

## WHAT WE DO:

- Offer water and wastewater service solutions;
- Conceptual design and capacity analysis for new sites;
- Site development feasibility assessment and budgeting;
- Soil and site evaluation, geotechnical assessment, and nutrient impact analysis;
- Engineering design, regulatory negotiation, and permit management;
- Complete system installation and start-up;
- On going operation and management, contract basis or utility style;
- System ownership.



*A new subdivision concept with Decentralized Wastewater System Design*

## WHY NCS:

- Professional design and engineering services based on decades of knowledge and experience
- Turn key solutions—Design, Build, Operate— with clear accountability;
- We can turn your water and sewer development cost into long-term valuable asset;
- We help you optimize land use and obtain higher density while meeting strict water and environmental quality standards;
- We are experienced in obtaining permits for difficult and challenging sites;
- Peace of mind and reliable services at affordable cost.



**NCS Wastewater Solutions,**  
a Division of Northwest Cascade, Inc.

10412 John Bananola Way E.  
Puyallup, WA 98374  
www.nwcascade.com  
www.ncswastewater.com

**800-444-2371**

253-848-2545 (Fax)  
anish@nwcascade.com



**Expert in non-sewered *green* development.**



**NCS Wastewater Solutions,**  
a Division of Northwest Cascade, Inc.

[www.nwcascade.com](http://www.nwcascade.com)  
[www.ncswastewater.com](http://www.ncswastewater.com)

## Land Development with Decentralized System

Should central sewer be extended to a new subdivision or do we rely on home onsite systems for new development? This narrow either/or public policy choice, often made by default through lack of adequate resources and resistance to growth, has major implications for shaping the future character of our communities.

In recent years, an important third choice for providing sewer capacity has emerged, designed to address the inherent limitations of both central sewer and home onsite systems. Various known around the country as "decentralized sewer", "cluster systems" and "small community sewer", these systems all include a shared sewer collection system, provide at least secondary level of wastewater treatment, rely on discharge of treated wastewater to the soil and provide the management infrastructure required for long term sustainable operation at affordable cost.

Important benefits of decentralized systems are:

1. Improved land use with increased green space and community amenities;
2. Optimized development density;
3. Sustainable and affordable water and sewer services on demand (wherever and whenever needed—build as needed);
4. Environmentally friendly (**green**) technologies for wastewater treatment and effluent reuse or disposal systems; and
5. Long-term responsible management at affordable and predictable cost.

Contact us to see if decentralized systems are appropriate for your land development projects.

## NCS Offers Site Development Services:

**Site Feasibility Assessment** – Working with builders and developers during the initial due diligence phase of land acquisition, NCS conducts a preliminary soil evaluation and prepares an assessment of site development capacity (e.g., number of residential lots or the range of commercial tenants that can be supported by the site). Budget and time line are then developed as input to the site purchase decision.

**Soil & Hydrologic Evaluation** – Based on the requirements established by the respective state and local jurisdictions, NCS conducts the necessary detailed soil evaluation and hydrologic studies needed for wastewater treatment and dispersal system design and permitting.

**Engineering & Design** – Given site conditions and development constraints, NCS designs the wastewater treatment and dispersal system best suited to the site. NCS will match the best treatment technology available, considering required discharge quality limits and capital & operating costs, with the best dispersal technology fitting the site. NCS has extensive experience for larger developments using a wide variety of treatment technologies and dispersal methods including spray irrigation, drip irrigation, subsurface trenches and wastewater reuse.

**Permit Management** – NCS manages the process to obtain all permits required for development related to wastewater treatment and dispersal. With highly successful experience across the country working with both state and local jurisdictions, we bring a unique and broad perspective to problem solving during the permit process.

**Construction** – NCS literally grew out of the trenches having installed most treatment and dispersal technologies available today. With decades of experience and a skilled cadre of project managers and crews, NCS brings efficiency, quality and accountability to all projects. Our passion for doing the tough jobs has made us a leader in the industry.

**Management** – NCS has long recognized the importance of managing systems once they are built. One can have the perfect design, the best equipment and superb installation, but without qualified ongoing management, headaches will follow. NCS provides skilled management and continuity.

## Examples of Decentralized Systems



Aerobic treatment + Drip dispersal System.



## NCS Wastewater Solutions, a Division of Northwest Cascade, Inc.

10412 John Bananola Way E.  
Puyallup, WA 98374  
www.nwcascade.com  
www.ncswastewater.com

**800-444-2371**  
253-848-2545 (Fax)  
anish@nwcascade.com