development of a specific conservation and greenways plan to assess and identify key targets for future land conservation and corridor linkages.

As noted above, the City should consider re-establishing an interlocal agreement with the Medford School District for the usage of school sites to serve as proxy parks during non-school hours. While this option may not be ideal, it can illustrate the power of cooperation between the organizations for the benefit of the residents of Medford. The inclusion of at least some of the previously delisted school sites into the inventory will substantially aid Medford in attaining the service standards for both neighborhood and community parks. Additionally, the City should continue to coordinate and negotiate

with residential developers to secure, set-aside and construct future parks in areas with planned residential growth.

NEEDS / PRIORITIES

Community Parks

With the exception of Prescott Park, all of Medford’s community parks are developed and in good condition. The City should improve community parks as needed to ensure proper maintenance, usability and quality of park features and grounds. Future enhancements or upgrades to community parks should include shaded picnic areas or picnic tables, shade structures for playgrounds, nature play areas, community gardens and accessibility improvements. The City should also pursue the development of a fully-inclusive, accessible playground to provide play opportunities for people with physical or mobility disabilities.

The pending development of Prescott Park is a long-awaited improvement for the Medford community. The site was master planned in 1984 with updates in 1999, 2008 and 2010. Improvements to the park are planned to include an all-weather loop road, trails for hiking, bicycling and horseback riding, overlooks, interpretive signs, restrooms, equestrian/auto parking, lodge for classes and covered pavilions, off-leash dog area, caretaker residence and maintenance yard. Beyond the improvements noted in the master plan, Prescott Park could provide regional value via connections to the Pacific Crest Trail (PCT) and connections to Chrissy Park and the Bear Creek Greenway, among others.

Neighborhood Parks

Medford currently has three undeveloped neighborhood park sites. Development of these parks would greatly improve recreational access for nearby communities.

The City purchased a 5.4-acre piece of the former Cedar Links golf course in 2011 to create a neighborhood park. The site was master planned to include playground equipment, a restroom, parking and a picnic shelter, as well as two half-court basketball areas. Much of the interior of the park on the west side will be a large open play area with a looped walking trail.

Midway Park is a 3-acre site located adjacent to Railroad Park and immediately west of I-5. The park was master planned as a neighborhood park to provide outdoor recreation opportunities for nearby residents. The park will include a dog park, playground, basketball court, restrooms, picnic areas and parking. The park will also include a berm along the east side of the park, adjacent to I-5. The park will connect the neighborhood to Railroad Park and the Bear Creek Greenway.

Chrissy Park is a large and unique park property on Medford’s eastern edge. The site is 166 acres in size and will serve multiple purposes. A 10-acre portion of the site

along Cherry Lane will provide neighborhood park amenities for nearby residents. The park will also serve as both a special use area with hiking and equestrian trails and as a natural open space area. The park has been master planned, and amenities include sport courts, cycle cross, picnic areas, hiking trails, equestrian trails, disc golf, a playground, restrooms and parking. Chrissy Park is also planned to connect to Prescott Park and link with corridors along the riparian alignments of the Middle and North Forks of Larson Creek.

In general, the City should make improvements to neighborhood parks as needed to ensure proper maintenance, usability and quality of park features and grounds. The City could also consider adding playground shade structures, half-court basketball courts, small skate park elements and other recreation features in the development of new or existing neighborhood parks to expand recreational opportunities.

School Parks

School grounds in Medford play a role in its overall park system. While school sites may offer an open field or play equipment, daytime access is restricted by school use and limited for security concerns. During non-school hours, public elementary and middle school properties provide functions very similar to neighborhood parks. Unfortunately, and as noted earlier in this chapter, the expiration of the agreement between the City and the Medford School District resulted in several school parks being removed from the inventory.

The City should re-initiate and revitalize its relationship with the District and seek agreement on a new usage arrangement that can benefit the residents of Medford. Specifically, such an agreement should consider options for the following:

- Utilize school grounds during non-school hours in areas where there are no other opportunities to provide parks for the service area
- Accommodate sport field usage for league practices and recreational programs (e.g., Wilson) and consider options for joint redevelopment or renovation of field turf to improve playability and safety
- Consider cost-sharing for maintenance and security, as well as improvements
- Re-examine options for reduced or waived fees for indoor facilities and priority access for scheduling, in balance with an option for shared renovation costs for outdoor facilities

Paths & Trails

Recreational path and trail connections, improvements and relationships to streets, sidewalks and bike lanes have been cited in numerous Medford plans. The Transportation System Plan identifies future needs in the multi-modal, non-motorized transportation system for the community.

The proposed path and trail network plan is illustrated on Map 2, and it includes the following proposed segments:

- Prescott Park trails
- Alignments along the Middle and South Forks of Larson Creek
- Alignments along Lone Pine Creek, Lazy Creek and sections of the irrigation canal
- Lateral connections from U.S. Cellular Community Park to Larson Creek
- Alignment connecting Prescott Park to the Lone Pine Creek corridor along PP&L property
- Alignments along the Upton Slough and portions of the Hopkins Canal

In addition to the proposed recreational path and trail alignments noted in this Plan, Medford may want to consider a stand-alone trail plan to identify and reinforce the need for off-street, recreational trail improvements to improve community connectivity.

Cooperation with Jackson County in conducting a unified regional trail plan for both the City and the greater Medford region could further planning efforts as the community grows and may provide valuable implementation strategies for a better connected path and trail system, while improving project eligibility for both transportation and recreation grant funding.

Also, such a plan could explore and consider alignment options to connect to lands held by the Bureau of Land Management. For example, regional connections to the Pacific Crest Trail (PCT) could enable better PCT access and better options for PCT hikers to stop for services or choose section hiking waypoints. Additionally, a regional planning effort could also support the vision to extend the Bear Creek Greenway farther north and south and to further enhance the significance of the pathway.

Recreation Centers & Aquatics

Interest and participation in the City's recreation programs are increasing annually. However, the number and types of activities the City can offer in its facilities are limited by a lack of facility capacity. Although school facilities provide additional activity space, these partnerships no longer meet the needs of Medford's residents. Additional recreation, fitness and community space is needed to promote wellness, active recreation and social engagement.

To meet this need, the City should pursue a multi-use indoor facility to enable comprehensive recreation programs for Medford residents. Such a facility would allow the City to control facility design, programming, scheduling and fees to more effectively meet community needs. Development of an indoor recreation facility requires extensive planning, including a feasibility analysis, appropriate site, and management and operation plans, as well as exploration of potential financial and programming partnerships. The facility should include gymnasiums, classrooms and multifunctional rooms, fitness rooms and a lap swimming and leisure aquatics facility. The facility may also include civic space (i.e., library, city service center/offices, etc.) or other leasable office space depending on the potential to secure funding partners with interest in co-

locating at the facility.

Partnerships may be necessary to offset development and operational costs. Given that the region recently lost the pool at Southern Oregon University and strong demand remains, the Department should take the lead role in soliciting assistance from other agencies and organizations, as needed. Potential partners may include the Medford School District, Jackson County, nearby municipalities (e.g., Ashland, Shady Cover, Butte Falls, Grants Pass, White City), nearby school districts (Crater, Phoenix), Rogue Community College and Southern Oregon University.

It is recognized that funding will be a challenge and there is a real and significant need to balance what the community says it wants with what the community is willing to fund. Although several past City bond attempts for a pool failed, it was voted down by the same percentage as the Sports Park did during its first attempt at public financing. There is potential to pursue a combined bond between the City and the Medford School District, which would demonstrate the partnership potential and due diligence by both agencies to develop a facility that jointly meets needs for recreational program space. Also, if the school district were willing to co-sponsor a financing package, the Oregon Legislature recently approved legislation for bond funding of aquatic facilities that is a competitive grant program for school districts to access state funds. Additionally, the Parks and Recreation Department should seek private construction capital and seek the potential re-use of existing bond repayment funds to lessen the total funding request of voters.

PARKS CONCLUSIONS

The following are conclusions about the provision of parks, open space and leisure services in Medford based on community input and technical analysis. These conclusions provide a foundation for the Parks Goals, Policies, and Implementation Strategies.

1. Medford's population is growing and will continue to do so over the planning period of 2016 to 2025. Population increase and expanding cultural demographics are the primary reasons for the increasing demands for parks and recreation services.
2. In the past, the City has shown great vision in acquiring and developing park and recreation facilities to meet the growing need. As Medford grows, new investments in existing and future parks will be needed to meet the needs of the community, support youth development, and provide a range of recreational options for its residents and visitors.
3. Medford is a growing community, home to many families with children as well as older adults. Population growth creates new demand for park and recreation services. An individual's demographic characteristics such as age, employment,

and income play a role in recreational interests and participation. The recreation programs and facilities within the City need to adjust to meet existing and future community needs.

4. The basic concept of the proposed park system is to assure that every neighborhood in Medford is served by a neighborhood or community park. Medford will need to acquire nearly 45 acres of neighborhood parks and 91 acres of community parkland in the next ten years.
5. Of all park and recreation services, the top three actions ranked as “very supportive” by respondents were to rehabilitate older parks, develop a new indoor recreation center/pool, and expand programming for youth under 18.
6. The City of Medford is a significant provider of recreational programs in the region. Programs and services need to be expanded in nearly all areas, especially for youth, teens, adults, and seniors, to meet increasing community needs.
7. In order to remain the primary provider of recreational programs in the community, the Parks and Recreation Department needs to focus on youth, adult, and aquatics programming. In addition, emphasis needs to focus on community and special events, special needs participants, seniors, and arts and cultural programs.
8. The Jackson Aquatic Center built in 1960 provides a wide variety of water activities but is nearing the end of its useful life cycle. The City should pursue a multi-use indoor facility that includes an aquatics component.
9. The development of Prescott Park has been pending for several decades. Improvements include amenities such as trails for hiking, bicycling, and horseback riding, interpretive signs, and covered pavilions. Prescott Park has the potential to become an important asset to the City and region.
10. The City has a series of open space and greenway systems that need to be protected, expanded, and enhanced over time.
11. Based on a mileage per capita metric of 0.46 miles per 1,000 population, the City is deficient of over 4 miles of paved paths and 10 miles of unpaved park trails. Rather than continuing to use this measurement, the City will work toward improving path and trail connectivity between parks and major destinations as allowable.
12. City of Medford General Fund, grants, and donations are the primary sources of funding for improvements, maintenance, and the expansion of facilities in existing parks.

13. Parks System Development Charges (SDCs) are an important source of funding for the acquisition, planning, and development of new parks and open space areas. The City will periodically update the methodology and rate structure, as appropriate, to be best positioned to obtain future acquisition and development financing from residential development. Parks SDCs need to be prioritized to secure new park properties and finance park or trail development consistent with the Leisure Services Plan.

PARKS—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

SYSTEM GROWTH & STEWARDSHIP

Goal 1: To provide for a full range of recreational activities and opportunities to meet the needs of all residents of Medford.

Policy 1-A: The City of Medford shall use the Parks Element as a factual basis in the land use decision-making process.

Implementation 1-A-1. Coordinate with the Planning Department to implement the LSP as part of the Comprehensive Plan.

Policy 1-B: The City of Medford shall recognize the social and economic value of other providers in the City and nearby county, state, and national recreation resources that provide recreation for Medford residents, create tourist expenditures within the City of Medford, and attract businesses and industries to the City.

Implementation 1-B-1. Provide park and recreation programs that complement nearby county, state, and national recreation resources.

Implementation 1-B-2. Pursue partnerships as a key means for leveraging community resources and minimizing duplications of effort.

Policy 1-C: The City of Medford shall be a primary provider of recreation programs and services community-wide.

Implementation 1-C-1. Provide park and recreation facilities to support community programming needs.

Implementation 1-C-2. Provide program services to all ages, abilities, and economic and cultural backgrounds.

Implementation 1-C-3. Expand the City's role as primary provider of recreation programs and services and increase programming to meet changing demographics and growing community needs.

Implementation 1-C-4. Monitor local and regional recreation trends to ensure community needs and interests are addressed by available programming.

Implementation 1-C-5. Maintain the aquatics facilities at Jackson Pool

until it is renovated or replaced.

Implementation 1-C-6. Pursue opportunities to develop an indoor aquatic facility and recreation center, potentially in partnership with other organizations or agencies. Consider financial feasibility and long term operations needs prior to design or construction of any new facility.

Policy 1-D: The City of Medford shall provide and acquire parklands necessary to adequately serve the City's current and future population based on adopted service levels.

Implementation 1-D-1. Provide parks to meet the service standard of 1.56 acres of developed neighborhood parks per 1,000 persons and 2.75 acres of developed community parks per 1,000 persons.

Implementation 1-D-2. Strive to provide equitable park distribution and prioritize park acquisition in underserved areas where households are more than ½-mile from a developed park.

Implementation 1-D-3. Seek parkland identified within this plan, in both developed and undeveloped areas, to secure suitable locations for new parks to serve future residents. Evaluate opportunities to acquire lands declared surplus by other public agencies for park and recreation use if such land is located in an area of need or can expand an existing City property and can be developed with site amenities listed in the Guidelines for Site Selection and Development (see Appendix E).

Implementation 1-D-4. Prioritize park acquisition in areas of the City facing population growth and residential and commercial development.

Implementation 1-D-5. Implement the Southeast Medford Area Plan Map with regard to greenway paths/trails, parks, and recreation facilities.

Implementation 1-D-6. Evaluate opportunities to acquire lands declared surplus by other public agencies for park and recreation use if such land is located in an area of need or can expand an existing City property.

Policy 1-E: Use traditional and new funding sources to adequately and cost-effectively maintain and enhance the quality of Medford's park and recreation system.

Implementation 1-E-1. Maintain and seek to expand general fund support of parks, recreation programs and maintenance.

Implementation 1-E-2. Offer programs at a range of costs (free, low-cost,

full price) and implement other strategies to ensure program affordability, while meeting city financial goals.

Implementation 1-E-3. Maintain and enhance program scholarships and other mechanisms to support recreation access for low-income residents.

Implementation 1-E-4. Pursue alternative funding options and dedicated revenues for the acquisition and development of parks and facilities, such as through private donations, sponsorships, partnerships and grant sources, as well as the retention and reallocation of existing revenue sources currently used for debt service.

Implementation 1-E-5. Consider the use of voter-approved initiatives, such as bonds and levies, to finance the development of additional facilities and significant park upgrades.

Implementation 1-E-6. Examine the feasibility for and potential benefits of a Park & Recreation District to fund and manage certain park and recreation facilities, such as an indoor aquatics facility.

Implementation 1-E-7. Review, and if necessary update, use and rental fees on a periodic basis to reflect market rates.

Implementation 1-E-8. Establish more revenue-generating programs to increase program funding to subsidize other programs and services.

Implementation 1-E-9. Consider developing additional rental facilities, such as reservable picnic areas, wedding sites and meeting rooms, to meet community needs and generate additional operating resources.

Implementation 1-E-10. Facilitate compatible, revenue-producing concession facilities and services within parks that enhance visitor use and enjoyment of the City's parks.

NATURAL AREAS MANAGEMENT

Goal 2: To preserve natural resources in the Medford Urban Growth Boundary that provide open space or have unique recreational potential, encouraging development with parks and recreation facilities if appropriate.

Policy 2-A: The City of Medford shall seek to preserve significant natural areas to meet outdoor recreation needs, provide opportunities for residents to connect with nature, and meet habitat protection needs.

Implementation 2-A-1. Develop a long-range public open space plan in partnership with the Planning and Public Works Departments and RVCOG that provides for an interconnected system of creek corridors, greenways, wetlands, and other significant natural resource areas.

Implementation 2-A-2. Develop and implement natural resource management plans for significant natural areas within parks and other City-owned or controlled lands, such as oak savanna, riparian areas, and wetlands, to identify management priorities and to guide acquisition, development and restoration decisions.

Policy 2-B: The City of Medford shall give special consideration to the Bear Creek corridor in order to protect this dynamic natural and recreational resource for the enjoyment of present and future generations.

Implementation 2-B-1. Maintain and expand partnerships for the ongoing maintenance and restoration of the Bear Creek Greenway.

Policy 2-C: The City of Medford shall give special consideration to Prescott Park in order to protect this dynamic natural and recreational resource and most significant scenic view for the enjoyment of present and future generations.

Implementation 2-C-1. Follow the recommendations of, and periodically update, the *Prescott Park Management Plan*.

Implementation 2-C-2. Pursue land additions or parcel reconfigurations for Prescott Park, as opportunities become available, to enhance access or site development opportunities.

Implementation 2-C-3. Pursue inclusion of Prescott Park in the Medford Urban Growth Boundary for eventual inclusion within the City of Medford.

Implementation 2-C-4. Enhance access and public enjoyment of Prescott Park by implementing the Prescott Trails Plan and developing appropriate facilities to enhance appreciation of natural resources, the outdoors, and Medford's unique environment.

BICYCLE & PEDESTRIAN OPPORTUNITIES

Goal 3: To provide recreational opportunities within parks and connectivity to parks through a path and trail system that is well integrated with the community.

Policy 3-A: The City of Medford shall seek to develop a network of shared-use

pedestrian and bicycle paths and trails to promote their important recreational uses within parks and enable connectivity between parks, neighborhoods, public amenities, and major pedestrian and bicycle routes identified in the Transportation System Plan and Southeast Circulation Plan.

Implementation 3-A-1. Coordinate recreational path and trail system planning and development with the City's and Jackson County's Transportation System Plan and Southeast Plan to provide a comprehensive pedestrian and bicycle network.

Implementation 3-A-2. Integrate the siting of proposed path and trail segments into the development review process; require development projects along designated routes to be designed to incorporate path and trail segments as part of the project.

Implementation 3-A-3. Facilitate and provide for a high degree of pedestrian and bicycle connectivity from major shared-use paths, such as the Bear Creek Greenway, to parks and other destinations.

Implementation 3-A-4. Develop the Southeast Area greenway paths shown in the adopted SE Area Neighborhood Circulation Plan Map.

Implementation 3-A-5. Implement the Prescott Park Trails Plan in phases as funding and park infrastructure are available.

Implementation 3-A-6. Partner with local utilities, public agencies and private landowners to secure easements and access to open space for path and trail connections.

Implementation 3-A-7. Implement standards for route and wayfinding signage and associated facilities and informational maps and materials identifying existing and planned path and trail facilities.

Implementation 3-A-8. Provide trailhead accommodations, as appropriate, to include parking, signage, restrooms and other amenities.

MANAGEMENT & MAINTENANCE

Goal 4: To coordinate park and recreation planning, acquisition, maintenance, and development in the City of Medford to serve a broad spectrum of citizen and institutional interests.

Policy 4-A: The City of Medford shall design and maintain parks and recreation facilities in a safe, attractive manner, to serve as positive amenities for the community and the neighborhoods in which they are located.

Implementation 4-A-1. Utilize and periodically update the *Guidelines for Site Selection and Development* for the acquisition and/or development of parks within each park classification and include the review of development guidelines and site plans by the Parks Maintenance Division.

Implementation 4-A-2. Implement a consistent park signage program for use throughout the system and consider installation of updated standards for park entry signs and specialized signage such as mileage markers along trails and pathways.

Implementation 4-A-3. Consider design elements that enable parks to be used year-round, including picnic shelters and playground shade structures.

Implementation 4-A-4. Design, improve and maintain parks and facilities in a manner that conserves energy and other resources and maximize efficient maintenance practices.

Implementation 4-A-5. Design and maintain parks and facilities to offer universal accessibility for residents of all physical capabilities, skill levels and age.

Implementation 4-A-6. Incorporate sustainable development and low impact design practices into the design, planning and rehabilitation of new and existing facilities.

Implementation 4-A-7. Examine opportunities to locate a Parks maintenance facility east of Interstate 5 to facilitate enhanced efficiency in the maintenance of east Medford sites and facilities.

Policy 4-B: The City of Medford shall evaluate and design park and recreation facilities to minimize operation and maintenance costs.

Implementation 4-B-1. Review and consider the projected maintenance and operations costs when developing new facilities or redeveloping existing facilities prior to initiating design development.

Implementation 4-B-2. Consider maintenance costs, including transportation and loading/unloading of equipment, before acquiring park stand-alone or isolated park sites smaller than one acre.

Implementation 4-B-3. Seek and implement opportunities for acquisition and use of contiguous school and park sites for recreational purposes beneficial to both City and the School District.

Policy 4-C: The City of Medford shall actively manage its park and recreation assets through a regular schedule of maintenance and capital renewal efforts to optimize use, reduce unplanned reactive maintenance and protect public investment.

Implementation 4-C-1. Allocate an average minimum maintenance cost per acre annually for maintenance of each park type and seek to increase maintenance funds using this guideline as new amenities or facilities are added to the City's system.

Implementation 4-C-2. Update the Maintenance and Operations Management Standards Plan, as necessary, to ensure parks, facilities and equipment are maintained in a manner that keeps them safe and attractive; repair or remove damaged components immediately upon identification.

Implementation 4-C-3. Maintain a standardized and systematic inventory and assessment of park system infrastructure, including quantity, location, condition and expected useful life.

Implementation 4-C-4. Implement and finance the upgrades for ADA compliance as noted in the ADA Transition Plan to ensure a safe, secure and accessible park infrastructure.

Implementation 4-C-5. Consider creation of a Natural Resources Division to focus efforts toward natural area management and restoration, and urban forestry related needs.

Implementation 4-C-6. Update the Natural Resource Management Plans and Procedures manual, as necessary to address Integrated Pest Management and other best practices for site management of City-owned or controlled properties.

PARTNERSHIPS

Goal 5: To enhance and support partnerships that leverage Medford's human, social and physical capital to improve recreation opportunities for residents.

Policy 5-A: The City of Medford shall continue to pursue and maintain effective partnerships with neighboring cities, Jackson County, Medford School District, other governmental agencies, and private and non-profit organizations to plan and provide recreation activities and facilities and maximize opportunities for public recreation.

Implementation 5-A-1. Develop and maintain inventories and evaluations of shared athletics and recreation facilities.

Implementation 5-A-2. Pursue or enhance partnerships with the Medford School District to maximize public use of recreation facilities on school sites, especially athletic fields and gymnasiums, and to utilize school grounds as parks in areas where parkland distribution deficiencies exist.

Implementation 5-A-3. Attempt to partner with Jackson County, the State of Oregon and others to provide regional facilities.

Implementation 5-A-4. Coordinate with public, private and non-profit providers, such as organized sports leagues, to plan for projects to enhance and maintain athletic field facilities.

Implementation 5-A-5. Explore partnership opportunities with local hospitals and businesses to develop, fund, and promote park, recreation and wellness activities, programs and amenities.

Implementation 5-A-6. Encourage collaboration among local art, business, education, tourism, city beautification and recreation interests.

Policy 5-B: The City of Medford shall partner with public safety agencies in order to address community perceptions regarding safety in parks and greenways.

Implementation 5-B-1. Coordinate with the Medford Police Department to develop a volunteer program that recruits and trains citizens to serve as park hosts.

AESTHETICS

Goal 6: To maintain and enhance community livability in Medford by promoting the aesthetic quality of the urban environment.

Policy 6-A: The City of Medford shall recognize trees as valuable amenities that contribute to the livability of our city through the proper selection, placement, preservation and maintenance of trees along our streets, in open spaces, and in parks.

Implementation 6-A-1. Provide a mechanism for a tree recognition program.

Policy 6-B: The City of Medford shall require the provision and continued maintenance of appropriate landscaping in conjunction with new development.

Implementation 6-B-1. Consider and advocate for a revision to the Medford Municipal Code to promote sustainable and cost effective maintenance and management of right-of-way landscape areas.

Policy 6-C: The City of Medford shall encourage the establishment of public art in parks, on public grounds, and in public buildings.

Implementation 6-C-1. Investigate mechanisms for displaying art in public places.

ENGAGEMENT & COMMUNICATIONS

Goal 7: To encourage and support active and on-going participation by diverse community members in the planning and decision-making for parks and recreation.

Policy 7-A: The City of Medford shall endeavor to involve residents and stakeholders in park and recreation facility planning, design and recreation program development to solicit community input, facilitate project understanding and build public support.

Implementation 7-A-1. Use a diverse set of communication and informational materials and employ innovative strategies to improve community involvement in park and recreation planning efforts, including in-person meetings and events, signage, print programs and materials, and electronic communication (e.g. website, newsletters, social media)

Implementation 7-A-2. Promote and distribute information about recreational activities, education programs, community services and events, and volunteer activities sponsored by the City and partner agencies and organizations.

Implementation 7-A-3. Identify under-represented segments of the community and work to improve their capacity to participate in park planning and decision-making.

Implementation 7-A-4. Support the Parks & Recreation Commission as the forum for public discussion of parks and recreation issues.

Implementation 7-A-5. Survey, review and publish local park and recreation preferences, needs and trends at least once every five years.

Implementation 7-A-6. Collaborate with the City's economic development staff and regional tourism staff to promote Medford's events, parks, trails and facilities.

CAPITAL FACILITIES PLAN

The Capital Facilities Plan (CFP) sequences the strategic actions to guide the implementation of this Plan. It assigns proposed timeframes and estimated costs for specific projects grouped by project type. The following CFP lists all park and facility projects considered for the next ten years. The majority of these projects entail the acquisition and development of parks, renovating or enhancing existing facilities and expanding path and trail corridors.

The following CFP project list provides brief project descriptions and priority ranking to assist staff in preparing future capital budget requests. Corresponding maps are provided to illustrate the general locations of CFP projects.

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Figure 7. 2016-2025 Capital Facilities Plan (Projects eligible for SDC funding)

Medford Leisure Services Plan Update (2016)

2016 - 2025 CAPITAL FACILITIES PLAN

Projects Eligible for SDC Funding (In Whole or In Part)

Project #	Proposed 2015-2025 Projects	Type	2017-19 BIENNIUM		2019-21 BIENNIUM		2021-23 BIENNIUM		2023-25 BIENNIUM		2025-27 BIENNIUM		10-yr Total	Abbreviated Project Descriptions/Potential Grant Sources
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27		
Park Enhancements & Development													\$ 10,744,000	
	Donahue-Frohnmayr Park Expansion & Upgrades	D						\$ 2,100,000					\$ 2,100,000	Master plan improvements and expansion, including Spring Street Improvements
	Oregon Hills Park, Phase II	D		\$ 310,000									\$ 310,000	Phase II: playground, sports courts, more trails. (Amount shown will be carry-forward from current fiscal period)
	Chrissy Park Development	D	\$ 290,000								\$ 3,500,000		\$ 3,790,000	Phase I: parking, restroom, picnic shelter, paved & natural trails. Phase II: parking, sports courts, shelters, discgolf, dog park, exercise trails. (Amount shown will be carry-forward from current fiscal period)
	Cedar Links Park Development	D		\$ 1,400,000									\$ 1,400,000	Park development (per MP) with playground, parking, restrooms, picnic shelters, basketball court, pathways, landscaping
	Howard School Park	D						\$ 922,000	\$ 922,000				\$ 1,844,000	Restrooms, renovated sports courts, playground, added pathways
	Midway Park Development	D			\$ 1,100,000								\$ 1,100,000	Parking, pathways, picnic shelter, restrooms, splash pad, gazebo, exercise course, BCG trail connection
	Lone Pine Park Development	D							\$ 200,000				\$ 200,000	Playground, community garden, added pathways
Paths & Trails													\$ 8,981,832	
	Prescott Park Trail Development	D	\$ -		\$ 1,750,000								\$ 1,750,000	Internal park trails (0.42 miles)
	SE Area Plan - Larson Creek Corridor	A/D	\$ -					\$ 1,390,000					\$ 1,390,000	Multi-use shared path (1.15 miles)
	SE Area Plan - Tributary to Medford Canal	A/D	\$ -					\$ 1,570,000					\$ 1,570,000	Multi-use shared path (1.25 miles)
	SE Area Plan Paths & Trails	A/D	\$ -						\$ 2,000,000	\$ 2,271,832			\$ 4,271,832	Paths and trails consistent with SE Area Circulation Plan
Future Acquisitions													\$ 15,106,582	
P-1	Neighborhood Park - N Medford	A	\$ 1,625,000										\$ 1,625,000	Potential acquisition - North Medford, south of airport (5 acres)
P-3	Neighborhood Park - SE Medford	A		\$ 1,020,000									\$ 1,020,000	Potential acquisition - Southeast Medford, southwest of Hillcrest Road and Foothill Road (3 acres)
P-2	Community Park - SE Medford	A		\$ 4,875,000									\$ 4,875,000	Potential acquisition - Southeast Medford, near N Phoenix Road in the Larson Creek area (15 acres)
P-9	Community Park - W Medford	A			\$ 2,320,000								\$ 2,320,000	Potential acquisition - West Medford, generally near Rossanley Drive and N Ross Lane (15 acres)
P-4	Neighborhood Park - E Medford	A				\$ 741,935							\$ 741,935	Potential acquisition - East Medford, south of MoAndrews and east of Foothill Road (2 acres)
P-6	Neighborhood Park - SE Medford	A						\$ 1,074,647					\$ 1,074,647	Potential acquisition - Southeast Medford, northwest of Hillcrest Road and Foothill Road (3 acres)
P-7	Neighborhood Park - SW Medford	A						\$ 1,350,000					\$ 1,350,000	Potential acquisition - Southwest Medford, near Crooked Creek and Kings Hwy (5 acres)
P-8	Neighborhood Park - SW Medford	A							\$ 1,350,000				\$ 1,350,000	Potential acquisition - Southwest Medford, near South Medford High School (5 acres)
P-5	Neighborhood Park - SE Medford	A								\$ 750,000			\$ 750,000	Potential acquisition - Southeast Medford, near Hillcrest Road between Prescott Park and Chrissy Park (2 acres)
Facilities													\$ 18,000,000	
	Multi-Use Recreation & Aquatic Center	D		\$ 9,000,000	\$ 9,000,000								\$ 18,000,000	
Totals per year:			\$ 1,915,000	\$ 16,605,000	\$ 14,170,000	\$ 741,935	\$ 5,486,647	\$ 3,842,000	\$ 3,550,000	\$ 3,021,832	\$ -	\$ 3,500,000	\$ -	\$ 52,832,414

Figure 8. 2016-2025 Capital Facilities Plan (Projects not eligible for SDC funding)

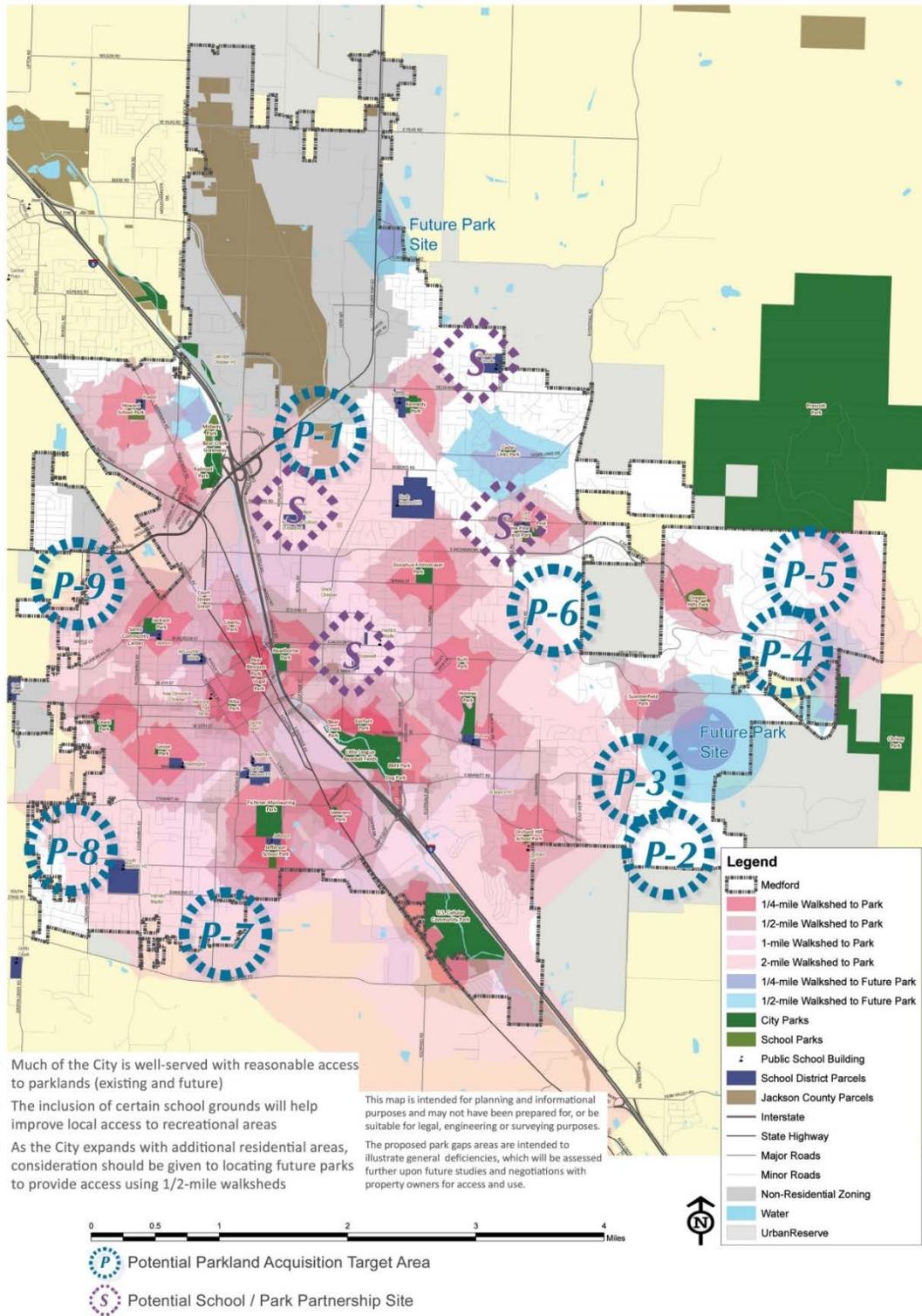
Medford Leisure Services Plan Update (2016)

2016 - 2025 CAPITAL FACILITIES PLAN

Projects Not Eligible for SDC Funding

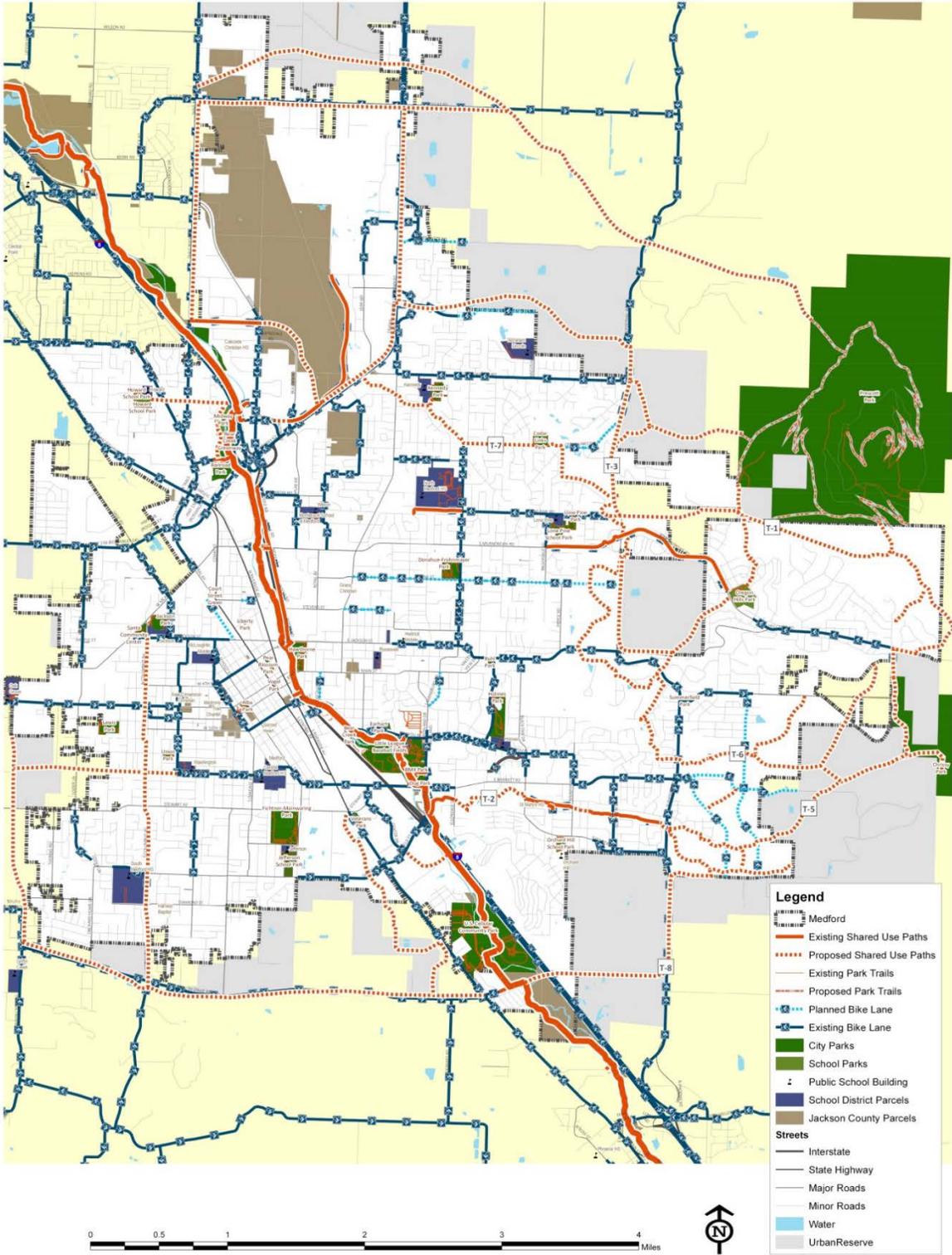
Project #	Proposed 2015-2025 Projects	Type	2017-19 BIENNIUM		2019-21 BIENNIUM		2021-23 BIENNIUM		2023-25 BIENNIUM		2025-27 BIENNIUM		10-yr Total	Abbreviated Project Descriptions/Potential Grant Sources	
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27			2027/28
Park Enhancements & Development													\$ 7,390,250		
	Restroom Replacement Program	R	\$ 300,000		\$ 80,000		\$ 100,000		\$ 80,000		\$ 80,000		\$ 640,000	Replace restrooms @ Richter-Mainwaring, Holmes, Bear Creek, RUF, and Union Parks	
	Meser Plan Updates	D	\$ 30,000		\$ 30,000		\$ 30,000						\$ 90,000	Update master plans for Jackson, Holmes and Bear Creek Parks	
	U.S. Cellular Community Park Turf Replacement	R	\$ 250,000	\$ 250,000	\$ 40,000	\$ 40,000	\$ 250,000	\$ 250,000	\$ 40,000	\$ 40,000	\$ 250,000	\$ 2,500,000	\$ 40,000	\$ 3,950,000	Anticipated replacement for artificial turf areas
	Bear Creek Park Renovations	R			\$ 250,000	\$ 450,000								\$ 700,000	Additional picnic shelter, improved circulation pathways, restroom, lighting, shade trees, drainage, pavement resurfacing and playground replacement
	Safety Improvements, Upgrades and Renovations	R	\$ 150,000	\$ 150,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 1,200,000	Add and upgrade lighting, path repairs, irrigation systems, shelter repairs and parking lot maintenance
	Wayfinding & Signage Program	R	\$ 32,500	\$ 32,500	\$ 65,000	\$ -	\$ -							\$ 130,000	Unified system (for graphics & materials) of Park ID and wayfinding signs for parks, trails & special use facilities
	ADA Renovations & Upgrades	R	\$ 9,250	\$ 158,500	\$ 48,000	\$ 152,000	\$ 122,500	\$ 108,000	\$ 40,500	\$ 41,500				\$ 680,250	Targeted ADA barrier removals and upgrades based on ADA transition plan
Other Capital Enhancements													\$ 150,000		
	Hiliker Wall Repair	R	\$ 150,000											\$ 150,000	
Totals per year:			\$ 921,750	\$ 591,000	\$ 613,000	\$ 742,000	\$ 602,500	\$ 458,000	\$ 260,500	\$ 181,500	\$ 430,000	\$ 2,600,000	\$ 140,000	\$ 7,540,250	

Map 1. Proposed Parks and Acquisition Target Areas



Map I: Proposed Parkland Acquisition Target Areas

Map 2. Proposed Trails and Paths



Map 2: Proposed Trails & Paths

IMPLEMENTATION TOOLS

The recommendations for park and recreation services will trigger the need for funding beyond current allocations and for additional staffing, operations and maintenance responsibilities. Additional resources will be needed to leverage, supplement and support the implementation of proposed policies, programs and projects. The following implementation strategies are presented to offer near-term direction to realize these projects. Given that the operating and capital budgets for the Department are limited, the implementation measures identified below look primarily to non-General Fund options.

Partner Coordination & Collaboration

Internal coordination with the Public Works and Planning departments can increase the potential of discrete actions toward the implementation of the proposed trail and path network, which relies heavily on street right-of-way enhancements, and in the review of development applications with consideration toward potential parkland acquisition areas, planned path corridors and the need for easement or set-aside requests. However, to more fully expand the extent of the park system and recreation programs, additional partnerships and collaborations should be sought.

Continued coordination with local school districts and private schools will advance a number of projects in which resources can be leveraged to the benefit of the community. The City should explore options with the Medford School District for joint financing and shared use of a new multi-use recreation and aquatic center that can serve the needs of both organizations.

As an active lifestyles community, Medford should explore partnership opportunities with regional health care providers and services, such as Asante, Providence and the Jackson County Health & Human Services Department, to promote wellness activities, healthy living and communications about the benefits of parks and recreation. For example, this group could more directly cross-market services and help expand communications about local wellness options, and they could sponsor a series of organized trail walks throughout Medford as a means to expand public awareness of local trail opportunities and encourage residents to stay fit. Other communities in the Pacific Northwest have been successful with funding requests to regional hospitals for the development and printing of community walking guides that highlight the health benefits of walking and include trail system maps and descriptions.

Volunteer & Community-based Action

Volunteers and community groups already contribute to the improvement of park and recreation services in Medford. Volunteer projects include wildlife habitat enhancement, invasive plant removal and tree planting, among others. Medford should maintain and update a revolving list of potential small works or volunteer-appropriate projects for the website, while also reaching out to the high schools to encourage student projects. While supporting organized groups and community-minded individuals continues to add value to the Medford parks and recreation system, volunteer

coordination requires a substantial amount of staff time, and additional resources are necessary to enable a volunteer coordinator position to more fully take advantage of the community's willingness to support park and recreation efforts.

Local Funding

According to the City budget, Medford maintains reserve debt capacity for council manic bonds and voter approved debt. Although past attempts failed to secure voter approval for a new aquatic facility, the City should continue to examine options for a new multi-use recreation and aquatic center. Based on the community feedback conducted as part of the 2016 LSP in support of a new facility, the development of a new recreation center warrants a review of financing alternatives and debt implications, along with polling of voter support for such a project. Additionally, the Department should seek to re-use existing bond repayment funds for a reallocation toward increased staff support or as leveraged resources toward a new recreation and aquatic center. Also, the continued collection of the Parks Utility Fee, Transient Lodging Tax and Car Rental Tax are critical to the Department's continued successful operations of its programs and facilities.

System Development Charges

Park System Development Charges (SDCs) are imposed on new development to meet the increased demand for parks resulting from the new growth. SDCs can only be used for parkland acquisition, planning and/or development. They cannot be used for operations and maintenance of parks and facilities. The City of Medford currently assesses Parks SDCs, but the City should periodically update the methodology and rate structure, as appropriate, to be best positioned to obtain future acquisition and development financing from residential development. The City should prioritize the usage of Parks SDCs to secure new park properties and finance park or path/trail development consistent with the priorities within this Plan.

Grants & Appropriations

Several state and federal grant programs are available on a competitive basis, including Oregon State Parks, LWCF and MAP-21. Pursuing grants is not a panacea for park system funding, since grants are both competitive and often require a significant percentage of local funds to match the request to the granting agency, which depending on the grant program can be as much as 50% of the total project budget. Medford should continue to leverage its local resources to the greatest extent by pursuing grants independently and in cooperation with other local partners. Appropriations from state or federal sources, though rare, can supplement projects with partial funding. State and federal funding allocations are particularly relevant on regional transportation projects, and the likelihood for appropriations could be increased if multiple partners are collaborating on projects.

Parkland Donations & Dedications

Parkland donations from private individuals or conservation organizations could occur to complement the acquisition of park and open space lands across the City and UGB.

Gift deeds or bequests from philanthropic-minded landowners could allow for lands to come into City ownership upon the death of the owner or as a tax-deductible charitable donation. Parkland dedication by a developer could occur in exchange for Park SDCs or as part of a planned development where public open space is a key design for the layout and marketing of a new residential project. Any potential dedication must be vetted by the Department to ensure that such land is located in an area of need or can expand an existing City property and can be developed with site amenities listed in the Department's Guidelines for Site Selection and Development.

Public-Private Partnerships

Public-private partnerships are increasingly necessary for local agencies to leverage their limited resources in providing park and recreation services to the community. Corporate sponsorships, health organization grants, conservation stewardship programs and non-profit organizations are just a few examples of partnerships where collaboration provides value to both partners. The City has existing partners and should continue to explore additional and expanded partnerships to help implement these Plan recommendations.

Park & Recreation District

Another approach to financing park, recreation and path/trail needs is through the formation of a special district. Municipalities across Oregon have favored the creation of Park and Recreation Districts (PRD) to meet the recreational needs of residents, while also being sensitive to the set of demands placed on general purpose property tax funds. Bend and Willamalane are two examples of successful PRDs in Oregon. The Oregon Revised Statutes (Chapter 266) detail the formation and operation of such a district. Upon formation, the district would be managed by an elected board and have the authority to levy taxes, incur debt and issue revenue or general obligation bonds.

In particular, a PRD may be a viable option to help finance the construction and operation of a new multi-use recreation and aquatic center. As a regional facility, the PRD boundary could be enlarged to encompass nearby cities to help spread costs. A feasibility study should be conducted to explore the potential, financial viability and voter support for a PRD.

Other Implementation Tools

Appendix H of the 2016 Leisure Service Plan identifies other implementation tools, such as grants and acquisition tactics that the City could utilize to further the implementation of the projects noted in the CFP.

8.4.4 SOLID WASTE MANAGEMENT

INTRODUCTION

The cost of providing solid waste disposal in Oregon runs as much as \$260 million annually. Americans are consuming and disposing of ever increasing amounts of materials and toxins. Per capita generation has nearly doubled since 1960. Nationally in 1990, the single largest category of municipal waste (33 percent) was made up of containers and packaging; non-durable goods, such as newspapers, were 27 percent, landscaping waste was about 18 percent, and durable goods, such as furniture and tires, were 14 percent. Oregon's landscaping waste is significantly lower than the national average; however, the amount of food waste is much higher.

Waste prevention must be the initial goal in solid waste management planning, particularly to assure cost-effectiveness. Oregon has instituted a state management hierarchy of: reduce, reuse, recycle, compost, recover energy, and, then, landfill or incinerate. Only "residual" waste should end up in landfills; i.e., disposal only after a product has been used to its fullest potential. Personal responsibility is the key to reducing the waste stream, although some governmental policies do give a competitive edge to the use of virgin materials, such as energy subsidies, certain tax write-offs, use of public forests, etc. The *Solid Waste Management Plan for Jackson and Josephine Counties* estimates that regional waste generation will increase at 1 percent per year over its 20-year planning period (1993 to 2013).

"Waste that is not generated does not have to be managed."

Oregon State Integrated Resource & Solid Waste Management Plan, 1995 to 2005

EXISTING PLANNING AND FACILITIES

Solid waste management planning in Jackson County is reflected in the *Solid Waste Management Plan for Jackson and Josephine Counties*, prepared by Parametrix, Inc. in 1994. The planning process was funded by a grant from the Oregon Department of Environmental Quality (DEQ). With a 20-year planning period, the plan provides a framework for making short and long-term decisions about solid waste management in the region. The plan focuses on evaluating long-term landfill options, waste reduction and recycling programs, transfer stations, institutional arrangements, and system funding alternatives. A Solid Waste Advisory Committee (SWAC) was formed to facilitate the planning process. State law requires new waste facilities to be compatible with an adopted solid waste management plan before being issued a DEQ permit to operate.

The solid waste management system in the region is in transition from a decentralized system to one that will send all waste to a single facility. This is the result of recent state and federal regulations that require new solid waste management approaches involving

additional services and environmental compliance. The true cost of waste disposal is the sum of the long-term costs of operating, closing, and monitoring landfills. The critical waste management issues facing the region are future landfill capacity, rate stabilization, and adequacy of closure funds.

Solid waste planning efforts in Jackson County in 1974-1975 recommended a single “resource recovery” facility in the White City area in-lieu of providing landfills, which would recover recyclable materials and incinerate the remaining waste to produce energy. This facility would serve as the regional recycling center. This regional recycling facility (BIOMASS ONE), located at 2350 Avenue G in White City, provides resource recovery services.

Regional Landfills

Until recently, the primary landfill in Jackson County was the South Stage Landfill located on Bellinger Road near the city of Jacksonville. The closure process for this landfill began in 1999, with a closure cost of about \$12 million. A leachate treatment system will be installed, and the landfill will be covered with soil and re-vegetated with grass. Groundwater and methane gas must be monitored for 30 years after closure. Both the Ashland and Prospect landfills will also be closing in the near future or have already closed. The Dry Creek Landfill, located approximately two miles northeast of the Medford UGB adjacent to Prescott Park, will be the single facility to serve Jackson County, and, most likely, Josephine County. The other landfills are closing because meeting the new standards is too costly. The Dry Creek facility will have a life span of 50 to 100 years. A new working area or “cell” with a thick multi-layered lining and a wastewater processing system is being constructed to replace the present working area. This new lined working area may eventually be filled with up to 300 feet of waste.

LEVEL OF SERVICE

State and Federal Solid Waste Regulations

Solid waste must be managed to protect the public health and environment, and to conserve resources, since improper solid waste management can pollute the environment and deplete resources. Statewide Planning Goals 6 and 11 address solid waste management. Goal 6 requires solid waste facilities to comply with federal environmental quality requirements, and Goal 11 requires solid waste management to be a part of public facility planning, including siting standards for needed facilities. The Oregon DEQ takes primary responsibility for regulation of solid waste under the federal Resource Conservation and Recovery Act of 1976. The *Oregon State Integrated Resource and Solid Waste Management Plan, 1995-2005* was produced in 1994 by DEQ. The planning process began in 1991 with the establishment of regional workgroups. A representative of the City of Medford was among the ten members of the Jackson-Josephine County workgroup.

Special Wastes

Certain wastes are specially regulated, require special handling, and often cannot be disposed of in landfills. These are discussed below.

- **Tires** Waste tires, which cannot be placed in landfills, are sent to California or to the Portland area. The Les Schwab Tire Company has plans to incinerate tires in Central Oregon.
- **White Goods (Appliances)** Appliances can be disposed of in landfills if the ozone-depleting compounds have been removed; however, most are recycled.
- **Construction/Demolition Wastes** Construction and demolition wastes, such as concrete, bricks, asphalt, wood, glass, roofing, plaster, etc., are permitted in the region's landfills. In Jackson County in 1991-92, 14 percent of this type of waste was recycled at the Biomass One and Jo-Gro facilities. Education and rate incentives are needed to encourage separation of such materials, and to encourage salvage operations prior to demolition.
- **Household Hazardous Waste** Household hazardous waste, such as solvents, pesticides, paints, and motor oil, cannot be disposed of in local landfills. Voluntary hazardous waste collection events take place periodically in Medford. The materials are recycled or shipped to an appropriate storage and disposal facility. Collection of such waste also prevents it from being dumped into the sanitary sewer system, which can cause contamination of the treatment facility. Programs are needed for education about toxic use reduction to reduce the volume of such waste. Instead of one-day events, a permanent facility could be provided.
 - **Hazardous Waste from "Conditionally Exempt Small Quantity Generators" (CEGs)** CEGs are businesses such as dry cleaners, vehicle repair shops, gasoline stations, etc. that produce lesser quantities of hazardous waste that cannot be disposed of in landfills. One-day collection events occur in conjunction with the household hazardous waste collection events. Programs are needed for education about toxic use reduction to reduce the volume of such waste.
 - **Petroleum Contaminated Soils** These are soils contaminated by gasoline, fuel oil, etc. The amount of contaminated soil will diminish over time as leaking underground tanks are replaced. Low-level petroleum-contaminated soil can be placed in the Dry Creek Landfill. Petroleum-contaminated soil can also be remediated through incineration at Copeland Sand and Gravel in Grants Pass. Additional private sector remediation and recovery facilities are needed.
 - **Asbestos-Containing Material** When asbestos becomes friable, it releases fibers into the air that cause lung cancer and other diseases. The Dry Creek landfill accepts asbestos subject to specific regulations. Burying the material is a good means to limit exposure. Homeowners are exempt from federal disposal regulations but must follow the local landfill rules. The

- need for handling will decrease over time as asbestos-containing materials are eliminated.
- **Infectious Medical Waste** Infectious medical waste, including used needles, blades, etc., is waste created by facilities such as hospitals, veterinaries, and funeral homes. In this region, it is held in special storage, and hauled, once per month, to Brooks, Oregon to be incinerated.
- **Agricultural Wastes** In Jackson County, agricultural wood waste is usually burned on-site, and some agricultural waste is sent to the Jo-Gro facility. The Sabroso Company sends waste from orchard products processed in Medford to the regional water reclamation treatment plant.
- **Sewage Sludge** Sludge (biosolids) is a final product of sewage treatment. It can be applied to land as fertilizer, buried in special landfills, or incinerated. Medford's regional Water Reclamation Plant typically disposes of sludge in landfills and has also provided sludge for agricultural land application.

Refuse Collection

Counties have the authority under state law to design, construct, and operate solid waste facilities, and about three-quarters of the landfills in Oregon are publicly owned. Cities and counties can establish franchises for collection, recycling, and disposal. A franchise gives a certain company or companies' exclusive rights to a specific service area. In Jackson County, franchised haulers collect refuse from specified areas on a regular schedule, and provide recycling services in urban areas. They pay a franchise fee, which is a percentage of net income or a set amount. Collection service is not yet mandatory for residential or commercial generators. A private company, Rogue Waste Systems, Inc. serves the Medford area, and also owns the South Stage and Dry Creek landfills.

Recycling Programs

Oregon's first legislation dealing with recycling was the renowned 1971 *Oregon Bottle Bill* that required the return of beverage containers to the manufacturers. It placed part of the waste management burden on the manufacturer by requiring them to accept their products for reuse or reprocessing. In 1983, the *Opportunity to Recycle Act* set clear public policy about the recycling opportunities afforded to the citizens of the state. Oregon Senate Bill 66, the *1991 Recycling Act*, required statewide waste reduction. It also attempted to assure markets for the recyclable material, e.g., it established minimums for the recycled material content of certain items marketed in Oregon, such as glass, rigid plastic, and newsprint. The only previous state government role in these markets had been in areas such as tax credits.

The current statewide recycling goal is to have 50 percent material recovery by the year 2000. Recovery rates include all materials except those recycled by vehicle and scrap metal yards. In Oregon, 70 percent of newsprint is recycled to make more newspapers. Jackson County met its 1998 waste recovery rate goal of 25 percent set by the state plan. One-third of the current waste recovery in Jackson County consists of the

materials received at the Biomass One facilities, which accept primarily wood waste (not including grass or leaves). The materials are shredded into landscaping or soil amendments or burned as fuel to create energy.

The 1991 Recycling Act also set recycling program component choices for local governments; or, a unique program can be developed if the goals and objectives of the Act are met. There are eight recycling program component choices. Cities of more than 10,000 in population, such as Medford, must implement at least four or five of the elements. They are:

- A. Curbside collection containers for recyclables provided for residential customers
- B. Weekly collection of recyclables on same day as refuse collection
- C. Expanded education and promotion of recycling
- D. Recycling for multiple-family complexes of five or more units
- E. Yard debris recycling program
- F. Commercial recycling program
- G. Expanded recycling depots
- H. Rate incentives for recycling

In Medford, elements A, B, C, and H have been implemented. Element E, yard debris recycling, takes place only during the fall, when the City provides a free leaf pickup service for three months. Approximately 33 tons of leaves are taken to the Jo-Gro facility in Josephine County, where they are combined with sewage sludge and composted into a soil amendment. Public recycling centers (element G) are located at the Dry Creek Landfill and the White City Transfer Station.

Curbside recycling collection is provided in Medford by Rogue Waste Systems, which also conducts recycling promotion and education. The higher density of Medford's residential and commercial development, compared to elsewhere in the County, allows for greater recycling opportunities at a lower cost. The curbside collection program collects newspapers, glass, cardboard, aluminum, used oil, and plastic milk jugs. The recycling centers accept other recyclables such as magazines, scrap paper, phone books, certain plastics and "tin" cans.

Recycling Facilities

A coordinated regional approach to recycling is needed. Start-up costs are initially higher for waste reduction and recycling than for land filling, but more cost-effective over the long-term. Removing recyclables initially from other waste is more cost-effective than mechanically removing them from a mixed waste stream in a resource recovery facility.

Presently, collected recyclables are sorted and compacted, and most are then transported to Portland-area industries. The Recycling Act will require a substantial upgrade of services to the haulers of recyclables in the future; for example, currently, some recycled glass is not paid for. Southern Oregon Recycling and Sessler Recycling

accept scrap metals, and Biomass One accepts wood waste and yard debris, but not grass or leaves. Some of the wood waste is ground into soil amendments, and some is burned as “hogged fuel” to generate electricity. The Biomass One facilities have been expanding and upgrading.

The local solid waste plan recommends three program opportunities to increase the level of diversion from the solid waste stream. The first is to form a regional waste reduction steering committee to coordinate regional options for improving material recovery. Some of these options include expanded industrial, commercial, and institutional collection; expanded drop-off collection; and expanded multiple-family collection. The second is to provide an expanded yard waste collection program that would expand non-energy options for diverted yard waste, establish more sites for accepting such waste, and increase marketing of the final products. The third is to provide hauler/recycle demonstration (pilot) programs, such as a program to increase commercial waste recovery, especially for office paper and food waste. The commercial sector in the region generates 60 percent of the waste, with only a 12 percent recovery rate.

Transfer stations are one means to help maintain service levels while cost-effectively playing a significant role in waste reduction and recycling. The local solid waste plan recommended providing transfer facilities to make up for the loss of the landfills. Ideally, they should be located within 20 minutes of the majority of the users. The White City area was chosen as the location for a transfer station due to the location and the availability of vacant industrial land. In 1999 the Rogue Waste Systems transfer facility in the Whetstone Industrial Park near White City was opened. The Whetstone Industrial Park is property owned by the City of Medford. A portion of the site at one time contained a landfill, which is the subject of an on-going clean-up process.

City of Medford Solid Waste Policies and Regulations

The City of Medford has an unwritten policy to purchase high quality, recycled materials such as paper products whenever economically feasible. Used office paper is also regularly collected for recycling in city facilities by providing a container at each workstation. The *Medford Land Development Code* permits most solid waste-related facilities in a variety of zoning districts. Trucking facilities, including sanitation trucks, and scrap metal and other recycling facilities are permitted in the Heavy Commercial and all of the industrial zoning districts. Solid waste collection and disposal sites are permitted in the industrial zones. Community services, which include indoor recycling collection centers, are conditional uses in residential zones. Rogue Waste Systems has trucking facilities within the city of Medford in General Industrial (I-G) zones on Crater Lake Avenue and on Myers Lane.

Illegal dumping, an important waste disposal issue, is usually caused by the cost and perceived inconvenience of collection or disposal at a landfill. Strong anti-dumping ordinances are necessary as illegal dumping increases. The most effective prevention activities are education, reporting, and community cleanups. In the city of Medford,

unlawful accumulation of junk or garbage is an infraction. If such an accumulation is determined to be a public nuisance, the City can remove it after conducting a public hearing. The property owner is then assessed the cost of the abatement as a lien against the property. Many communities address illegal dumping by imposing mandatory garbage collection. As of 1997, residential rental owners in the city of Medford are required to provide garbage receptacles that accommodate 30 gallons per unit, and to provide weekly garbage collection service.

Dry Creek Landfill and Prescott Park

Prescott Park, a 1,740-acre park owned by the City of Medford, adjoins the Dry Creek Landfill along the northeast section of the park. The park is not within Medford's UGB, although it abuts the UGB. Prescott Park is an identified Goal 5 resource in the Jackson County *Comprehensive Plan*. It is designated as an outstanding scenic resource, comprising both a "scenic viewpoint" and a "scenic site." The Jackson County *Comprehensive Plan* suggests a "scenic resource overlay zone" to protect such resources. Many regard Prescott Park (Roxy Ann Butte) as the City's premier open space and most significant natural view, currently and historically. The interface with lands surrounding Prescott Park is critical for preserving this open space/view shed.

It has been recommended that a comprehensive planning program for a specifically defined area be developed to ensure long-term protection of the Roxy Ann Butte view shed, and protection of the natural resources (plant and animal habitat). Such a program should also address the park's interface and view of the Dry Creek Landfill.

FUNDING

The cost of solid waste disposal is funded by "tipping" fees, which are usually based on the weight of the waste. The private waste disposal companies in the region have begun to increase fees to cover funding landfill closures, remediation, and monitoring, which is very expensive. Financial assurance is required as a part of closure plans prepared five years in advance of closure. According the regional plan, local governments may be able to promote funding of such activities at a lower cost through general obligation or revenue bonds. The formation of a county service district or a regional sanitary district or authority, which have the ability to ask the voters to levy additional property taxes, would make it easier to issue bonds. An in-depth analysis of various funding methods is needed. Importing waste from surrounding rural counties could help fund long-term financial stability, since a capacity shortage is not anticipated.

SOLID WASTE MANAGEMENT—CONCLUSIONS

1. The City of Medford is required to participate in the preparation and implementation of a regional solid waste management plan developed through a cooperative effort by local governments and the private sector, in compliance with the state solid waste management plan.
2. The most critical solid waste management issues facing the City of Medford

- and the region are future landfill capacity, rate stabilization, and adequacy of closure funds. A coordinated regional public/private strategy will be needed to address landfill closures and long-term remediation of closed landfills.
3. The Dry Creek Landfill, located approximately two miles northeast of the Medford Urban Growth Boundary adjacent to Prescott Park, is the solid waste facility serving Jackson and Josephine Counties.
 4. Private waste disposal companies in the region fund the cost of solid waste pickup and disposal through “tipping” fees, which are usually based on the weight of the waste.
 5. Waste prevention must be the initial goal in solid waste management planning, particularly to assure cost-effectiveness. Public/private efforts to develop, implement, and fund innovative, cost-effective waste prevention and recycling activities are needed, with a commitment to making such activities a part of daily decisions and business practices.
 6. The City of Medford can educate and lead through good example by purchasing durable, reusable, repairable, recycled, and recyclable products, by participating in recycling, and by educating employees about waste prevention and recycling in the workplace.
 7. Jackson County met its 1998 waste recovery rate goal of 25 percent set by the state plan. The current statewide recycling goal is to have 50 percent of materials recovered.
 8. Additional recycling efforts needed in the region include expanded industrial, commercial, and institutional collection, especially for office paper and food waste (the commercial sector generates 60 percent of the waste in the region, with only a 12 percent recovery rate); expanded drop-off collection; expanded multiple-family collection; and expanded yard waste collection with non-energy options for diverted yard waste, more sites for accepting such waste, and increased marketing of the final products.
 9. A solid-waste transfer station located on Table Rock Road in White City, plays a significant role in the region’s waste reduction and recycling ability.
 10. Planning is needed to assure compatibility between the development and use of the Dry Creek Landfill and Prescott Park.

SOLID WASTE MANAGEMENT—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To achieve a cost-effective, locally controlled, technologically feasible, environmentally sound, and publicly acceptable solid waste management system for the City of Medford.

Policy 1-A: The City of Medford shall support and promote compliance with state and county solid waste management plans.

Policy 1-B: The City of Medford shall participate in the implementation of the

regional solid waste management plan developed through a cooperative effort of local governments and the private sector.

Implementation 1-B-1. Provide City technical staff assistance, as appropriate, to ongoing interagency committees dealing with solid waste management.

Policy 1-C: The City of Medford shall review City policies and ordinances governing the siting, permit review process, and development standards for those solid waste system facilities that may be needed within the Medford Urban Growth Boundary in the future.

Policy 1-D: The City of Medford shall continue to carry out a program that effectively addresses illegal dumping of solid waste.

Policy 1-E: The City of Medford shall assure that appropriate measures are taken to secure compatibility between the development and use of the Dry Creek Landfill and Prescott Park.

Goal 2: To achieve a steady long-term decrease in the per-capita amount of solid waste being disposed of in landfills by the residents of Medford.

Policy 2-A: The City of Medford shall strive to manage the City's solid waste according to the state management hierarchy of reduce, reuse, recycle, compost, recover energy, incinerate, and landfill.

Policy 2-B: The City of Medford shall cooperate in public/private efforts to develop, implement, and fund innovative, cost-effective waste prevention and recycling activities and programs.

8.4.5 SCHOOLS

Revised Schools Section adopted February 4, 2016 by Ordinance 2016-19.

INTRODUCTION

This Schools section of the Public Facilities Element addresses primary, secondary and higher education facilities located in the Medford Urban Growth Boundary (UGB). The City of Medford is served by a number of educational institutions providing primary, secondary and higher education. The City is served by two public school districts, Medford 549C and Phoenix–Talent, providing for the primary and secondary (K-12) educational needs of the population, as well as two higher education institutions.

Rogue Community College (RCC) offers higher educational opportunities to Medford and the greater Rogue Valley. RCC has facilities at several valley locations, including a downtown Medford campus, facilities located just north of the Medford UGB, and facilities in Grants Pass. Four-year and post-graduate educational opportunities are also provided within a short distance of Medford: Southern Oregon University (SOU), located 15 miles down Interstate 5 in the City of Ashland, offers both baccalaureate and master’s programs. SOU and RCC also provide combined facilities in downtown Medford at the Higher Education Center.

This Schools section of the Public Facilities Element also provides specific information about the current enrollment, educational standards, facilities inventories, projected enrollments and needed expansions of the two public school districts from the Long-Range School Facilities plans adopted by the school districts (Medford 549C and the Phoenix–Talent).

EXISTING FACILITIES OVERVIEW

Public Primary and Secondary Education - Medford 549C and Phoenix–Talent School Districts

In 2010, 81% of the population in the Medford 549C School District lived within the Medford City limits and 25% of the Phoenix–Talent School District population lived within the Medford City limits. The Medford 549C School District serves approximately 85% of the Medford UGB, including all of the UGB west of Interstate 5 and all of the UGB east of Interstate 5 north of Barnett Road. The Phoenix–Talent School District serves the southeastern portion of Medford, east of the Interstate and south of Barnett Road, totaling approximately 15% of the UGB.

In November 2006, voters in the Medford 549C School District approved Measure 15-73, which authorized issuance of \$189 million dollars in bonds to renovate, improve and expand district facilities. Improvements included significant renovations to North Medford High School and the construction of a new South Medford High School on a

larger site. Elementary school improvements included the reconstruction of the Jackson and Roosevelt facilities. Lone Pine Elementary received significant renovation and new facilities. All other campuses within the District received significant enhancements.

The Phoenix–Talent School District serves the southeastern portion of Medford and currently has one elementary school (Orchard Hill) within the UGB. In 2010, the district acquired an 11.7-acre site at the northeast corner of N. Phoenix Road and Coal Mine Road for the future development of an elementary school when additional population in the Southeast Area precipitates the need for an additional school.

The City of Medford has inter-governmental agreements for the collection of a development excise tax with both the Medford 549C and Phoenix–Talent school districts. In 2007, the Oregon State Legislature passed Senate Bill 1036 (ORS 320.170) to help school districts pay for new and expanded school facilities. ORS 320.170 authorizes school boards, in cooperation with cities and counties, to tax new residential and non-residential development. In January 2012, the City Council approved Ordinance 2012-11 authorizing the collection of an excise tax for the continuing development of Medford 549C School District facilities. In September 2012, the City Council approved Ordinance 2012-139, authorizing the collection of an excise tax for the continuing development of Phoenix–Talent School District facilities.

Primary and Secondary Education - Existing Facilities

Within the Medford UGB, there are currently (2013) 17 public schools (not including charter schools). In addition to public schools, there are several private schools serving the kindergarten through 12th grade student population. Public schools located outside Medford’s UGB also serve areas within the UGB. There are two elementary schools within the Phoenix–Talent School District that serve a portion of the UGB. One of these schools (Orchard Hill) is within Medford’s UGB and serves the southeastern portion of the UGB.

Figure 1 shows the location and type of public schools within Medford’s UGB.

Medford 549C School District Facilities

- 11 elementary schools within the UGB
- 3 elementary schools outside the UGB (Griffin Creek, Ruch, and Jacksonville)
- 2 middle schools within the UGB
- 3 high schools within the UGB
- 3 public charter schools

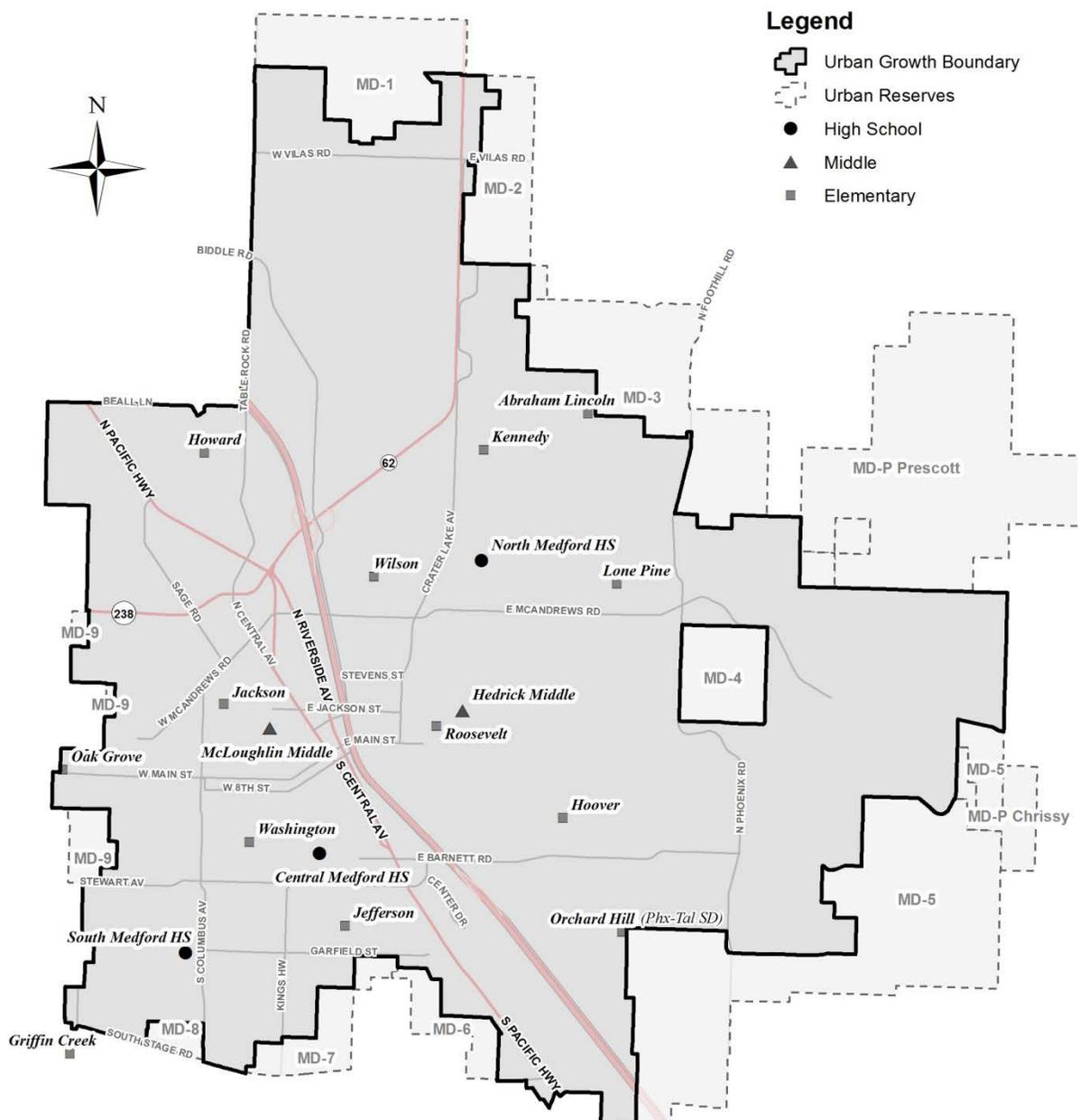
Phoenix–Talent School District Facilities

- 1 elementary schools within the UGB
- 2 elementary schools outside the UGB (Phoenix Elementary, Talent Elementary)
- 1 middle school outside the UGB (Talent Middle School)
- 1 high school outside the UGB (Phoenix High School)

Private Schools

- New Dimensions Elementary
- Sacred Heart Elementary
- Grace Christian Elementary
- St. Mary’s High School
- Rogue Valley Adventist School
- Medford Montessori School
- Crossroads School
- Cascade Christian High School

Schools Figure 1: Public School Facilities, Medford Urban Growth Boundary



Higher Education Facilities

Rogue Community College

Rogue Community College (RCC) was established in November 1970 by vote of the Josephine County electorate. On May 21, 1996, voters in Jackson and Josephine counties approved expansion of RCC's district boundaries to include all of Jackson County, allowing a wider range of educational programs, more job-training opportunities, and greater access for students throughout the Rogue Valley.

Each year, the college provides educational experiences to more than 17,000 students (5,700 full-time equivalent) (2012) in lower-division transfer, job training, and development studies programs. RCC has the Riverside Campus in downtown Medford, located along Ninth Street, Bartlett Street, and Riverside Avenue. Responding to increasing enrollment, the college developed programs in a number of nearby facilities in Medford's downtown area. Enrollment at the RCC downtown campus has grown by over 600 students in recent years (2005/06 – 2009/10), an increase of 42.3%.

In 2008, RCC and Southern Oregon University (SOU) collaborated in the development of a 68,700-square foot building located near the Riverside Campus in downtown Medford, known as the Higher Education Center (HEC). Both SOU and RCC needed additional classroom space in downtown to adequately meet the needs of the population. The sharing of a single facility saves the two institutions in operating costs and avoids duplication of resources. Total facility cost was \$22.2 million dollars, with each school contributing half of the construction cost. Funding for the facility received support from many sectors of the community, including state bonding, bonds approved by Jackson County voters, and \$2.6 million dollars raised locally in matching funds. Prior to the construction of the HEC, many RCC and SOU classrooms were located in several older remodeled commercial buildings. This facility provides state-of-the-art labs and classrooms in a building designed for academic purposes.

The Table Rock Campus is the newest of the RCC locations. The campus opened in 2005 on the site of a former electronics manufacturing facility located just north of the Medford UGB in White City. The facility offers a wide range of programs such as Diesel Technology, Manufacturing, Electronics Technology, Fire Science, Emergency Medical Technology and Public Safety. The vision for this campus is to maintain and expand its focus on career and technical training, while adding academic skills, continuing education classes and support services to create a more comprehensive campus.

RCC offers Associate Degrees with specific articulation agreements established with SOU, for the completion of four-year degrees in the areas of Business, Criminology, Computer Science, Early Childhood Education and Human Services. RCC also offers Associate Degrees with articulation agreements with the Oregon Institute of Technology (OIT) in the areas of Manufacturing, Engineering and Informatics Technology. OIT and RCC are planning to include articulation agreements for several health education programs, such as Medical Imaging, Dental Hygiene and Medical Laboratory Science.

In September 2009, the RCC Board of Education contracted with local design firms for a master facilities plan. The process included college beneficiaries and constituents in a collaborative planning process. Significant background information was documented regarding the college facilities, including the creation of a digital database of all buildings and program areas, allowing a better understanding of facility capacities. The *RCC College Master Plan* was completed and accepted by the RCC Board of Education in April 2011.

Southern Oregon University

Southern Oregon University (SOU) is an accredited four-year public university offering Baccalaureate and Master’s Degree programs. Although the main campus is in Ashland, as noted, the university maintains a satellite campus in Medford located in the Higher Education Center. In a cooperative arrangement with Rogue Community College (RCC), SOU also offers college courses to RCC students. These courses are designed to provide supplemental coursework for students interested in transferring to the university.

PUBLIC SCHOOL DISTRICT FACILITIES PLANNING

Long-Range Planning for Public School Facilities

Long-range school facilities planning is an important and somewhat complex process requiring the cooperation and coordination of school districts, local governments and citizens. Long-range planning by the Medford and Phoenix–Talent School Districts is continuous. It is a different type of planning, however, from the long-range planning activities of local “general-purpose” governments, whose responsibility is to direct the location and intensity of community growth and development, and to perform functions of community and regional planning that fall within their jurisdictional and statutory authority. Conversely, school districts are “special-purpose” government entities, whose role is to coordinate with city and county agencies, and react appropriately to the service demands generated by the growth and development policy decisions of general-purpose governments. State statutes, particularly ORS 195.110, define the City’s role and responsibilities in the required facilities planning of large (defined by ORS 195.110 as having more than 2,500 students) school districts.

A school district’s estimates of future enrollment and school needs are based on the district’s forecasted student population, including in its urban and rural areas. Both Medford 549C and Phoenix–Talent school districts have developed enrollment projections utilizing a variety of information, including population and residential development forecasts. These school districts also coordinate with the City of Medford and Jackson County, utilizing land use studies and adopted plans to better evaluate ways to ensure the timely development of new schools.

The identification of locations for new public schools is an important function of any facilities plan adopted by a school district. The need for new schools is closely related to residential development and the various housing densities within the community. It is

important that new schools be located with reference to development patterns planned in the local jurisdictions' (cities and counties) adopted comprehensive plans.

ORS 195.110 Facilities Plan, Summary

ORS 195.110 requires a city and/or county containing large school districts to include, as an element of its comprehensive plan, school facilities plans prepared by the districts in consultation with the affected city and county. (Both the Medford 549C and Phoenix–Talent school districts are considered “large school districts”.)

Facilities plans submitted by a district must cover a period of at least 10 years and must include the following elements:

- Population projections by school age group.
- Identification by the city or county and the large school district of desirable school sites.
- Descriptions of physical improvements needed in existing schools to meet the minimum standards of the large school district.
- Financial plans to meet school facilities needs, including an analysis of available tools to ensure facilities needs are met.
- Analysis of:
 - The alternatives to new school construction and major renovation; and
 - Measures to increase the efficient use of school sites, including multiple-story buildings and multipurpose use of sites.
- Ten-year capital improvement plans.
- Site acquisition schedules and programs.

Large school districts must identify in their school facilities plans, school facilities needs based on population growth projections and land use designations contained in the city's and/or county's comprehensive plan. Facilities plans must provide an analysis of the land inside the UGB that is suitable, as a permitted or conditional use, for school facilities required for the 10-year period covered by the plan. If a large school district finds that there is an inadequate supply of suitable land for facilities for the 10-year period, the city or county, or both, and the district must cooperate in identifying land for school facilities and take necessary actions, such as adopting appropriate zoning, aggregating existing parcels in separate ownership, or adding one or more sites designated for school facilities to a UGB pursuant to applicable law.

Educational Service Standard

Overcrowding of classrooms is an important factor affecting a school's ability to provide quality educational services. The measurement most often used as a level of service standard is the ratio of students per classroom. Students per classroom is suggested as the level of service measurement for schools because (1) it is easily understood as a measure of facilities capacity, (2) it is frequently used as a workload barometer in

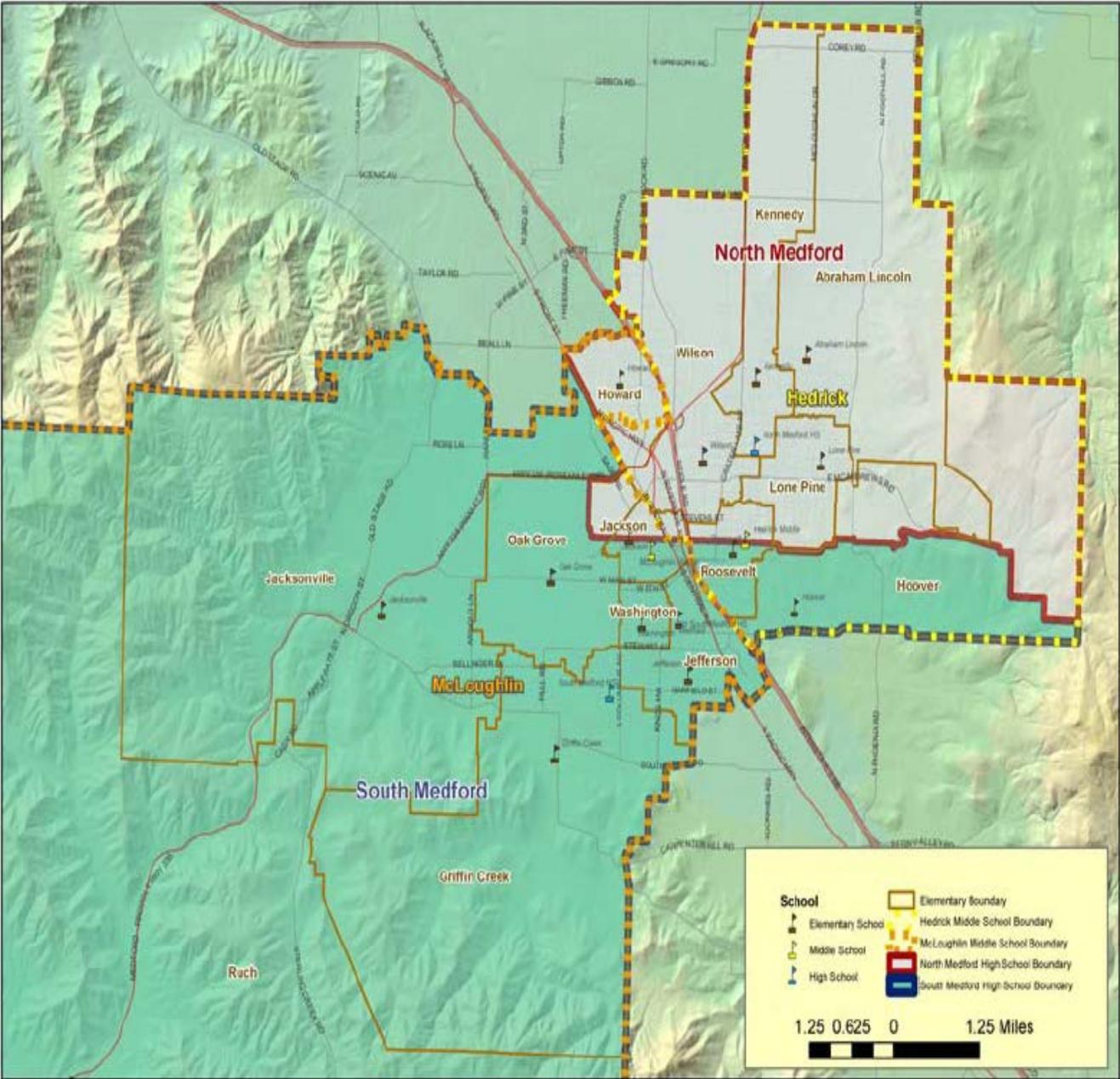
teacher contracts, and (3) analyses of schools often use class size as an indicator of educational quality and facilities adequacy. Both Medford 549C and Phoenix–Talent School Districts have adopted similar level of service educational standards:

Schools Table 1: Educational Level of Service Standard

Grade Level	Average Students per Classroom
K–3	25
4–6	30
7–8	32
9–12	32

Source: Medford 549C School District Long Range Facilities Plan Update – August 11, 2014

Schools Figure 2: Medford School District 549C Boundaries



Source: Medford 549C Long Range Facilities Plan Update –August 11, 2014

Medford 549C School District

The Medford 549C School District is the largest school district in Jackson County. The District enrollment for the 2013–14 school year is 13,547 students. The district’s geographic area includes approximately 370 square miles, extending from the southwest corner of the County to approximately three miles northeast of the City of Medford. Communities within the district include unincorporated Ruch, all of the City of Jacksonville, most of the City of Medford, a portion of the City of Central Point, and the rural areas in between.

The Medford 549C School District adopted its current Long Range Facilities Plan in August 2014. The plan is divided into eight chapters that serve to meet the specified components required by ORS Section 195.110, and which include the following:

- District Planning
- District Educational Program Standards
- Facilities Inventory
- School Capacity
- Enrollment Projections

Facilities Needs

- Capital Facilities Financing
- Conclusions and Recommendations

District-Wide Enrollment Forecast

The Medford 549C School District Facilities Plan projects an average of 2.3% district-wide annual student enrollment growth over its first 10 years (2011–2020), and a growth in student enrollment of 1.4% over the following 10 years, through the end of the planning horizon (2021–2030). This is an average of 1.8% over the entire forecast period, adding approximately 4,500 students through the year 2035. This translates to 2,470 more elementary school students, 655 more middle school students, and 1,360 more high school students under the current grade distribution. However, these increases are not forecasted to distribute evenly across the district. Schools near vacant residentially-zoned land are forecasted to have the largest marginal increases in population and will exceed the existing capacity soonest.

Enrollment Forecast by School

The following table details the forecasted growth of each school, except the enrollment for Central High School.

Schools Table 2: Enrollment Forecast by School, Medford School District

Enrollment Forecast by School, Medford School District																
<i>From Demographic and Enrollment Forecasts Johnson Reid, December 2011</i>																
School	ACTUAL ENROLLMENT							FORECAST ENROLLMENT								
	2005	2006	2007	2008	2009	2010	2011	2015	2020	2025	2030	2011-2020 Δ	AARG	2020-2030 Δ	AARG	
North Schools																
Wilson	572	540	547	559	565	485	485	447	417	433	442	-68	-1.7 %	25	0.6 %	
Hoover	484	487	468	521	560	638	603	782	935	1,056	1,115	322	4.3 %	179	1.8 %	
Lone Pine	558	547	569	547	532	537	564	650	706	743	759	142	3.1 %	52	0.7 %	
Kennedy	547	547	587	561	555	515	519	566	624	658	673	105	2.2 %	49	0.8 %	
Roosevelt	385	404	354	372	368	407	406	416	435	458	469	29	0.7 %	34	0.8 %	
Lincoln	525	543	524	510	475	466	449	510	581	652	689	132	2.5 %	107	1.7 %	
Hedrick	956	930	922	935	894	908	894	917	1,109	1,153	1,249	215	2.2 %	139	1.2 %	
North Medford	1,941	1,877	1,890	1,759	1,757	1,775	1,734	1,884	2,039	2,224	2,431	305	1.6 %	392	1.8 %	
South Schools																
Griffin Creek	560	550	538	599	562	593	580	704	835	951	1,008	255	3.9 %	174	1.9 %	
Oak Grove	455	538	514	500	474	471	492	571	693	820	877	201	4.4 %	185	2.4 %	
Jacksonville	401	366	361	361	325	391	400	459	528	597	630	128	3.4 %	103	1.8 %	
Jefferson	543	526	549	542	542	495	505	580	617	631	637	112	2.5 %	20	0.3 %	
Jackson	380	373	320	309	317	388	394	445	489	519	532	95	2.6 %	43	0.9 %	
Washington	443	421	439	413	405	420	443	488	515	527	534	72	2.3 %	19	0.4 %	
Howard	549	544	531	535	501	547	501	563	637	682	701	136	1.7 %	64	1.0 %	
Ruch	191	199	214	174	197	171	176	147	120	132	139	-56	-3.9 %	19	1.5 %	
McLoughlin	882	837	866	919	895	837	789	864	1,071	1,123	1,236	282	2.8 %	165	1.4 %	
South Medford	1,887	1,920	1,920	1,833	1,777	1,804	1,821	1,838	2,019	2,221	2,447	198	1.3 %	428	1.9 %	
K-6	6,593	6,585	6,515	6,503	6,378	6,524	6,517	7,329	8,131	8,859	9,206	1,614	2.5 %	1,075	1.2 %	
7-8	1,838	1,767	1,788	1,854	1,789	1,745	1,683	1,782	2,180	2,277	2,485	497	2.9 %	305	1.3 %	
9-12	3,828	3,797	3,810	3,592	3,534	3,579	3,555	3,722	4,058	4,445	4,878	503	1.5 %	820	1.9 %	
Total	12,259	12,149	12,113	11,949	11,701	11,848	11,755	12,833	14,369	15,581	16,569	2,614	2.3 %	2,200	1.4 %	
															4,814	1.8 %

School Capacity

School conditions and capacity in 2013 were inventoried as part of school district facilities planning. Then, combined with the population forecasts, a forecast was developed projecting what year school population might exceed the capacity of each school. The following tables provide the 2013 school facilities capacity and the projected 2020 school facilities capacity. The Table 4 figures are adjusted to allocate for space requirements for partnerships and district programs.

Schools Table 3: Overall School Facility Capacity, Medford 549C District

Schools	Teaching Stations	Permanent Capacity	Oct 2013 Enrollment	Available Capacity
Elementary Schools	330	7,714	6,746	968
Middle Schools	86	2,339	1,789	550
High Schools	176	4,787	3,714	1,073
Total Available Capacity	592	14,840	12,249	2,591

Total enrollment does not include chartered schools because Medford School District does not provide or manage the facilities for these schools.

Schools Table 4: Projected School Facility Capacity 2020 – Medford 549C District, K–6, 7–8, 9–12 Configuration

Schools	Adjusted Teaching Stations	Adjusted Permanent Capacity	Projected 2019/2020 Enrollment	Change in Capacity
Elementary Schools	309	7,224	7,450	-226
Middle Schools	85	2,312	2,105	+207
High Schools	176	4,787	4,227	+560
Capacity	576	14,323	13,782	541

Facilities Needs

As of 2014, public school facilities within the Medford 549C School District were adequate to meet the needs of the community. However, the adopted Medford 549C School District Facilities Plan indicates a need for at least one additional elementary school by 2024. The enrollment forecast, using the year 2011 grade configuration, results in the need for at least one elementary school, with a likelihood of needing two by 2020.

Future School Site Options

MD-2 Property: The District has a Letter of Intent for a land donation of 20 acres located within an adopted Urban Reserve Area near Coker Butte Road and Springbrook Road. The property is located in the city's urban reserve and might be adopted into the Urban Growth Boundary in the near future. The location of this property meets the District's requirements for future school sites as established in the School Facilities Plan's site selection criteria. This property is large enough to fit either a future elementary or middle school.

The District desires to cooperate with the City and landowners to bring the property into the urban growth boundary to provide additional capacity to meet further growth needs. An amendment to the existing urban growth boundary must be mutually reviewed and approved by the City and County and acknowledged by the State. The procedure would include a comprehensive plan amendment and zone change so that the site will be appropriately zoned.

Property Purchase: The District should also consider purchasing land to meet the need for future school sites. The cost for a 10-acre plot to meet the standard for an elementary school within the existing Urban Growth Boundary would range between \$500,000 and \$1,000,000. The cost for a 20-acre lot to meet the recommended middle school standard within the Urban Growth Boundary would range between \$1,000,000 and \$2,000,000. Property located in the Urban Growth Boundary to meet future land needs is becoming more difficult to locate. Property located in the Urban Reserve to meet future land needs could be purchased at a lower cost but will still need to be incorporated into the Urban Growth Boundary.

This City has designated a future elementary school site on the Southeast Area Plan Map in a planned residential area to the east of North Phoenix Road and north of East Barnett Road. Although the site has not been acquired by the District, the Southeast Plan provides for notification to and coordination with the District through a required Planned Unit Development review process as the area is built out.

Hull Road Property: The owners of property on Hull Road had pledged to gift to the District a 20-acre school site on the southwest quarter of their property. The initial agreement to work through a process to potentially accept the gift expired in 2012. The District and the Hull Road property owners have since amended the initial agreement to extend through January 1, 2020. The Hull Road property is located outside of the Urban

Growth Boundary and Urban Reserve and, as such, is currently viewed by the District as a potential long-range option for a school site. The property would need to be included within the City of Medford's Urban Growth Boundary before the property could be utilized as a school site. To include this site within the UGB, amendments to the City's Comprehensive Plan and the Bear Creek Valley Regional Plan would need to be mutually reviewed and approved by the City and County and acknowledged by the State.

Evaluating Potential School Sites

In evaluating potential sites, many factors must be considered, including health and safety, location, accessibility, environment, physical characteristics (soil and topography), acquisition and development costs (including utilities), and coordination with local comprehensive plans. The criteria adopted by the Medford 549C School District outlined in the following table from the Facilities Plan are intended to select sites that provide for both a safe and supportive environment for students.

Medford School District School Site Selection Criteria

Location

- Allows for efficient and logical school area boundaries (students within the enrollment area live within one-half mile of an elementary school, one mile of a middle schools, or 1.5 miles of a high school)
- Proximate to residential neighborhoods
- Safe walking areas can be provided
- Multiple street approaches available (three frontages ideal)
- Ability to maintain at least a 200-foot setback from nearby farm and forest practices
- Favorable orientation

Safety

- If near arterial roadways, elementary school sites must maintain sufficient setbacks to be conducive to a good learning environment
- These factors must be avoided:
 - Within 1,500 feet of railroad tracks
 - Within Airport Approach overlay zone
 - Crossed by high-voltage (500 KV) power lines
 - Close to high-pressure lines, such as natural gas, gasoline, sewer, or water
 - Contaminants/toxics in the soil or groundwater, such as from landfills, chemical plants, refineries, fuel tanks, nuclear plants, or agricultural use of pesticides or fertilizer
 - Close to high-decibel noise sources
 - Close to open-pit mining
 - On or near a fault zone or active fault
 - In a dam inundation area or 100-year floodplain

- Social hazards in the neighborhood, such as high incidence of crime or drug or alcohol abuse

Environment

- Has a variety of trees and plants or a wooded area for use in education programs such as biology or outdoor learning
- Free from sources of noise that may impede the instructional process
- Free from air, water and soil pollution
- Provides aesthetic view from and of the site
- Environment compatible with the educational program

Soils

- Proximate to faults or fault traces
- Unstable subsurface and bearing capacity
- Danger of slides or liquefaction
- Positive drainage

Topography

- Generally level
- If flat site unavailable, choose site with minimum need for major excavation
- Rock ledges or outcroppings
- Surface and subsurface drainage
- Level area for playfields

Size and Shape

- Length-to-width ratio does not exceed 2:1
- Sufficient open play area and open space
- Potential for expansion for future needs
- Area for adequate and separate bus loading and parking

Accessibility

- Obstacles such as crossings on major streets and intersections, narrow or winding streets, heavy traffic patterns
- Access and dispersal roads
- Natural obstacles, such as grades or gullies
- Access for bus transportation
- Routing patterns for foot traffic
- Remote areas (with no sidewalks) where students walk to and from school
- Easily reachable by emergency response vehicles

Public Services

- Available and feasible at time of construction
- Fire and police protection, including fire water lines

Cost

- Reasonable costs for purchase of property, severance damages, relocation of residents and businesses, and legal fees
- Reasonable costs for site preparation, including, but not limited to, drainage, parking, driveways, removal of existing buildings, and grading
- Reasonable costs for environmental mitigation
- Reasonable maintenance costs

Availability

- On the market for sale or likely to be available
- Title clearance – unencumbered
- Condemnation of buildings and relocation of residents to be avoided

SCHOOLS—CONCLUSIONS

1. For public primary and secondary education, the Medford 549C and Phoenix–Talent school districts serve the City of Medford, its Urban Growth Boundary, and its Urban Reserves.
2. Funding for public primary and secondary schools comes primarily from state income taxes and state lottery proceeds (50%), local property taxes (35%), and the federal government (15%). In addition, both the Medford 549C and Phoenix–Talent school districts now collect a construction excise tax via the City of Medford in accordance with Oregon Statutes to help pay for school facilities. (ORS 320.170 authorizes school boards, in cooperation with cities and counties, to tax new residential and non-residential development.)
3. Through continuing analyses of changes in demographic trends and in geographic demands for various types of school facilities, and through coordination with local governments such as the City of Medford, school districts can keep pace with the changing demand for the facilities and services they provide.
4. The location and design of school facilities can affect neighborhood formation and traffic patterns.
5. Upon review of the enrollment forecasts (which uses the current (2013) grade configuration) and the analysis from the Medford School District 549C Long-Range Facilities Plan, August 11, 2014 Update, the City of Medford concurs with District findings that Medford 549C School District school facilities are adequate to meet District short-term needs, but acknowledges the need for at least one additional elementary school by 2024.
6. Upon review of the facility inventory and analysis in the Medford School District 549C Long-Range Facilities Plan, August 11, 2014 Update, the City of Medford

concur with District findings that there is an inadequate supply of suitable land under Medford School District 549C ownership to meet the identified long-term needs of the student population.

7. Medford's adopted Southeast Plan identifies a general location for a future Medford 549C School District school on the east side within the Medford City limits.
8. Medford School District 549C has, through a donation, obtained rights to property located southeast of the intersection of Bellinger Avenue and Hull Road, which is outside of Medford's Urban Growth Boundary and Urban Reserve. The initial agreement to work through a process to potentially accept the land donation expired in 2012. The District and the Hull Road property owners have since amended the initial agreement to extend through January 1, 2020. The Hull Road is currently viewed by the District as a potential long-range option for a school site because the property is located outside of the Urban Growth Boundary and Urban Reserve. The property would need to be included within the City of Medford's Urban Growth Boundary before the property could be utilized as a school site.
9. Upon review of the School District's site selection criteria and the characteristics of each of the potentially suitable school sites in the UGB, the City understands but does not concur with District findings that none of the potential sites inside the UGB are suitable to meet District needs for future west-side schools.
10. The City of Medford does not concur with the Medford 549C School District's finding that the Hull Road property from the *Medford School District 549C Long-Range Facilities Plan, May 15, 2012 Update* is a desirable west side school location. A determination that the Hull Road property is a desirable location for a west side school(s) cannot be rendered by the City of Medford at the present time. Such a determination can be made by the City only after an "alternatives analysis" of land within and outside the Urban Reserve based on the "priority of land scheme" and the land use decision process in Oregon Urban Growth Boundary (UGB) expansion laws and rules are conducted.

The Greater Bear Creek Valley Regional Plan, Chapter 5, Monitoring and Implementation (Section 5.1.2), provides that UGB expansion into land not designated as an Urban Reserve will require a Regional Plan Minor or Major Amendment prior to or concurrent with any other process. By Section 5.2.4, the 80-acre Hull Road property would be deemed a Major Amendment. Processing amendments to the adopted Regional Plan are the responsibility of Jackson County and can only be proposed by the governing authority of a participating Regional Plan jurisdiction. Approval of a Major Amendment to the Greater Bear Creek Valley Regional Plan is also subject to providing corrective measures and plan adjustments per Section 4.4 of the Regional Plan. The City might concur with the suitability of the Hull Road property only after a 'Major' Amendment to

the Regional Plan was adopted and associated corrective measures were approved by the appropriate approving authorities.”

In addition, any consideration by the Medford 549C School District to bring the Hull Road property into the City’s UGB runs directly counter to the City’s long-established plan for its growth. After lengthy deliberations and public hearings by both the Planning Commission and the City Council, the City decided that it would not plan to expand into the Exclusive Farm Use (EFU)-zoned land to the west of its current UGB. For the City, this decision is fundamental to its compliance with the Statewide Planning Goals that seek to deter the expansion of urban development into immediately adjacent agricultural land.

11. Future inclusion of a school district’s desirable school site(s) within the City’s growth boundaries will require that all applicable state, regional, county, and city land use regulations, as may be in effect at the time, are fully met.
12. Additional work with the Phoenix–Talent School District is needed towards the development and adoption of a long-range facilities plan into the City of Medford Comprehensive Plan Public Facilities Element.

The following Phoenix–Talent School District-adopted documents were previously provided by the District.

- a. Phoenix–Talent School District Daily Class Load Policy, 2/3/83 (adopted).
 - b. Phoenix–Talent School District Class Size Policy, 2/3/83 (adopted).
 - c. Phoenix–Talent School District enrollment summaries, 10/1/98.
 - d. Phoenix–Talent School District Map, Jackson County GIS Files, 1/1/99.
13. The Phoenix–Talent School District has acquired an 11.7-acre site at the northeast corner of North Phoenix Road and Coal Mine Road for the future construction of elementary school facilities, which will accommodate district students residing in the Southeast Area, south of Barnett Road.

SCHOOLS—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To support excellent public education for Medford’s citizens.

Policy 1-A: The City of Medford hereby adopts by reference the District-adopted Medford School District Long-Range Facilities Plan, August 11, 2014 Update, along with Appendices. [A complete copy of the referenced document, along with appendixes and supplemental appendix, is on file in the Medford Planning Department.]

Policy 1-B: The City of Medford will cooperate with Medford 549C School District and Phoenix–Talent School District in providing public improvements and services needed to support adopted educational programs.

Implementation 1-B-1. Provide a section of the Comprehensive Plan which:

- (a) Describes how the City will involve the school districts in comprehensive planning, including plan amendments and amendments to land use regulations; and,
- (b) Describes the responsibilities of the school districts in comprehensive planning, including plan amendments and amendments to land use regulations affecting provision of education services; and,
- (c) Establishes the role and responsibilities of the City and the school districts with respect to approval of new development; and,
- (d) Establishes the role and responsibilities of the City with respect to school district interests regarding matters such as public facilities, capital facilities and real property, and rights-of-way and easements.

Implementation 1-B-2. Continue meeting and conferring with the Medford 549C and Phoenix–Talent school districts to accomplish the planning required by Oregon Revised Statutes for local government planning coordination, and, in particular, with the Phoenix–Talent School District towards the development and adoption of a long-range facilities plan into the City of Medford Comprehensive Plan Public Facilities Element.

Implementation 1-B-3. Cooperate in identifying land suitable for school facilities when a school district determines that there is an inadequate supply of land for the 10-year period covered by the adopted school facilities plan, and take necessary actions, including, but not limited to, adopting appropriate zoning, aggregating existing parcels in separate ownership, or adding one or more sites designated for school facilities to the Urban Growth Boundary, pursuant to applicable law.

Implementation 1-B-4. Continue to cooperate in collecting a construction excise tax in accordance with Oregon Statutes to help pay for school facilities.

Implementation 1-B-5. Provide notice to school districts when considering a proposed plan, amendment, or development that may impact school capacity.

Implementation 1-B-6. If a school district adopts objective criteria in its school facilities plan to be used by the City to determine whether adequate capacity exists to accommodate projected development, utilize those criteria for purposes of evaluating applications for comprehensive plan amendments or residential land use regulation amendments. [Note: Per the Oregon Revised Statutes, the City may deny a residential

development application based on a lack of school capacity only if the issue is raised by the school district, the lack of school capacity is based on a formally adopted school facilities plan and the City has considered options to address school capacity.]

Implementation 1-B-7. Work with school districts to identify barriers and hazards to children walking or bicycling to school and to develop plans for funding improvements designed to reduce such barriers and hazards.

Goal 2: For Medford's public and private educational facilities to be positive community assets.

Policy 2-A: The City of Medford shall discourage the location of primary and secondary schools in or next to industrial zoning districts or the Airport.

Policy 2-B: The City of Medford shall encourage secondary schools or higher education facilities over 10-acres in size to be located on at least one higher order street.

Policy 2-C: The City of Medford shall encourage public school districts to allow community use of school facilities when the use does not conflict with the primary use of the facility and student safety.

Goal 3: Promote ongoing partnerships with public, private and alternative educational providers in Medford to deliver varied life-long learning opportunities.

Policy 3-A: The City of Medford shall support life-long learning and training programs with high schools, the community college, and the university.

8.4.6 HEALTH SERVICES

INTRODUCTION

The City of Medford is recognized as a regional health service center, serving several counties from around southern Oregon and northern California and a population base exceeding 500,000. As a regional health service center providing general and specialized care, Medford has become a destination for those seeking temporary and long-term health care treatment.

The quality and abundance of health care facilities and services available locally has been an important factor in attracting an increasing population of persons choosing to relocate and/or retire to the Medford area. As this trend continues it is important for local general-purpose governments, such as the City of Medford, to plan its public facilities and services accordingly. Efforts must be made to adequately provide for transportation, utilities, and other public facilities and services needed to support health care facilities within the Urban Growth Boundary, consistent with their growth requirements.

EXISTING FACILITIES

There are two hospitals in the Medford area, providing medical, surgical, obstetrics, pediatric, psychiatric, and critical care facilities.

Providence Medical Center (PMC)—Fully accredited community hospital is a licensed 153-bed acute-care facility composed of more than 375 physicians, 800 employees, and 350 volunteers. In addition to inpatient and outpatient services, surgery, and clinical services, Providence also offers the community a variety of other services including education, hospice, adult day health care, transportation, and home health programs.

Rogue Valley Medical Center (RVMC)—Fully accredited and licensed not-for-profit 305-bed facility has 300 physicians on staff, representing nearly all specialties and sub-specialties. RVMC is the largest, most comprehensive regional medical facility between Eugene, Oregon, and San Francisco, California. RVMC serves the health care needs of more than 500,000 individuals throughout southern Oregon and northern California.

LEVEL OF SERVICE

While national guidelines for levels of service exist, they tend to focus on occupancy rather than a ratio of beds per thousand population. For hospitals over 4,000 admissions per year, such as PMC and RVMC, the national guidelines allow an occupancy standard of 80 percent, or 75 percent for hospitals with fewer admissions. The latter situation is

most often found in small and rural hospitals. The selection of a specific occupancy standard is a judgment to be made by each community. Occupancy rates at PMC and RVMC average 80 percent. Lower occupancy rates mean greater scheduling convenience for doctors and patients, but there is a tradeoff to be made in terms of reduced efficiency and therefore higher costs.

With two hospitals within Medford’s Urban Growth Boundary, health care facilities and services are adequately accommodated presently and for some time into the future. The City of Medford and the health care institutions located within the urban area should continue to work together to address public facilities and services needed to accommodate future comprehensive health services.

HEALTH SERVICES—CONCLUSIONS

1. Medford is the regional center for health services for southern Oregon and a portion of northern California.
2. The presence of high quality health care facilities influences people’s decisions to visit and relocate to the Medford area.
3. Health services in the Medford planning area appear to be adequate for the present and into the foreseeable future.
4. Health care institutions, local jurisdictions, and the communities they represent are best served when they participate together in planning for future public facilities and services.

HEALTH SERVICES—GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal 1: To support the provision of adequate health services and facilities to meet the needs of the people within the Medford Urban Growth Boundary and the region.

Policy 1-A: The City of Medford shall strive to provide transportation, utilities, and other public facilities and services needed to support health care facilities within the Urban Growth Boundary, consistent with the health care facilities’ growth requirements.

Policy 1-B: The City of Medford shall encourage cooperation among local, state, federal, and private agencies in planning and providing for health and related social services.

Policy 1-C: The City of Medford shall encourage the development and/or expansion of health services to meet regional as well as local needs.