Questions for local Leagues **November 2008**

Lane County

1. **Provide a brief description of the community surveyed, including the population and transient population, geographic location, climate and annual rainfall.**

Lane County is large and diverse, covering 4620 square miles, almost as big as Connecticut, reaching from the Pacific Ocean 120 miles to the Cascade Mountains. 90% is forest land.

Principal Industries: Agriculture, Higher Education, High Technology, Forest Products, Recreation, RV Manufacturing, Tourism.

Points of Interest: Twenty historic covered bridges, coastal sand dunes, Fern Ridge Reservoir, Heceta Head Lighthouse, Hendricks Rhododendron Garden, hot springs, Hult Center for the Performing Arts, Lane Comm. College, McKenzie Pass, McKenzie River rapids, Mt. Pisgah Arboretum, Old Town Florence, Pac-10 sports events, sea lion caves, University of Oregon, vineyards and wineries, Waldo Lake, Washburne State Park tide pools, Willamette Pass ski area.

There are 12 incorporated cities and 35 unincorporated communities, with a combined population of 343'140.

The 12 incorporated cities are:

Coburg	Cottage Grove	Creswell	Dunes City
Eugene	Florence	Junction City	Lowell
Oakridge	Springfield	Veneta	West Fir

Source: http://www.co.lane.or.us/About/quick_facts.html July 18-2008

Eugene/Springfield Metropolitan Area

With a population of 220,000, Eugene/Springfield comprises the biggest metropolitan area in Oregon outside of the Portland Metropolitan Area. Eugene has 153,690 inhabitants, including 24,000 students from the University of Oregon, and Springfield has 57,320.

Eugene is the county seat of Lane County and is located at the southern end of the Willamette Valley, at the confluence of the Willamette and McKenzie Rivers. Both cities are surrounded by farmland, forests and mountains. The geographic location of Eugene is 44 degrees N. and 123 degrees W. at an elevation of 422'.

Both Eugene and Springfield enjoy a moderate climate with cool winters and warm summers. Summer daytime highs range in the 80s with nighttime lows in the 50s; winter daytime highs average in the 40s and nighttime lows in the 30s with an occasional snowfall.

The highest recorded temperature was 108 degrees F. in 1981 and the lowest -12F. in 1972.

Most of the average 46" of rain, as measured at the Eugene airport, fall between October and March, with November and December being the wettest months.

There can be considerable variation from year to year: e.g. only 33" fell in 1985 and 65" in 1995. In the 20th century the trend has been for increased rainfall. Source: http://zebu.uoregon.edu/rainann.html July 21-2008

Higher Education, High Tech industry, Government and Timber Products are some of the major employers in this area.

Creswell

Creswell, situated on I-5 and Rt. 99, lies 10 miles to the south of Eugene. A city of 4,650 people, it was once primarily a logging community. In recent years, the economy has shifted to farming and timber processing.

Climate and rainfall are very similar to the Eugene/Springfield area. The highest recorded temperature was 105 degrees F., recorded in 2002 and the lowest -5 F. in 1972.

Cottage Grove

The Covered Bridge Capital of Oregon, 20 miles south of Eugene, is situated along I-5. Two nearby lakes and golf courses offer recreational opportunities. As the timber industry declined, the technology industry and tourism helped to diversify the economy.

The estimated population for 2007 is 9345. Recently the city completed an $11 Million upgrade to it's waste water treatment system.

Rainfall averages 45 inches per year; temperatures are similar to Eugene/Springfield with wintertime lows in the 30s and highs in the upper 40s and summertime lows around 50 and highs in the 80s.

Coburg

Coburg, 7 miles north of Eugene, was placed on the National Register of Historic Places in 1986. A pretty town of 1070 people, it averages 49" of rain per year. The average high temperature is 82 degrees F., the average low 33 degrees F.

Monaco Motor Coach Corporation is the biggest employer.

Junction City

Junction City, 14 miles north of Eugene, is a growing farming community with 5,135 inhabitants. A mental health facility and a prison are soon to be built, adding to employment opportunities.

The city averages 50" of rainfall with temperatures in the same range as Eugene's.

Veneta

Close to Fern Ridge Reservoir, 12 miles west of Eugene, Veneta has a population of 4,640.

It averages 43" of rain and the temperatures are in the same range as Eugene's.

Veneta is the only city with water conservation tips on the city's website.

Florence

Florence is a magnet for tourists because of its location on the Pacific Ocean, a vibrant Old Town on the bank of the Siuslaw River and excellent fishing. Being on the coast it enjoys a very moderate climate with temperatures around 70 degrees for summer days and 50 degrees at night. Winter days are cool, frost is rare. Rainfall is abundant, averaging 73" per year.

It is a growing city of 8,270, 60 miles west of Eugene.

Oakridge

At the foot of the western slopes of the Cascades at 1220 feet, Oakridge offers many recreational opportunities: hiking and skiing in the surrounding National Forest, mountain biking and fishing in the Middle Fork of the Willamette River. The city is located 45 miles east of Eugene on Highway 58 and has a population of 3,700.

Precipitation averages 42", August highs are in the 80s while lows are in the 50s.

Vida

Vida is a small community in the McKenzie River Valley, 30 miles east of Eugene**,** where river rafting is a big attraction**.** It gets 66" of rain per year; the average low is 41 degrees and the average high 63 degrees with the hottest days in the upper 80s.

Sources: Information on individual towns from city websites; http://www.co.lane.or.us/About/quick_facts.html Aug. 7- 2008
Information on Vida from: http://www.epodunk.com Aug. 7- 2008
Rainfall data: http://ocs.oregonstate.edu/index.html July 21- 2008
Population estimates are as of July 1, 2007 and are from the Oregon Population Report by Risa S. Proehl, dated March 2008, published by Portland State University Population Research Center in the College of Urban and Public Affairs. Downloaded from www.pdx.edu/prc Aug. 9-2008

2. Identify the major watersheds and sub-watersheds in which you live.

The major watershed in Lane County is the **Willamette**, with four sub-basins—the **Upper Willamette**, **McKenzie**, **Coast Fork Willamette** and the **Middle Fork Willamette**.

Eugene is located in the Upper Willamette while its major source of drinking water is from the McKenzie River. Springfield is situated in the McKenzie watershed. (Watershed map is available from Lane County maps at http:geography.uoregon.edu/infographics/lcweb/watersindex.htm)

Part of the coastal portion of Lane County is in the **North Oregon Coast watershed**, while a small part of southern Lane County is in the **South Oregon Coast watershed**, a part of the northern drainage of Steamboat Creek in the North Umpqua sub-basin is in Lane County.

Watershed Councils in the Willamette Basin:

Watershed councils [WSC] in the **Willamette Basin**, Lane County, include the Long Tom, the McKenzie and its partner, the Mohawk, the Coast Fork Willamette and Middle Fork Willamette Watershed Council (WSC).

The one watershed council in the North Oregon Coast entirely within Lane County is the Siuslaw River WSC. The Alsea Watershed is part of an umbrella group called the Midcoast Watersheds Councils but doesn't seem to have its own WSC. The northern half of Waohink River/Siltcoos River/Tahkenitch Lake Frontal watershed is in Lane County but has no WSC. There are no WSC in the South Coast basin.

Describe the uses of the water resources in that community, i.e., recreational, agricultural, industrial, residential, and ecological. The largest industries include agriculture, higher education, high technology, forest products, recreation, recreational vehicle manufacturing and tourism. Residential uses (private/domestic and municipal) are listed below.

recreational	No estimate given
agricultural	
irrigation	Less than 15 million gallons a day
aquaculture	Less than 1 million gallons a day

industrial	Less than 1 million gallons a day
mining	1 to 2 million gallons a day
residential	
domestic	4 to 10 million gallons a day
municipal	Less than 5 million gallons a day
ecological	No estimates given

(Source: < http://www.co.lane.or.us/About/quick_facts.htm>, researched 18 July 2008)

According to USGS figures for 2005 by county for Oregon, total water withdrawals show Lane County using **213.93 million gallons daily (MGD)**. Of that 24.79 MGD (11.6 percent) came from ground water, with 189.14 MGD (88.4 percent) from surface water. (Source: <http://or.water.usgs.gov/projs_dir/or007/ comp05_dir/2005_tots/ SWGW_totals_by_County.htm>, researched 27 October 2008).

Have major pollutant concerns been identified (sediment/turbidity, mercury, temperature, bacteria, etc.)?

Yes. Information from LWV Lane County Water Study Report, November 2005.

The Clean Water Act of 1972 has been instrumental in improving the health of rivers, lakes, and coastal waters. It has stopped billions of pounds of pollution from fouling the waters. The goal of the act was to reduce pollution in all U. S. waters and to restore and maintain the chemical, physical, and biological integrity of our nation's water. … However, the Act has not prevented the degradation of high quality streams such as the McKenzie River, the source of drinking water for the City of Eugene. The Eugene Water and Electric Board must treat the water for turbidity, viruses, and bacteria before providing it to customers.

The DEQ has recently completed the draft Willamette Basin Total Maximum Daily Load (TMDL) study, which is a pollution analysis of the mainstream of the river (from Eugene to the Columbia River) as well as twelve sub-basins. (Source: *Draft Willamette Basin Total Maximum Daily Load (TMDL) and Water Quality Management Plan*, 2004)… The study found that the three primary pollutants were bacteria, mercury, and temperature and that they were widespread throughout the watershed. Several additional pollutants, including low dissolved oxygen, turbidity, and toxins (DDT, Aldrin, Dieldrin) were addressed for specific water bodies. Bacteria levels are highest in urban areas and attributed primarily to storm water runoff. Likely sources include failing septic tanks, leakages and equipment failures in sanitary sewer systems, and animal wastes (pet, livestock, and wildlife). Mercury, which is a naturally occurring element in Willamette Valley soils, reaches the river through erosion of agricultural, forested, and urban lands. It is also deposited onto the land and water by numerous local, U.S., and non-U.S. air pollution sources such as fires, the burning of fossil fuels, and industrial processes. With regard to water temperatures, the analysis concluded that the impacts of major dams, reservoirs, and the loss of riparian vegetation are the major sources of river warming that can be quantified. Other potential sources are loss of wetlands, channel modifications, and flow modifications. (Source: LWV Lane County Water Study Report, November 2005).

Lane County Chapter 13 Restrictions

Lane County established, under its Land Code Chapter 13 effective December 6, 1983, Quantity and Quality Groundwater Limited Areas involving the Spencer Creek Watershed south of Eugene; River Road/Santa Clara area; East Creswell area; Junction City South area; township 16 south, range 3 west, sections 27, 34, 35, 36 (located near Coburg) & areas listed by parcel in Glenada, Noti, Lorane (from Lane County Land Code 13.010.) Some of these areas, such as River Road/Santa Clara, are now served by urban water and sewer services and earlier restrictions may not apply.

According to Lane County Land Code 13.050(13), a report, prepared by a licensed geologist or engineer, must be submitted to the county planning department showing the subdivision/partition is "capable of sustaining the development anticipated with sufficient potable water." (Source: <http:www.lanecounty.org/LaneCode/documents/ CodeChapterx13Jun25_04.pdf>, researched 21 October 2008) The goal, according to a Lane County Planning

Department spokesperson is “to address the carrying capacity of the groundwater when land owners are trying to divide their land.” (Source: email from Lane County Planning Department, received 23 October 2008)

3. Which organization or organizations provide the drinking water and what are the sources of that drinking water? What percentage of the population draws water from private wells?

LEAGUE OF WOMEN VOTERS OF LANE COUNTY
POPULATION AND WATER SOURCES IN LANE COUNTY BY CITY OR OTHER AREA

CITY	ESTIMATED (1) POP.	TYPE (2)	SERVICE PROVIDER (2)	POP. PERCENT
COBURG	1070	GROUNDWATER	CITY OF COBURG	0.3%
COTTAGE GROVE	9345	SURFACE WATER	CITY OF COTTAGE GROVE	2.7%
CRESWELL	4650	SURFACE WATER	CITY OF CRESWELL	1.4%
DUNES CITY	1360	SURFACE WATER (?)	CITY OF DUNES CITY	0.4%
EUGENE	153690	SURFACE WATER	EUGENE WATER AND ELECTRIC BOARD	44.8%
FLORENCE	8270	GROUNDWATER	CITY OF FLORENCE	2.4%
JUNCTION CITY	5135	GROUNDWATER	JUNCTION CITY WATER UTILITIES	1.5%
LOWELL	995	SURFACE WATER	CITY OF LOWELL	0.3%
OAKRIDGE	3700	GROUNDWATER	CITY OF OAKRIDGE	1.1%
SPRINGFIELD	57320	GROUNDWATER GROUNDWATER	SPRINGFIELD UTILITY BOARD RAINBOW WATER DISTRICT (6300 POP)	16.7%
VENETA	4640	GROUNDWATER	CITY OF VENETA	1.4%
WESTFIR	335	SURFACE WATER	CITY OF WESTFIR	0.1%
UNINCORPORATED				
RR/SANTA CLARA(3)	15000	SURFACE WATER	EUGENE WATER AND ELECTRIC BOARD	4.4%
OTHER	77630	GROUNDWATER	DOMESTIC WELLS PRIMARILY	22.6%
TOTAL	343140			100.0%

MUNICIPAL	77.4%
PRIVATE	22.6%
SURFACE WATER	54.0%
GROUNDWATER	46.0%

NOTES

(1) THE POPULATION ESTIMATES ARE AS OF JULY 1, 2007 AND ARE FROM THE 2007 OREGON POPULATION REPORT BY RISA S. PROEHL, DATED MARCH 2008, PUBLISHED BY PORTLAND STATE U, POPULATION RESEARCH CENTER IN THE COLLEGE OF URBAN AND PUBLIC AFFAIRS.
IT WAS DOWNLOADED FROM http://www.pdx.edu/prc on AUGUST 9, 2008

(2) THE INFORMATION ON THE TYPE OF SYSTEM AND THE NAME OF THE PROVIDER WAS OBTAINED FROM THE WEBSITE OF THE DRINKING WATER PROGRAM OF THE OREGON DEPARTMENT OF HUMAN SERVICES ON AUGUST 8, 2008. THE URL ACCESSED WAS http://www.oregon.gov/DHS/ph/dwp. FROM THE "DATA ON-LINE" TAB, VIEWERS WERE ROUTED TO THE FOLLOWING URLS: http://170.104.158.45/inventory list.php3 and http://170.104.158.45/countysurface.php3

(3) EDUCATED ESTIMATE

4. Characteristics of the drinking water, stormwater and wastewater treatment utilities.

EUGENE/SPRINGFIELD - The water needs of the Eugene-Springfield Metropolitan area are served by three public utilities. The Eugene Water & Electric Board (EWEB) provides service throughout the City of Eugene and also distributes water to the Santa Clara Water District which serves customers in the unincorporated areas of River Road and Santa Clara north of Eugene, and to the Willamette Water Company, which serves Goshen south of Eugene. The Springfield Utility Board (SUB) serves most of the City of Springfield. The Rainbow Water District serves customers both inside and outside the Springfield city limits. Both EWEB and SUB are active participants in the McKenzie Watershed Council.

Eugene Water & Electric Board

EWEB is the largest public utility in Oregon. Its service area covers 238 sq. miles; the system delivers 9.6 billion gallons of water annually to about 50,000 accounts, including about 45,000 residential accounts. The McKenzie River is the sole source of water for the district. Water is treated at the Hayden Bridge Water Filtration Plant which is rated to treat 72 million gallons of river water per day. EWEB has rights to about 197 million gallons per day from the river. A 15 million gallon reservoir and a 120 million gallon-per-day pump station were placed in service in 2003. (http://www.eweb.org/about/facts/index.htm. researched 10/17/08).

EWEB's 2007 Water Quality Report describes the three-step treatment process: Chlorine is added to the water for disinfection; the water then travels through an extensive filtration process which removes sediment and other suspended materials; at the end, the pH of the water is adjusted to reduce corrosion in plumbing systems. Test show EWEB water meets all regulations and exceeds all water quality standards.

Springfield Utility Board

SUB has about 20,000 water accounts with annual consumption of 3.1 billion gallons. Its service area covers 25 sq. miles. Its water (93%) comes from a system of seven well fields tapping groundwater from the aquifer underlying Springfield. The remaining 7% is drawn from the Middle Fork of the Willamette River. The utility also has water rights to the McKenzie River which it plans to access in future. (http://www.subutil.com/water_service/water_quality researched 10/17/08).

SUB's 2007 Annual Water Quality Report describes the water purification process: SUB has a carbon filtration plant for water from the well fields and a slow sand filtration plant for the water from the Middle Fork. Two new filtration plants, each using membrane filtration and having a capacity of 10 million gallons per day, are planned to purify water to be drawn from the McKenzie. SUB uses a small amount of chlorine as a disinfectant; water meets or exceeds all state and federal water quality standards.

Rainbow Water District

The Rainbow Water District provides service to 6,300 people in the Springfield area through 2,400 connections. The source of its water is four well fields, two of which operate only during the summer months when demand is higher. The District's 2007 Water Quality Report does not indicate the presence of contaminants in excess of the maximum contaminant level specified by regulations.

Metropolitan Water Management District

Both Eugene and Springfield have separate sewer systems that come together into a regional system of lines. The regional system includes the Water Pollution Control Facility (the plant); Biosolids Management Facility [BMF], Biocycle Farm, Seasonal Industrial Waste Facility, interceptor lines, force mains and pump stations.

There are over 800 miles of sewer lines and 50 pump stations that transport wastewater to the plant. The Biosolids Management Facility treats and land applies over 2,000 dry tons of biosolids per year. The Metropolitan Wastewater Management Commission [MWMC] also operates a state required industrial pretreatment program to work with commercial/industrial users to control industry wastewater entering the systems. Biocycle Farm is a new poplar plantation that will help recycle biosolids. The Biosolids Management Facility further treats the solids that come from the wastewater treatment process to create biosolids. The BMF is located at 29686 Awbrey Lane in north Eugene.

Biosolids from the treatment process are pumped from the anaerobic digestors at the Water Pollution Control Facility to the Biosolids Management Facility to 4 lagoons where time and natural processes further stabilize the material and reduce pathogens. From the lagoons, biosolids are processed in sealed-asphalt drying beds and/or a belt-press facility for further treatment. Once fully treated to regulation standards, the dried biosolids, (Biocycle) can be used either on the compost program, applied to DEQ-approved agricultural land use (grass crops) or to the new Biocycle Farm. The BMF staff applies over 2,000 dry tons of biosolids each year. (http://www.mwmcpartners.org/RegionalSystem.htm Researched 10/21/08)

Veneta Source: City of Veneta 2007 Annual Drinking Water Quality Report

The City's sole water source is from deep wells located within city limits. In 2007 two wells were drilled and another is slated to go online in the summer of 2009. Effective July 1, 2008, water rates were increased to $1.85 per 1,000 gallons used per month up to the first 10,000 gallons, then $2.20 per 1,000 gallons. Drinking water met all federal and state requirements. (http://www.ci.veneta.or.us. Researched 10/21/08

Cottage Grove

The City's water production facilities are currently comprised of two water treatment plants, which produce the City's drinking water supply from four separate surface water intakes. The Layng Creek water treatment plant diverts water from Layng and Prather Creeks, and the Row River water pretreatment plant diverts water from two locations on the Row River.

Because of an aging transmission line constructed in the mid 1940's, the Layng Creek treatment plant is scheduled to be abandoned by late 2008. The most cost effective option for replacement is to increase the water production capacity of the Row River plant. The planned improvements for this expansion phase will replace the current 2 million gallon a day sand filtration unit with membrane treatment units that can treat 4 million gallons a day. (http://www.cottagegrove.org/publicworks) Researched 10/21/08

In 2006 the city purchased The Middlefield Golf Course. Several hundred thousand gallons of purified effluent from the newly upgraded Row River wastewater treatment plant are used to water all the grass and the fairways.

Currently Cottage Grove residents pay 1.2 cents per gallon for the first 1,000 gallons of water and $1.25 for each additional 1,000 gallons. The storm drain utility fee is $3.20. [http://www.cgsentinel.com dated May 28/2008] Researched 10/21/2008

Creswell

Creswell has three water sources: the Coast Fork of the Willamette River and two well fields which draw off two aquifers at a depth from 54' to 197'. In 2007 ongoing testing revealed slightly elevated levels of arsenic. The city is trying to isolate the problem and if necessary take the well out of production. A new Membrane Treatment Plant is anticipated to be on line late in 2008. This plant will be capable of removing arsenic. {http://www.ci.creswell.or.us} Researched 10/15/2008

Oakridge

Water is supplied by 5 wells located near Salmon Creek and distributed throughout the City by over 22 miles of various sized water mains. Test results for the year 2004 revealed no violations of water standards.

Wastewater is carried through 19 miles of sewer main to a 7-year-old treatment plant. The removal of pollutants prior to discharge is consistently over 95%. {http://www.ci.oakridge.or.us} Researched 10/21/08

Florence

In 2007, the City of Florence supplied water to approximately 8,360 people within the City's water service area. This water came from 12 dunal wells located just north of the City's water treatment plant. City owned, the well field is 80 acres of managed land as recommended in the City's well head protection plan. They are

part of the recently completed expansion of the water treatment plant. This expansion has increased plant capacity from 2 to 3 million gallons per day. The processes now involve a biological iron removal process; this process eliminates the need for chemical removal of iron and replaces the chemicals with an aeration procedure. A relatively new process in the US, Florence is one of two communities in the US using this environmentally friendly approach.

Treated water is stored in two 2 million gallon tanks and the 500,000 gallon reservoir for a total storage of 4.5 million gallons. Florence has been adding fluoride to its water service since the early 1960's. The City has an ongoing water testing program. It collects 9 microbiological samples per month in addition to samples required by the EPA and the Oregon Health Department to ensure the city's drinking water meets state and federal standards. {http://www.ci.florence.or.us/publicworks.} Researched 10/21

Junction City

A state prison and state mental hospital are scheduled to open in 2015, effectively doubling the current needs of its population of 4,965. The proposed site is a 236 acre parcel located between Hwy. 99 and Prairie Road south of Milliron Road. At this time, the city's water resource is used to its maximum. It has six production wells but is unable to use two of them due to high nitrate levels. The wells feed directly into the distribution system. {Register Guard 2/25/07, 2/21/08 and Minutes of the City Council for the City of Junction City 2/20/08}

Funding is in place for $3 million of the $4.9 million projected expense. Costs are covered for at present only for design of the new water and wastewater expansion. Included in the design are a new water source, transmission line and reservoirs in the South Industrial Corridor. A new trunk sewer and pump stations will be constructed to serve the Corridor and acquisition of right-of-way for utility easements. Additionally, included are improvements to Junction City's existing water system, including acquisition of land for a new water treatment facility. When the $3 million now on hand is expended, work will be stopped until the balance of the $4.9 million is made available to the city. (The Register Guard 2/25/07, /2/21/08 and Minutes of the City Council for the City of Junction City 2/20/08)

Coburg

The City plans to construct a $19 million sewage treatment system to replace individual septic tanks. Necessary to protect the city's wells from nitrate contamination and to allow new development, the sewage treatment system will use primary treatment tanks at each residence or business to convert solid waste into liquid that can then be pumped to a community treatment plant. Filters and biological processes will cleanse the wastewater so the effluent can safely be used for irrigation or discharged into wetlands. Plans are for operation in 2011 if the necessary funding is secured. { Register Guard, 12/11/07}

Small Rural Communities

Lane County has assisted rural communities by obtaining Community Development Block Grants to improve the water supply infrastructure of existing and new water districts. All water systems will become the property of the water districts once construction is complete.
http://www.co.lane.or.us/cao_econdev/water.htm Researched 10/21/08

Blue River

Blue River has received $1 million from the State of Oregon to retrofit an outdated and dangerous well system and to construct a new storage tank as a secondary back-up. The Community Development Block Grant will pay for much needed repairs to a system which has not been improved since 1965.

Mapleton

A state-of-the-art water treatment plant will be completed by the end of 2008. This will replace a deteriorating water treatment system not improved for 20 years. Mapleton's share of the Community Development Block Grant was $750,000.

Row River

This small community of 300 homes will lose service from the City of Cottage Grove in late 2008. With the assistance of the Lane County Community and Economic Development Department, the Row River Water District was created in 2007. Lane County will apply for the same funding as secured for Blue River and Mapleton Water Districts in order to fund installation of a replacement water system.

Committee members: Pat Bitner, Pat Hocken, Pat Russell, Veronika Walton