Chapter 3: Forecast of Future Needs

Forecasting future need sounds easy enough in concept. But what steps need to be included? This chapter considers the major components of estimating what the future need will be in order to be consistent with the Land Use Element and other chapters of the comprehensive plan.

With the full picture from the inventory, along with identification of needs through the planning horizon and an estimate of those costs, jurisdictions can then use information flowing from visioning, through planning to implementation, budgeting, and project development to evaluate success in providing capital facilities and services over time. On an on-going basis the information can be used back through review and evaluation into visioning.

WAC 365-916-415 (b) recommends the following:

1. Counties and cities should forecast needs for capital facilities during the planning period, based on the levels of service or planning assumptions selected and consistent with the growth, densities and distribution of growth anticipated in the land use element. The forecast should include reasonable assumptions about the effect of any identified system management or demand management approaches to preserve capacity or avoid the need for new facilities.
2. The capital facilities element should identify all capital facilities that are planned to be provided within the planning period, including general location and capacity.

3. Counties and cities should identify those improvements that are necessary to address existing deficiencies or to preserve the ability to maintain existing capacity.

4. Counties and cities should identify those improvements that are necessary for development.

5. Counties and cities may identify any other improvements desired to raise levels of services above locally adopted minimum standards, to enhance the quality of life in the community or meet other community needs not related to growth such as administrative offices, courts or jail facilities. Counties and cities are not required to set level of service standards for facilities that are not necessary for development. Because these facilities are not necessary for development, the failure to fund these facilities as planned would not require a reassessment of the land use element if funding falls short as required by RCW 36.70A.070 (3)(e).

Developing Demand Forecasts from the Land Use Element
A local government cannot determine what it will need in the future for public facilities and services without knowing what levels of service it has to meet.\(^1\) If the existing plan includes adopted LOS standards, these standards should then be applied to additional population and employment growth anticipated. If the existing plan does not include adopted LOS standards, consult other sources, such as in functional plans. Ideally, the capital facilities element defines capital facilities and services, identifies which ones are necessary to support development, and clearly states the adopted LOS for those necessary to support development.

Kitsap County’s Final Capital Facilities Plan Update\(^2\), dated August 2012, is a good example of a county documenting its current inventory, its level of service capacity analysis, and its capital projects and funding. In the plan the County provides the analysis for public buildings, fire protection, law enforcement, parks and recreation, sanitary sewer, schools, solid waste, stormwater, transportation, and water. The plan forecasts revenues by source and identifies the assumptions used in the plan.

To help set level of service standards and forecast need, consult resources from other agencies. For example, the Washington State Department of Health has guidance related to Safe Drinking Water. These resources help identify any requirements of related potential funding sources. A careful review allows local governments to address applicable requirements in the planning work, potentially streamlining funding and construction work later.

\(^1\) See Wilma et al v Stevens County, Case No. 06-1-0009c, FDO, page 23.
Agencies with guidance or funding resources:
Department of Health – Drinking Water
Department of Ecology – Water, Water Quality, Wastewater Treatment, Stormwater
Recreation and Conservation Office - Recreation and Conservation Office
Public Works Board – Financial Assistance Options
Public Works Board – Technical Assistance Services
Community Economic Revitalization Board – CERB Core Programs
Department of Commerce - Community Development Block Grant

Developing and Using Levels of Service
Using an adopted Level of Service (LOS) standard is the key to determining what improvements will be needed and ensuring that the level of facilities and services the public expects will be provided and funded.

How to use LOS
A Level of Service Standard (LOS) is a locally-determined level, adopted in the comprehensive plan, that informs the public, developers, and decision-makers about the quality or quantity of a facility or service that will be maintained as growth occurs. An example may be based on quantity, such as a certain amount of park acres per 1,000 persons of population. Alternatively, it may be qualitative, such as a level of transportation delay (traffic congestion) that is deemed acceptable in commercial areas or residential neighborhoods. Some jurisdictions have also selected measurement to ensure consistent access to facilities across geographic areas, such as having a park (neighborhood, community, or regional) within a certain distance of every residence within the urban growth area. Ultimately LOS is a tool to evaluate the provision of services and facilities.

For example, Thurston County sets its LOS for parks at 3.5 acres of park lands per 1,000 persons of resident population. Its plan states:

“"It requires an understanding of current conditions relative to future needs, an assessment of various types of capital facilities that could be provided, analysis to identify the most effective and efficient facilities to support the needed service, and addressing how the facilities will be financed."”

Based on the adopted parks LOS and projected population growth, the county determined it will need 878 acres of park lands by the year 2017. Having 288 acres currently, the county notes it will need an increase of 590 acres of park lands to meet its LOS by 2017.

LOS is used for the types of facilities and services a community determines are necessary to support development. Counties and cities are not required to set LOS standards for facilities that are not necessary for development. Counties and cities should forecast needs for

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4 See WAC 365-196-415(2)(b)(ii)(C)
capital facilities during the planning period based on the LOS, consistent with the growth, densities, and distribution of growth anticipated in the land use element.

**How to address tribal or private facilities (schools, parks, etc.) for their contributions**

Addressing tribally-owned or privately-owned facilities, such as private schools or parks or tribal infrastructure, and how they contribute to meeting the LOS of the local government, may be of importance to certain jurisdictions. When that is the case, the facilities and services should be factored in to the jurisdiction’s inventory as well. In such cases it will be important to identify the assumptions used in calculating LOS. The GMA only requires capital facilities planning for publically owned facilities. However, local governments may choose to document how or if these other facilities were factored in to the LOS adopted. It would be important information to disclose as some private facilities could be sold or modified to the extent that changes to the LOS or Capital Facilities Plan may be needed by the county or city.

Thurston County notes that “parklands to be acquired will be focused on meeting specific needs for the types of park facilities, not met by other jurisdictions and/or the private sector.”

**Identifying unserved or under-served areas**

Part of identifying and forecasting future needs is planning to correct any existing deficiencies or problems. This may include areas of weakness within an existing system for an area that does not achieve the adopted LOS. These could be areas that need improvements to address stormwater, domestic water, or other type of infrastructure. Something to keep in mind is obtaining the LOS for all areas; unserved or under-served areas should be brought up to the minimum standard enjoyed by the rest of the community. This can demonstrate equity between neighborhoods but can also serve as a tool to document and demonstrate how all portions of the community will be brought up to current standards. It is also important to check existing capacity levels to determine how much more growth can be supported until major replacement or upgrade improvements to the infrastructure are needed. If an area has excess capacity, that additional capacity can be a strong incentive for infill or revitalization as well as being a good financial decision for the jurisdiction. However, this can also work in the reverse, where a facility is sized to meet future estimated growth. If the growth does not occur, the facility may not be able to function optimally, for example.

Identifying deficiencies could also include improvements to existing developed areas that don’t meet current LOS standards, such as for fire flow, sidewalks, neighborhood parks, or emergency services (e.g. fire station or police substations). It can be especially challenging to provide infrastructure at LOS standards across large geographic boundaries. Local governments should strive for such and seek to bring underserved areas up to LOS standards.

The City of Olympia’s CFP includes a Location Detail Report that lists capital facilities projects by the geographic areas within the city. This provides information to citizens and council
members about the projects occurring city-wide and how many projects are located in distinct areas of the city.

The City of Goldendale applied for and received grant money in 2009 through the state Community Development Block Grant (CDBG) Program to replace and upgrade infrastructure, bring streets and pedestrian crossing up to current standards, and address stormwater issues for a portion of the city that met certain income criteria. Although funded through a competitive grant, they also used local funds to leverage CDBG funding to bring several blocks up to current standards and make system improvements to the water and sewer infrastructure.

In a similar effort, the City of Walla Walla was awarded a 2011 CDBG General Purpose Grant to help replace a deteriorated roadway, add sidewalks and provide fire protection services to a neighborhood. Major components of the project included replacing approximately 3,600 feet of roadway and sidewalk and installing five fire hydrants in conjunction with a larger project to replace sewer and water mains in the neighborhood.

The City of Kennewick puts its financial reports on the city’s website so citizens can see the current financial condition of the City's sewer, water, and other urban services. Information is provided in both a layman's report (called the popular annual financial report) and a detailed accountant-style report (called the financial report).

**Determining what is necessary for development**
Population and employment growth as well as fiscal constraints can impact provision of facilities and services. It is important to identify in the comprehensive plan which facilities and services the county or city deems as necessary to support development. These are the facilities and services that will need an adopted LOS and could be subject to locally adopted concurrency provisions.\(^5\) It is important to note that transportation facilities are subject to concurrency requirements, while for other facilities it is optional to have concurrency requirements. For more information regarding transportation planning under the GMA, including currency, please see Commerce’s Guidebook “Your Community’s Transportation System: A Guide to Reviewing, Updating and Implementing Your Transportation Element.”

**Determining what facilities are necessary for growth**
In some cases a jurisdiction may know capacity needs to be expanded for certain facilities, but may not know how much expansion is needed. In such cases additional study will be necessary. For example, public administration space may be needed. In order to determine how much is needed, the county or city may want to set aside funding for a space analysis or needs study. Such a study should also consider consolidation of services (e.g. combining the library with city administration offices, or placing development review departments in one building). Considerations may show that consolidating services will have additional positive impacts, such as customer service or physical operation improvements.

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\(^5\) Concurrency provisions are only required for certain transportation facilities (see RCW 36.70A.070(b)) but are allowed for other capital facilities and services.
Determining which facilities are needed to support growth includes anticipating need created from the goals and policies included in the rest of the comprehensive plan such as new population growth and housing targets, patterns of development, need for additional stormwater infrastructure, and on-going operation and maintenance of new or assumed facilities (such as infrastructure in an area recently annexed or proposed to be annexed).

If a jurisdiction directs the majority of growth to urban growth areas, and facilitates strong infill development and redevelopment patterns, that jurisdiction will have significantly different facility and service needs than a jurisdiction that has an urban growth area with several or large undeveloped and unserved vacant lands to be developed at lower densities in a wider footprint.

Some of how growth causes the increased need for capital facilities and public services is related to the increase in the number of people (population and employment growth). Some if it is related to expansion of the footprint of the urban area (geographic growth). This distinction is central to managing infrastructure costs.

In the December 2012 report, Smart Growth and Economic Success: Benefits for Real Estate Developers, Investors, Businesses and Local Governments, the EPA states:

> Extensive research has found that compact development patterns, higher density, mixed uses, and other characteristics of smart growth development can reduce the costs of providing public infrastructure and delivering services.\(^6\)

The Halifax Regional Municipality prepared a preliminary report on Settlement Pattern & Form, including a service cost analysis for seven different settlement patterns. The development patterns included rural, suburban, and urban densities. For each of these settlement patterns they estimated costs for services such as roads, curbs and sidewalks\(^7\), solid waste, libraries, parks, police, fire, school bussing, governance, transit, water, and stormwater. Such an exercise can demonstrate the costs associated between various growth scenarios. In their analysis, the estimated costs for provision of the services considered varied between $5,240 (rural, low density) to $1,416 (urban, high density) per household.

Once the capital facilities inventory is complete and the adopted LOS for the facilities and services necessary to support development have been set, analysis can begin on determining which facility and service improvements will be needed to support growth. This may be as simple as determining how many more acres of park lands will be needed to meet your adopted LOS. For example, if your LOS is to have five acres of parks per 1,000 persons of population, you can divide the projected population at the end of the 20-year planning

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\(^6\) Smart Growth and Economic Success: Benefits for Real Estate Developers, Investors, Businesses and Local Governments, pg. 4.

\(^7\) Provision of curbs and sidewalks was not included for the rural categories.
horizon by 1,000 and then multiply by five to determine how many acres of park will be needed. Next, subtract the number of existing acres in parks. The result is how many additional acres of parks are needed to meet the adopted LOS. If your LOS for parks is more specific with a certain percentage of that park acreage for passive recreational purposes or a certain percentage to meet regional park needs, then further analysis will be required to ensure you are meeting your LOS for specific types of parks.

In Table 1 of Skagit County's 2014-2019 Capital Facilities Plan, the county clearly identifies LOS standards and services necessary to support development. The county provides for an urban level of service to accommodate its non-municipal urban growth area of Bayview Ridge.

The City of Tacoma has an adopted LOS for water\(^8\) of 442 gallons per day per Equivalent Residential Unit (ERU) and/or as contained in Tacoma Water's current Washington State Department of Health approved water system plan. The plan states:

> “An ERU is a unit of measure used to express the amount of water consumed by a typical residential customer of the Water Division during the 4-day peak period. The LOS is determined by multiplying the Water Division’s actual residential customer 4-day peak factor of 2.01 times the actual average daily residential water consumption. The 4-day peak water demands drive the new water system facility requirements for meeting new customer growth. The 4-day peak (maximum) is defined as: The average use per day of the four highest consecutive days of water use in the summer months.”

Tacoma has concurrency standards for water. In the Capital Facilities Program the City includes, for each capital facility, the major changes from the previous program, a summary of the services provided and the service area, background information, and a list of maintenance projects, and an analysis of Level of Service standards. They also list capital improvement projects and the anticipated costs. Each project identifies the funding source as well.

The analysis should identify any projected LOS shortfall. Additional facilities or services may be needed or the LOS must be lowered. Both options have implications that should be part of the discussion and decision-making process.

Jurisdictions need to not only have a good stakeholder group in the process to identify the current inventory, condition, and capacity of infrastructure – but also to determine what is needed for 20-years of potential growth. This group needs to have the city or county Chief Financial Officer (CFO) to provide the financial plan to pay for the infrastructure. It is advisable to have the CFP managed by the city or county CFO in order to ensure the CFP is updated and linked to the jurisdiction’s budget. The right stakeholders and CFO

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management of the CFP will provide the decision makers current data to make sensible land use decisions.

When estimating or projecting costs for facilities and services over the life of the plan it is critical to include costs associated with:

- Long term operation and maintenance of the existing systems, including repairs and replacement if needed during the planning horizon;
- Improvements necessary to support new growth (capacity expansion, new facilities, etc.)
- Improvements needed to address existing deficiencies

The costs of maintenance and system preservation for both the existing systems and additions to those systems should be factored into the long terms costs. These should be included in a forecast of future needs. It is especially critical to assess if there major future system preservation needs and to make sure that, if the system is growing as new facilities are built, the plan accounts for the maintenance needed for new facilities.

Another consideration when calculating cost of future improvements is potential changes in materials, location, or type of construction that may be used to mitigate risk. Certain areas may be more susceptible to impacts due to increased storm intensity, storm surge, sea level rise, or other impacts as a result of our changing climate. More information about infrastructure and the built environment, and increasing the resiliency of these systems, is available in Preparing for a Changing Climate: Washington State’s Integrated Climate Response Strategy.