

BARNEY & WORTH, INC.

December 1, 2008

To: Eric Hovee  
Bruce Prenguber  
John Spencer

From: Clark Worth

Re: Yamhill County Agri-Business

In the stakeholder interviews and community meetings the question of drinking water supply was raised as a possible constraint to inhibit further development of the agriculture and/or tourism sectors.

Fortuitously, HDR recently completed an analysis of county-wide municipal water supply. Libby Barg of our staff, who is former water quality manager for the City of Salem, took a look at this massive document and provided the attached summary.

Key points:

- Water supply constraints are a near-term issue for most communities – but plans are underway in most places to address the deficiencies.
- The HDR demand projections did not explicitly consider a different scale or character of development in the future – e.g., destination resorts. It is likely that the very small water systems in the smaller communities could not immediately support larger scale development of tourism- or agriculture-related facilities.
- The study's focus is municipal water use. It did not consider agricultural use, or possible competition between agriculture and community water use. It seems likely that, over time, some of the agricultural water rights will be converted to municipal use – communities can afford to pay more.
- Without importing water (from the Willamette River or other sources), Yamhill County is facing a very finite supply from available surface and groundwater sources. There is no unappropriated water.
- Cooperative regional partnerships are envisioned to address mid-term and long-term supply issues. For some communities, there is no local supply solution.

Encl.

cc: Tonya Saunders

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# Municipal Water Supply Analysis – Yamhill County Summary

Final report: April 7, 2008

Prepared by: HDR, Portland, OR

The report can be downloaded from

[www.co.yamhill.or.us/commissioners/water/supply%20analysis%20report\\_final%20040708.pdf](http://www.co.yamhill.or.us/commissioners/water/supply%20analysis%20report_final%20040708.pdf)

The objective of the study was to identify water supply options that can meet the demands through year 2050. The following municipalities were involved in the study.

- City of Amity
- City of Carlton
- City of Dayton
- City of Dundee
- City of Lafayette
- City of McMinnville (McMinnville Water & Light)
- City of Newberg
- City of Sheridan
- City of Willamina (portions within Yamhill County)
- City of Yamhill

## Scenarios for Population Growth

Three different scenarios for the population were considered:

Scenario 1 – No limit on UGB expansion

Scenario 2 – UGB expansion not allowed

Scenario 3 – UGB expansion allowed (after 2025)

## Assumptions

Assumes existing infrastructure and water right limits are the primary basis for source capacity, unless the water provider explicitly noted a source limitation due to available streamflow, spring flow or groundwater yield.

The study does not account for competing water needs from the agricultural community.

Demand projections are driven largely by population growth, and do not appear to account for potential water needs related to increased tourism activities. For the smaller communities' water systems the addition of tourism facilities could have significant impacts on projected maximum daily demand.

## Water Rights – *Not an Issue*

The total certificated and permitted ground water and surface water rights available among all of the water providers is 71.3 mgd of instantaneous rights. McMinnville (23 mgd) and Newberg (28 mgd) account for the majority share of these water rights.

Most of the water suppliers currently have enough water rights to meet their projected maximum day demands through the planning period (2050) under all growth scenarios. The exceptions are Dayton, Lafayette, Yamhill and McMinnville, which have deficiencies after 2025 under the most aggressive growth projection (Scenario 1). Yamhill and Dayton also have deficiencies after 2025 under Scenario 3, which assumes that UGB expansion occurs by 2025.

Also, the study assumes all of the water rights are available to be fully developed – not a safe assumption.

## Reliable Source Capacity – *Current Problem*

Unlike water rights, reliable capacity is a problem for meeting maximum day demand. The limiting factors include treatment plant and pumping capacities.

- Amity, Carlton, McMinnville, Newberg, and Sheridan all have treatment plant capacity limitations.
- Dayton, Dundee, Lafayette, Willamina and Yamhill have source pumping capacity limitations.

For all water providers except Carlton and Yamhill, reliable capacity is a limiting factor under all growth scenarios for meeting maximum day demand in the near-term (2010). This is looking at maximum day demand, not average day demand – but it does highlight the fact that communities in Yamhill County are facing capacity issues right now.

**Water Availability – Hardly Any!**

*Surface Water*

Most of the streams do not have year-round water available for new water rights permits for river diversions. Water is generally not available during the late summer and early fall months.

*Groundwater*

The Bureau of Reclamation (BOR) has concluded that groundwater in Yamhill County has been so intensely developed that the potential for developing new groundwater sources is limited to the Newberg area.

With no new surface water or groundwater sources, remaining source options include surface storage and the Willamette River.

**Recommended Supply Strategy – Uncertain Solutions**

A mix of local source development and regional solutions are discussed in Chapter 7 – Recommended Supply Strategy. HDR reports that all regional supply alternatives have “*significant uncertainties and none have a clear advantage over the others*”.

Table 7.2 summarizes the recommendations.

Time Frame	Supply Strategy	Amity	Carlton	Dayton	Dundee	Lafayette	McMinnville	Newberg	Sheridan	Willamina	Yamhill
Within 5 yrs.	Continue local source development/ rehabilitation (including ASR feasibility)	●	●	●		●	●	●	●	●	●
	Develop/ enhance water conservation program (to extent practicable)	●	●	●	●	●	●	●	●	●	●
	Plan and design interties/transmission with MWL		●	●		●	●				●
	Develop short-term leasing option with MWL (use of MacGuire Reservoir)		●	●	●	●	●	●			●
	Complete feasibility study for Willamette River diversion and WTP				●			●			
	Complete Feasibility Study for Upper Willamina Cr./ Gorge Reservoir	●							●	●	
5-15 yrs.	Construct interties/transmission with MWL (use of MacGuire Reservoir)		●	●		●	●				●
	Planning and design for Willamette River diversion and WTP <sup>(1)</sup>		○	○	●	○	○	●			●
	Planning and design for Upper Willamina Cr./Gorge Reservoir	●							●	●	
Beyond 15 yrs.	Construct Willamette River diversion and WTP <sup>(1)</sup>		○	○	●	○	○	●			●
	Construct Upper Willamina Cr./Gorge Reservoir	●							●	●	

Notes:

(1) Dundee and Newberg recommended to implement the Willamette River supply option; other water providers may participate in the regional use of the Willamette River source as their short-term leases with MWL end.

● – City/provider recommended to implement the supply strategy component

○ – Besides Dundee and Newberg this is optional for city/provider to implement the supply strategy component at this time – see Note (1)

ASR – aquifer storage and recovery

MWL – McMinnville Water and Light

WTP – water treatment plant; possible location is near Dundee