



MEMORANDUM

Date: October 20, 2017
To: Christina Robertson-Gardiner and Planning Commissioners
From: Wendy L Marshall, PE
Re: ZC 17-02/TP 17-03 Wheeler Farms
Additional Information - Sanitary Sewer Service Capacity

Goal 11.1 of the Oregon City Comprehensive Plan requires applicant to demonstrate that the proposal will *"Serve the health, safety, education, welfare and recreational needs of all Oregon City residents through the planning and provision of adequate public facilities."*

In the meeting of October 9, 2017, the Planning Commission denied the application of zone change and subdivision known as Wheeler Farms, finding *"insufficient details about how a sewer pump station would function as necessary to ensure adequate sewer capacity."*

Although the finding could have been more clear in making this point, the reference to a potential pump station came from a requirement found in the Sewer Master Plan rather than the proposal. A pump station is an alternate means of conveying sanitary flows, and has no bearing on the system capacity.

The applicant's design engineer AKS Engineering's evaluation indicated that development of the subject property when considered with development of homes at permitted densities to the City limits as well as the Urban Growth Boundary can likely be served by gravity sewer.

The 2014 Sanitary Sewer Master Plan calculates future capacity needs based on general land use densities. As shown in Section 3.5.1 of the Master Plan (see excerpt below), the methodology for calculating demand from all Low Density Residential properties assumes 5 dwellings per net acre. Net area is determined by reducing gross area by 20% to account for rights-of-way, easements, and utilities. The subject property is comprised of 22.56 acres. The sanitary sewer capacity allotted to the subject property is 22.56 acres x 0.80 x 5 dwellings per acre = 90 lots. The applicant proposes to construct 77 lots.

Therefore, the City finds that the subject property at proposed R-8 zoning has been accounted for in the City's 2014 Sanitary Sewer Master Plan, and the existing sanitary sewer system has adequate capacity to accommodate the development of Wheeler Farms at R-8 density.

Any questions can be directed to the City's Development Projects Manager, Wendy Marshall, at 503.496.1548, or wmarshall@orc.org.

Thank you,

Wendy L Marshall, PE

2014 City of Oregon City Sanitary Sewer Master Plan Excerpt:

3.5.1 Future Base Flows

Future average daily base flows were estimated from industry standard rates for each land use designation. For the large development areas, the proposed gross acreage for each land use designation was provided by the City. For parcels with areas greater than 1 acre, the net acreage was calculated assuming that 20 percent of the gross acreage would be used for local roads, easements, and other utilities. Table 3-2 lists the rates used to develop future base flows.

Table 3-2. Future Sewer Base Flow Unit Rates		
Land use	Unit type	Unit flow
Residential ^{a,b}	Gallons per capita per day	80
Commercial ^c	Gallons per acre per day (gpad)	1,000
Industrial ^c	gpad	2,000

^a An average of 2.5 people per household was assumed.

^b Development densities specified in the 2004 Oregon City Comprehensive Plan were used to determine the number of dwellings per acre. LDR = 5 dwellings per acre, MDR = 10 dwellings per acre, HDR = 22 dwellings per acre.

^c Unit flow rates for commercial and industrial areas were based on industry standard.