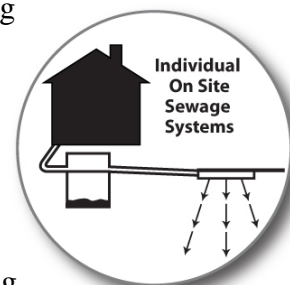


## **14 – ONSITE SEWAGE SYSTEM PROGRAM**

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This chapter presents the long-term strategies for the onsite sewage system program and short-term objectives and actions to be implemented during 2007–2012. These strategies and objectives are in response to challenges and issues described in Chapter 7. The planned policies, programs and projects are summarized in Chapter 17.



Property owners are responsible for owning and maintaining individual onsite systems, which are regulated by the Thurston County Board of Health. The City has no responsibility for owning, maintaining or managing private individual onsite systems. However, the City reviews onsite sewage system applications and can determine requirements for connection to public sewers. Within the City limits and its Urban Growth Area, the City is responsible for owning and maintaining community onsite systems (COSS) and any future large onsite sewage system (LOSS).

### **GOAL**

Replace onsite sewage systems in Olympia and its growth area through extension of gravity sewers. The number of onsite sewage systems will decline over time.

### **ANALYSIS**

Based on the challenges and issues described in Chapter 7, a range of possible strategies was developed for each type of problem. As shown in Table 14.1, each strategy was then evaluated based on four criteria:

- Effectiveness
- Feasibility
- Cost
- Likelihood of success

This analysis resulted in the following key findings:

- The most effective way to prevent permitting of new onsite systems in the City is to require connection to the gravity system for all new development regardless of distance, allowing grinder pumps as needed. (When a house is below the grade of the sewer main, wastewater can be collected in an onsite tank and pumped to the main with a grinder pump. The wastewater is not treated onsite.)

- Permitting onsite systems as interim facilities for individual single family residences on lots larger than one acre in size in the City, with an agreement to connect to the sewer when it becomes available, would protect the public and environmental health and allow for future conversion to the sewer.
- Restricting new onsite systems in the UGA would require amending the 1990 General Sewerage Plan.
- Extending sewers at City expense and/or through incentives to property owners is the most effective way to reduce the number of existing onsite systems and avoid future environmental and public health risks. However this would require a significant City financial and staffing commitment.
- Management strategies such as increased technical assistance and publicly sponsored maintenance programs can be useful in reducing risk.
- Requiring owners of existing onsite systems to convert to gravity when the system fails, per current Olympia policy, depends on implementation by Thurston County. Requiring conversion when remodeling prompts upgrades to an existing system would have limited application. Financial incentives could relieve the burden on the homeowner.

Based on this assessment, strategies, objectives and actions for 2007-2012 were developed. These are described in the following sections.

Table 14.1. Onsite Sewage System Challenges and Evaluation of Potential Strategies

Goal: Replace Onsite Sewage Systems through Extension of Gravity Sewer Systems

CHALLENGE	Context	PROGRAM AND POLICY OPTIONS*	IMPLEMENTATION	EVALUATION				NOTES
				EFFECTIVENESS	FEASIBILITY	PUBLIC COST	LIKELIHOOD OF SUCCESS	
<i>Why</i>		<i>What</i>	<i>How</i>					
1. New Onsite Sewage Systems (OSS) can be permitted within Olympia and its Urban Growth Area (UGA).	City infill lots	Allow OSS.	CP&D, Thurston County (TC)	Low	High	Low	Low	Continuation of current practices.
		Require connection if within 300' of gravity sewer, allowing grinder pumps as needed.	PPI, CP&D, TC	Moderate	High	Low	Moderate	Allows OSS for lots distant from gravity sewer.
		<i>For lots smaller than one acre, require connection regardless of distance to gravity sewer, allowing grinder pumps as needed.</i>	PPI, CP&D	High	High	Low (Higher private)	High	Significantly reduces new OSS in City.
	UGA	<i>Continue permitting individual OSS.</i>	TC	Low	High	Low	Low	Current Thurston County practice.
		Stop permitting individual OSS.	TC	High	Low	Low	Low	Thurston County holds permitting authority.
		<i>Permit community OSS (COSS) for small subdivisions with agreement for future connection and charges.</i>	CP&D, TC, PPI	Low	High	Low	Moderate	Current practice. COSS are at least set up for future connection to gravity sewers. Public liability.
		Stop permitting COSS.	PPI, CP&D, TC	High	High	Low (Higher private)	Moderate	Considerable coordination with Thurston County needed.
2. Existing OSS present a public and environmental health risk as urban-scale land uses increase.	Citywide	Manage OSS with existing City and TC policies and programs.	CP&D, TC	Low	High	Low	Low	Continuation of current practices.
		<i>Increase City sponsored technical assistance for OSS concerns.</i>	PPI	Low	Moderate	Moderate	Low	More than technical assistance is needed.
		Maintain City data system of existing systems (age, location, failure, and certification).	PPI	Low	Moderate	Moderate	Low	Not effective without management policies and programs in place.
		<i>Implement OSS maintenance program consistent with 2007 State guidelines for priority areas.</i>	PPI, TC	Moderate	Moderate	Moderate	Moderate	Improved tracking and management in certain areas.
		Implement citywide OSS maintenance program.	PPI, TC	Moderate	Low	Moderate	Moderate	Requires Thurston County implementation.
		<i>Provide incentives for conversion to gravity sewers.</i>	PPI	High	Moderate	High	High	Significant City commitment.
		<i>Extend gravity sewer services at utility expense with or without subsequent cost recovery.</i>	PPI, CFP	High	Moderate	High	High	Significant City commitment.

\* Planned options are in *bold italic*.

CHALLENGE	Context	PROGRAM AND POLICY OPTIONS*	IMPLEMENTATION	EVALUATION				NOTES
				EFFECTIVENESS	FEASIBILITY	PUBLIC COST	LIKELIHOOD OF SUCCESS	
Why		What	How					
3. Many existing OSS in Olympia are close to gravity sewer and could be expected to connect.	Citywide	Allow existing OSS and future repairs to continue under existing regulations.	CP&D, TC	Low	High	Low	Low	Risk of OSS failure continues.
		<i>Require connection:</i>						
		<ul style="list-style-type: none"> <li><i>Upon failure of existing OSS.</i></li> </ul>	PPI, CP&D, TC	Moderate	Moderate	Low	Moderate	Requires Thurston County implementation.
		<ul style="list-style-type: none"> <li><i>When remodeling prompts upgrades to existing OSS.</i></li> </ul>	PPI, CP&D, TC	Moderate	Moderate	Low	Moderate	Limited application.
		<ul style="list-style-type: none"> <li>When property is sold.</li> </ul>	PPI, CP&D, TC	High	Moderate	Low	Moderate	Systemic approach to conversion.
		<ul style="list-style-type: none"> <li>If within 300' of gravity system.</li> </ul>	PPI	High	High	Low (Higher private)	High	Supported by RCW/WACs.
4. Permit and Construction costs for sewer connection are high.	Citywide	<i>Provide public financing assistance/incentives.</i>	PPI, CP&D	Moderate	Moderate	Moderate	Moderate	Provide wastewater utility funding.
		Require owner funding.	CP&D	Low	High	Low	Low	Likely deterrent to connection.
5. City is responsible for maintenance and replacement of existing and future community OSS (COSS).	Potential new COSS systems.	<i>Continue charging COSS users the same utility rates as gravity users.</i>	PPI	Moderate	High	Low	Moderate	Current practice.
		Charge COSS user in accordance with costs.	PPI	Moderate	High	Low	Moderate	Meets equity goals.
	Potential new COSS systems.	Allow individual OSS instead of COSS.	PPI, CP&D, TC	Low	Moderate	Low	Low	Inconsistent with OSS policies. Coordination with Thurston County needed.
		<i>Allow COSS in the UGA with future connection agreement.</i>	CP&D, TC	Low	Moderate	Low	Low	Current practice.
		<i>Require sewer connections instead of COSS:</i>						
		<ul style="list-style-type: none"> <li><i>Within City</i></li> </ul>	PPI, CP&D	High	High	Low	High	Current practice.
<ul style="list-style-type: none"> <li>Within UGA</li> </ul>	PPI, CP&D, TC	High	Moderate	Low (Higher private)	Moderate	Coordination with Thurston County necessary.		

\* Planned options are in *bold italic*.

## **STRATEGIES AND 2007-2012 OBJECTIVES**

*Strategy 1. Manage individual and community onsite systems to ensure proper functioning and reduce the potential for failure.*

### *2007–2012 Objectives:*

1. Beginning in 2007, the City will send annual maintenance reminders to all onsite sewage system owners within the City.
2. By 2008, all onsite systems in drinking water protection areas will have been inspected in cooperation with Thurston County.
3. By 2009–2010 owners of onsite systems within the City will be required to submit an inspection report to Thurston County every three years documenting that the system has been inspected and found to be functioning properly.

*Strategy 2. Permit no new community onsite systems or large onsite systems (LOSS) within the City limits and permit no new individual onsite systems on lots smaller than one (1) acre within the City limits.*

Given anticipated population growth and planned urban densities in the Olympia area in future years, onsite systems on small lots pose unacceptable risks to public and environmental health.

### *2007–2012 Objective:*

1. Adopt regulations and modify interlocal agreements as needed so that new OSS will only be permitted on existing lots larger than one acre and COSS or LOSS will no longer be permitted in Olympia. Coordinate actions with Thurston County Board of Health.

*Strategy 3. Offer financial incentives to encourage conversion of existing OSS where sewers are currently available or extended by the City.* Sewers will be extended based on criteria listed in Chapter 12 (gravity sewer extension strategy) and below under Strategy 5. Extensions will be prioritized to serve the areas where onsite systems are clustered, as shown in Chapter 7, Figure 7-4 and on basin maps in Chapter 9.

### *2007–2012 Objectives*

1. By 2012, at least 75 existing OSS will be connected to gravity sewers by publicly funded sewer extensions.

2. City Council will adopt appropriate financial incentives by 2007.

***Strategy 4. Require all new plats in the UGA to connect to the public sewer. Allow individual and community onsite systems only on an interim basis until sewers are available.***

***2007–2012 Objective:*** Criteria for approving new individual and community onsite systems in the UGA, including financial assessment to support eventual conversion to gravity sewer, will be adopted by 2008, in cooperation with Thurston County Board of Health.

***Strategy 5. Extend the gravity sewer system to allow conversion of onsite sewage systems and service to undeveloped infill lots in priority areas, within the City and eventually in the UGA.*** (Note: Long-term strategy, short-term objective and implementation actions are duplicated in Chapter 13, Onsite Sewage Systems, as Strategy 5.)

***2007–2012 Objective:*** Each year, extend sewers to allow conversion of at least 15 onsite sewage systems using capital facilities funding.

## **PLANNED ACTIONS**

***Strategy 1. Manage individual and community onsite systems to ensure proper functioning and reduce the potential for failure.***

Staff will engage in local and regional OSS issues affecting the City and the Wastewater Utility. They will develop and implement a program designed to ensure safe operation of existing systems, protect ground and surface water from contamination, and coordinate conversion over time to gravity sewers.

### **Policies for Individual Onsite Systems**

- Require owners to submit an inspection report to Thurston County every three years documenting that the system has been inspected and found to be functioning properly. (*Amend Comprehensive Plan Policy PF 9.8.*)
- If an onsite system fails, require hookup if within 300 feet of an existing sewer. Consistent with current regulations, if a repair for an onsite system cannot be approved, hookup is required regardless of distance to sewer (OMC 13.08.020). Work with Thurston County to resolve inconsistencies in City and County repair policies. With challenging topography that impairs the feasibility of gravity pipes, allow connection to sewer with the aid of a grinder pump. (*Amend Comprehensive Plan Policy PF 9.5.*)
- If remodel or expansion would affect onsite system operation, require connection as a permit condition if within 300 feet of a public sewer.

### **Programs for Individual Onsite Sewage Systems**

- Begin an inspection program in 2007–2008 in wellhead and other risk areas, coordinated with Thurston County, per new state law (WAC 246-271A-0015).
- Coordinate implementation of inspection reporting with Thurston County.
- Mail annual maintenance reminders to all onsite system owners.
- Utilize Thurston County database on onsite system location, age, inspection records, failures, certifications and hookups, in order to provide better technical assistance and CFP planning.
- Coordinate monitoring in drinking water protection areas and other high-risk areas with City's Groundwater Protection Program.
- Work with Thurston County to designate Olympia's wellhead protection areas as areas of special concern, so they can be prioritized for special maintenance requirements.
- Offer educational programs on required maintenance, registration and inspection of onsite systems.
- Provide technical assistance for property owners on proper maintenance and options for conversion to gravity sewers.

### **Programs for Community Onsite Systems**

- Develop a general maintenance program in accordance with the requirements of the Thurston County Environmental Health Division to effectively maintain existing COSS and any future systems.
- Make sure adequate maintenance agreements are in place.
- Develop engineering and construction standards to ensure proper design and installation of a COSS.

***Strategy 2. Permit no new community onsite systems or large onsite systems (LOSS) within the City limits and permit no new individual onsite systems on lots smaller than one (1) acre within the City limits.***

### **Policies**

- Modify City policies and regulations to prohibit the permitting of new COSS and LOSS within the City limits and prohibit permitting of new OSS for properties smaller than one acre in size. Implementation of the regulation will be coordinated with Thurston County. (*Amend Comprehensive Plan Policy PF 9.3.*)

- Allow the use of grinder pumps to overcome topographical constraints. By Council resolution, STEP and grinder pumps have not been permitted in Olympia and its UGA since July 2005. (*Amend Comprehensive Plan Policy 9.3.*)

***Strategy 3. Offer incentives to encourage conversion of existing onsite systems where sewers are available.***

**Programs**

- Continue and expand the City’s Sewer Connection Assistance Loan Program (SCALP) for low and moderate-income onsite system owners.
- Initiate a Sewer Connection Incentive Program (City of Vancouver model). Under such a program, the City would select neighborhoods based on a rating system, then design and construct a sewer extension and bring a lateral to the property lines. Property owners who voluntarily connect to the pipe system within one year would be given low-interest financing for all connection costs, including an up-front guaranteed maximum cost for construction of the City sewer line.
- Provide technical assistance to Utility Local Improvement Districts (ULIDs) initiated by property owners.

***Strategy 4. Require all new plats in the UGA to connect to the public sewer. Individual and community onsite systems will be allowed only on an interim basis until sewers are available.***

**2007–2012 Objective:** All development within plats will be sewerred or include long-term arrangements for conversion to gravity systems.

**Policies**

- Allow new individual onsite systems in the UGA only if over 300 feet from a public sewer, only on individual parcels (not plats) and with a future connection agreement. (*Amend Comprehensive Plan Policy PF 9.3 and General Sewerage Plan, Intergovernmental Agreement, and/or Thurston County Health Code if necessary.*)
- Discourage community systems in the UGA; allow on an interim basis for plats with future connection agreements; encourage use of grinder pumps as an alternative to onsite disposal. Establish that Olympia’s review authority for COSS applications in the UGA includes denial authority. (*Amend Comprehensive Plan Policy PF 9.3. and General Sewerage Plan, Intergovernmental Agreement, and/or Thurston County Health Code if necessary.*)

- New systems must be designed for connection when sewer becomes available (e.g. tank must be close to the public right of way where sewer will be located, pipe from the house must be the correct size. (*Amend Comprehensive Plan Policy PF 9.3. and General Sewerage Plan, Intergovernmental Agreement, and/or Thurston County Health Code if necessary.*)

***Strategy 5. Extend the gravity sewer system to allow conversion of onsite sewage systems and service to undeveloped infill lots in priority areas within the City and eventually in the UGA.***

Reducing the number of onsite sewage systems over time will require City leadership and financial support.

**Program**

Evaluate neighborhoods with a high concentration of onsite sewage systems and/or undeveloped infill lots to identify and prioritize potential sewer extensions (see Figure 7.4 in Chapter 7 and basin maps in Chapter 9). Projects will be selected based on the following priorities, and wherever possible scheduled to coincide with street improvements:

- Occurrences of known OSS failures
- Neighborhood interest and financial commitment
- Potential for infill development
- Soil conditions
- Age of existing systems and/or likelihood of failure
- Proximity to groundwater protection areas and/or areas of known groundwater contamination
- Proximity to surface water such as Henderson Inlet
- Opportunity to coordinate with street improvement projects
- Feasibility of cost recovery by the City

**Projects**

Allocate at least \$300,000 annually in the Capital Facilities Program to fund sewer extensions to facilitate conversion of onsite systems and service to infill parcels. In the next six years, extensions are likely to be focused on the areas listed below and shown in basin management maps, Chapter 16. Specific projects will be identified at the time of program implementation and linked to cost recovery strategies.

- Sleater-Kinney Road (Northeast)
- Lilly Road (Northeast)

- 18th Avenue (Southeast)
- Division Street (West Bay)

## **SPECIFIC SUBSTANTIVE REQUIREMENTS**

The following specific substantive requirements shall apply to OSS.

### ***Requirements for Onsite Sewage Systems***

1. New onsite sewage systems shall be permitted within the City limits only to serve a single family residence provided:
  - The property being served is an existing undeveloped lot of record larger than one acre located more than 300 feet from the sewer;
  - The lot size determination shall include only those portions of a lot unencumbered by flood hazards, wetlands and/or landslide hazards as defined in the critical areas ordinance;
  - Permitted onsite sewage systems shall be considered interim facilities and must be designed for conversion to the sewer system when sewer becomes available;
  - Development of properties with onsite sewage systems shall be configured to allow for future redevelopment in accordance with the density requirements of the applicable Residential Districts' Development Standards.
2. New onsite sewage systems shall be permitted within the UGA only if the property is located over 300 feet from a public sewer and only on individual parcels (not plats).
3. If a property is located within 300 feet of an existing sewer, connection to the sewer shall be required when an onsite system fails or when a remodel or expansion of a structure on the property would affect onsite system operation. Where terrain, natural features or other physical barriers prohibit a gravity connection, properties may be served by grinder pump systems.
4. Properties located within the City limits and UGA to be served by new OSS shall enter into an appropriate agreement with the City agreeing to connect the residence directly with the proper sewer within one year after date of official notice to do so, provided that the sewer is within 300 feet of the property.
  - Application fees as established by the City Council shall be paid upon the submittal of a signed Onsite Sewage System Agreement requesting use of an onsite sewage system;

- Requirements that the cost of the sewer extension be borne in whole by the applicant for sewer services, subject to any provisions in effect at the time of connection for latecomer reimbursement;
- The agreement shall not be executed prior to the time formal application is made for approval of the project for which onsite sewage system is requested. The term of said agreement shall terminate at the time any project application or approval expires or is revoked for any reason. A new agreement shall also be required for any extension of project applications or approvals or when, in the opinion of the Director of Community Planning & Development, a substantial change or addition is made to the project; and
- Following execution, such agreement shall be recorded by the City Clerk in the chain of title for such property in the records of the Thurston County Auditor.

***Requirements for Grinder Pump Systems***

1. New grinder pump systems shall be permitted only to serve properties provided:
  - All grinder pump sewer systems including the grinder pumps and side sewer shall be purchased, owned, and operated by the property owner.
  - The property to be served by a grinder pump system is:
    - 1) Contiguous to a gravity sewer, but terrain, natural features or other physical barriers prohibit a gravity connection;
    - 2) The property being served is converting from an onsite sewage system to the sewer; or
    - 3) The property being served is undeveloped and terrain, natural features or other physical barriers will prevent the orderly extension of the sewer system including the use of sewage pump stations.
  - Publicly-owned grinder pump force mains shall be permitted under the following conditions only when it is in the City’s best interest as determined by the City Engineer provided the force main will be serving:
    - 1) Existing residential properties where onsite sewage systems have failed or have been determined to be an impending health hazard as determined by the Thurston County Health Department; or
    - 2) Infill development in terrain-isolated areas.