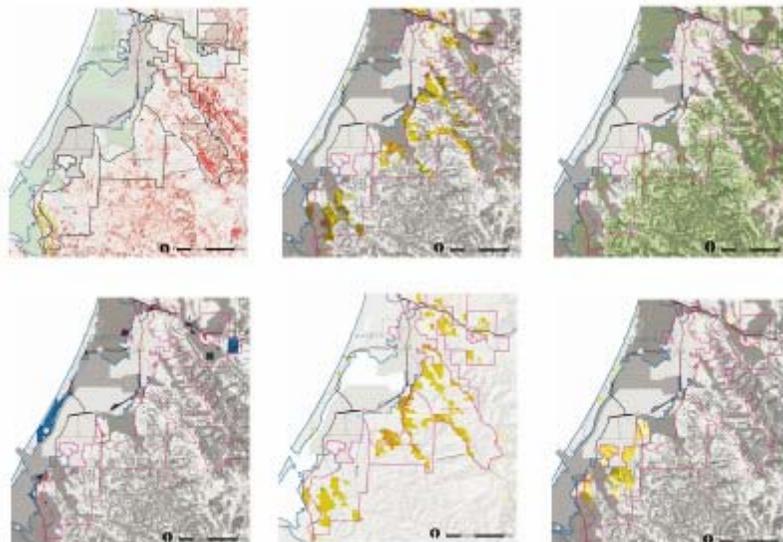


# **Appendix O**

## Urban Studies Area Report

# HUMBOLDT 2025 GENERAL PLAN UPDATE



## Urban Study Areas Report

April 2005 Draft

A Discussion Paper for  
Community Workshops

*Prepared by*

Humboldt County Department of  
Community Development Services

## Urban Study Areas

### Background

The purpose of this report is to provide for the review of **Urban Study Areas**, areas where water and/or sewer systems exist or may be appropriate to consider. The purpose of defining study areas is to provide for areas where more detailed analysis is appropriate, and to review in more detail the development capacity and servicing issues of these areas. The study areas are intended to be inclusive of areas where services may be feasible to provide, rather than to suggest all lands within these areas should be committed to development.

Identification of these areas will allow the County to work with the affected service providers to assess infrastructure capabilities and constraints, and to develop plans for the timing and financing of services. The results of these assessments will be the basis for suggesting scalable development alternatives, including development timing policies.

Roadway circulation is another key consideration to be addressed in more detail within these areas. Police, fire, stormwater management, and assessing the impacts of development within these areas will also need to be addressed.

Our current estimate of development capacity within these areas totals to about 16,000 dwelling units, based on preliminary plan designations and currently identified constraints resulting from the Sketch Plan Alternatives analysis. This estimate will be refined by conducting a more detailed site inventory and constraints analysis. It does appear, however, that these study areas have more than sufficient potential capacity to accommodate the 3,200 to 6,400 units current population projections estimate are needed for the entire unincorporated County area. In addition, in the rural and resource areas there is a capacity of about 12,000 units; however, for a variety of reasons, buildout in such areas is expected to be a small fraction of plan capacity, on the order of 10%, or 1,200 units.

Within the **Urban Study Areas**, 3 sub-areas are defined:

- 1) **Urban Service Study Areas**
- 2) **Water Study Areas**
- 3) **Potential Water Study Areas**

**Urban Service Study Areas** are areas where sewer and water exist or may be feasible to provide, and urban planned densities greater than one unit per acre are appropriate to consider.

**Water Study Areas** are those areas where water service exists or may be feasible to provide, and planned densities less than one unit per acre are appropriate to consider. Sewer service to these areas is not anticipated within the time frame of the plan or is unlikely at any time because of existing buildout patterns and or terrain.

**Potential Water Study Areas** are those areas where water service or the authority to provide it does not exist but may be desirable to consider for planned water service.

SUMMARY REPORT:  
CITY AND DISTRICT WATER AND SEWER SERVICE CAPACITIES  
IN HUMBOLDT COUNTY

Prepared By  
Humboldt County Department of Community Development Services

Revised Preliminary Draft - October 12, 2004

**EXECUTIVE SUMMARY**

The capacities and surpluses available for additional growth were determined for Cities and service districts within the county that provide domestic water, sewer, or both. Additionally, the potential number of additional residential units under the existing General Plan was determined, and an assessment was made of what portion of the service providers' surplus capacities might be taken up by development that is currently allowed. Service districts may be categorized as follows:

Districts with adequate capacity to service existing vacant parcels in their service area and in their serviceable area/sphere: Humboldt CSD (water, Note: sewer in some area may be constrained by lack of major infrastructure), Hydesville (water only), McKinleyville CSD, Orick (water only), Redway, Willow Creek (water - subject to planned improvements).

Service Districts which currently do not have sufficient capacity for serving all vacant parcels within their service area and are at or near their current capacity: Garberville, Loleta, Miranda, Palmer Creek (Note: see Fortuna), Phillipsville (water only), Riverside CSD, Westhaven (water only), Weott.

Shelter Cove is somewhat unique in that it has a great number of underdeveloped or vacant parcels. Within the Resort Improvement District's boundaries there is the potential for 3,906 additional units for water service and 1,895 additional units for sewer service. Available capacities are 600 connections for water and 225 connections for sewer

This report also researched the potential for incorporated Cities within the county to serve areas adjacent to their city boundaries and within their potential service areas. Following are city-specific issues related to providing service within the County jurisdictional area:

**Arcata:** The City opposes new water extensions in the Jacoby Creek area. The district is to become a part of Arcata's water system once the existing bond is paid. Arcata is not interested in serving the Bracut area in the near future, though it is within their sphere. The Sunnybrae/Golf Course Road area has limited water capacity so the City requests low density along Buttermilk Lane and that there be no new water connections in the Sunnybrae area by the golf course (in the sphere but not City limits). This is a "water only" area. The City has no intentions for annexations or extension of sewer service to this area. The Fickle Hill area is within the City's sphere, but there is no City water service to this area. The City may request to have this area removed from their sphere.

**Blue Lake:** The City is currently in the process of developing an annexation proposal. They are looking at two areas: 1) The area within their sphere south of Hwy 299; and 2) The area within their sphere north of Hwy 299. They may actually combine these areas into one proposal to LAFCo and "square" off the boundaries of the current sphere. The City has proposed land use designations for this area and are currently working on the EIR. The impetus for the annexation was from concerned citizens as to the future development around the city. There was a desire to see a definite distinction between Blue Lake and Fieldbrook/Glendale with some type of greenbelt. There currently is water only north of HWY 299 and water and sewer south of HWY 299. Water capacity is fine (two storage facilities currently) and the City believes they can serve the areas proposed for the annexation within their sphere.

**Eureka:** The City does not have any current plans for annexation; however, if the County develops land use plans that are inconsistent with the City's "strategic visioning process", they may want to annex. They want some type of control over ultimate buildout scenarios. They are interested in how the City will handle parks, traffic, small commercial facilities and services.

The city is investigating the sewer treatment plant's capacity next year. It is likely that the treatment plant will reach capacity before the Martin Slough interceptor is built (which they thought they would be in construction by 2006).

**Fortuna:** The State forced Fortuna to accept Palmer Creek into sphere and take sewage.

Fortuna requires all proposed annexations to be up to Fortuna sewer/water/roads standards and would require a new assessment district where there are deficiencies. The Carson Woods area gets water from the City and the area has an interest in subdivision. The area has prescriptive easements and a hodge podge of water line laterals. Palmer Creek area is constrained by a contractual agreement for sewage with the City.

**Rio Dell:** Scotia is currently not in the CPA with Rio Dell (they are not in any CPA boundary). The town of Scotia is owned by Pacific Lumber (the houses are rented to PL employees). We may want to revise the boundaries to include Scotia in the planning area. The majority of Scotia is zoned Unclassified; however, the commercial and industrial areas were recently rezoned to allow for expansion and/or retrofits of the mill site. The town of Scotia is served by a private water and sewer system. Rio Dell has their own water and sewer system and there is no discussion of "merging" these systems (Jim Grabow believes that their system is better than Rio Dell's); however, there has been some discussion of annexation of Scotia into the City boundaries. At the least, Scotia should be added to the community planning area. The City was looking at the Monument Road area, old Eel River Sawmills (north of Hwy 101) and agricultural lands NW of HWY 101 for future annexation sites. Planning stated that the ag areas NW of Hwy 101 were in the flood plain and on prime ag soils, and not a good candidate for annexation. The City sees the Eel River Sawmills site as a future industrial park (currently not in their sphere). Currently there are no industrially zoned lands in Rio Dell. No areas have been dedicated for Big Box Development either. The City is limited to 40 new water and sewer hookups through 2007 from RWQCB until they can develop an alternative sewage disposal system (Their wet weather storage system is over capacity. Designed for 1.2 million gallons and had over 3 million gallons this year during storms). The City currently issues 10 new building permits per year. They have recently implemented a pilot program that utilizes an infiltration system. The City draws their water directly from the Eel River using mobile pumping system. They were recently approved for the installation of a permanent water intake system up to 2.67cfm. The City has hopes of eventually adding some highway commercial or industrial (50-100 year time frame) as they currently have none.

**Trinidad:** There is no sewer service in the City of Trinidad, and no immediate plans to have sewer. The soils within the City have been conducive to on-site septic and the Health Department has been willing to work with property owners with existing lots to accommodate development. The city gets their water from Lufenholtz Creek (primary source) and Mill Creek (secondary source); both intake and water storage areas are located outside the city limits. Water capacity is not a problem; it is water storage. They currently can store approx. 300,000 gallons of water and have plans to increase this to 1,000,000 gallons (within the next 2-3 years). Currently there is some water delivery along Westhaven Drive where city water lines connect from storage facility at Lufenholtz Creek. Water service along Westhaven Dr. was approved during the original LCP hearing process. The City never intended to expand service to this area, however. Some residents did connect to the City system (different rate schedule dependent upon whether you are in the city limits). In the following years, LAFCo determined that new water connections could not be approved to residents outside the city limits. New water connections are now prohibited by LAFCo to this area unless they are annexed into the City.

The City believes that logical areas to be annexed in the future would be north on Patrick's Point Drive and Stage Coach Road and the Baker Ranch area. The sphere would contain both Mill Creek and Lufenholtz Creek so that they can continue to comment on development around their water source. The City is interested in an Area of Influence to protect the watersheds from which they draw their water.

Sketch Plan Alternatives should be developed and considered with respect to the ability of current service providers to provide for sewer and/or water. Lack of available services for potential new development areas will highlight the need for examination of infrastructure improvement mechanisms.

## INTRODUCTION

The purpose of this report is to summarize and assess the current status of the sewer and water capacity within Humboldt County as a necessary step for the General Plan Update and for development of General Plan Alternatives. The capacities and surpluses available for additional growth were determined for Cities and service districts within the county that provide domestic water, sewer, or both. These surplus capacities will be used to further refine sketch plans that will form the basis of the General Plan Update alternatives.

Additional objectives of the exercise are to determine potential number of additional residential units under the existing General Plan, and further assess what portion of the service providers' surplus capacities might be taken up by development that is currently allowed. The analysis should reveal whether or not there is sufficient surplus capacity such that higher densities or greater residential development could be supported in some areas with existing service provider capabilities. Finally, the results may be used to determine whether areas to be changed under different General Plan alternatives (Sketch Plans) to higher densities may require planning for major infrastructure upgrades to support increased residential density. The purpose of this report is to identify such issues for discussion with service providers as part of the General Plan Update process.

## METHODOLOGY

Service capacities were obtained from several sources, including numbers reported in the *Building Communities Report* (Dyett and Bhatia, February 2002), Master Service Elements prepared between 1999 and 2003, Master Service Reviews of service providers in the County prepared between 2001 and 2004, sewer capacity data prepared by the Regional Water Quality Control Board (RWQCB) for the years 2000 and 2001 (note: RWQCB staff in January 2004 have indicated that these capacity data are still valid in 2004), one-on-one meetings with major service providers conducted between January and April 2004, and various correspondence and reports submitted by service providers. The amounts of surplus capacities were determined by arithmetic means and the numbers of available connections were calculated based on standard per household consumption rates.

A GIS analysis was used to determine the potential number of additional residential units that could be developed under the existing General Plan. Number of Potential Units for vacant and underdeveloped parcels were calculated using the acreage of the parcel and mid-range density numbers (units per acre) associated with the current General Plan land use designations. Vacant and residential parcels were identified using the existing land use. Vacant commercial and industrial parcels were included in the vacant parcel count, however, they were not included in the potential units calculation because the assumed density is zero for commercial and industrial parcels.

For vacant parcels the number of potential units equaled acres divided by the assumed density under Sketch Plan 1 (asdensk1). Formula:

$$\text{Asdensk1} = \text{Assumed density (units per acre) under Sketch Plan 1}$$
$$\text{Potential Number of units} = \text{acres/asdensk1.}$$

For underdeveloped parcels the number of potential units equaled acres minus a threshold acreage divided by assumed density according to the schedule below.

Underdeveloped parcels were identified and number of potential units calculated as follows:

1) Single and Multi Family Residential parcels great than 1 acre were presumed underdeveloped.

Formula - # of units = (acres - 1)/asdensk1

2) Rural Residential parcels with water service great than 5 acres were presumed underdeveloped.

Formula - # of units = (acres - 5)/asdensk1

3) Rural Residential parcels without water service greater than 10 acres were presumed underdeveloped.

Formula - # of units = (acres - 10)/asdensk1

The potential number of residential units and vacant parcel analysis was not conducted on Cities, as the County's GIS system does not include land use or density range data for parcels within cities.

For service districts, the potential number of residential units on vacant and underdeveloped parcels was calculated for four separate areas defined as follows:

**Currently Served Areas** are those areas within the district's existing network of service lines where there are still some vacant parcels which could readily be hooked up to existing lines. Note, there are a few district where the currently served areas may include a few locations outside of the district's boundaries.

**District (serviceable areas)** are those areas within the district's boundaries would could be connected without major infrastructure investment.

**Spheres** are those areas within a district's Sphere of Influence.

**Outside of Sphere** are areas where some districts are currently serving parcel outside of there sphere of influence, and could potentially have additional connections in these areas.

## RESULTS

### Arcata

Services provided include water and sewer. The numbers of existing connections are: 7051 for sewer (7051 residential) and 5605 for water (4941 residential). Maximum sewer capacity is 2.3 mgpd with current use flow of 1.31 mgpd (per BC Table 5-3) leaving an available flow of 0.99 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.496 mgpd. Maximum domestic water capacity is 4.0 mgpd with a current use flow of 2.8 mgpd leaving an available flow of 1.2 mgpd. The City has recently updated their General Plan and included policies related to extension of services and annexations. The Plan maps out the urban services boundary and a "water only" urban services boundary. This boundary excludes areas inappropriate for urban development and includes areas where the City could extend services and infrastructure beyond their city limits but within the Sphere of Influence. Some of these areas are intended only for partial services (e.g. water only south of the City) and are not to be considered for annexation during the 20-year time frame of the plan. (See Figure GM-a of the Arcata General Plan). The City is currently providing sewer services to some residences in the Glendale area, but would prefer not to expand services in that area. The December 2000 Master Service Element indicates that the City's primary source for domestic water is from HBMWD accounting for 2.5 mgpd. The City is also developing a new water supply to provide for emergency backup and to supplement HBMWD supplies during summer months. A field of wells north of Arcata provide 1.0 mgpd and have a capacity of 4 mgpd from 4 wells. Waste water is treated by the City's waste water treatment plant and marsh system. During the dry season the treatment plant operates at less than 75% of its design flow capacity, however, during wet winter months the inflow of storm water causes flows into the treatment plant to be much higher than normal, a condition which makes it difficult to remove the required 85% of the inflow concentrations. The City needs to reduce sewer inflows in order to increase treatment facility capacity.

<b>ARCATA</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	7051 (7051)	2475	1240
Water	5605 (4941)	1714	N/a

<b>City of Arcata Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	131	200	57	54

#### Arcata Service Issues:

- **Jacoby Creek Water District:** This district provides water service to the residents of Jacoby Creek Water District. They are under contract with the City of Arcata (the city provides the water but does not service their infrastructure). The City opposes new water extensions in the Jacoby Creek area. The district is to become a part of Arcata's water system once the existing bond is paid.
- **Bracut:** Within the City's sphere but currently is not served with water. They are served by on-site well and sewage disposal system. City is not interested in serving them in the future.
- **Sunnybrae/Golf Course Road:** Limited water capacity in this area (last water tank that the City services is located off of Crestwood Lane). City requests low density along Buttermilk Lane and that there be no new water connections in the Sunnybrae area by golf course (in the sphere but not City limits). This is a "water only" area. The City has no intentions for annexations or extension of sewer service to this area.
- **Fickle Hill Area:** Within the City's sphere, but there is no City water service to this area. The City may request to have this area removed from their sphere.

**Blue Lake**

Services provided include water and sewer. Some recent preliminary City plans for future annexations have being developed. The numbers of existing connections are: 480 for sewer (all residential) and 610 for water (approximately 535-560 residential). Maximum sewer capacity is 0.18 mgpd with current use flow of 0.12 mgpd (per BC Table 5-3) leaving an available flow of 0.06 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.022 mgpd. No data are reported for MSR. Maximum domestic water capacity is 0.46 mgpd with a current use flow of 0.28 mgpd leaving an available flow of 0.18 mgpd.

<b>BLUE LAKE</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3	Available Connections based on the March 2002 Draft Master Service Element	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	480 (480)	150	300	55-67
Water	610 (535-560)	257	300-500 ("additional storage may be necessary").	N/a

<b>City of Blue Lake Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	15	15	7	7

Blue Lake Service Issue:

- The City is currently in the process of developing an annexation proposal. They are looking at two areas: 1) The area within their sphere south of Hwy 299; and 2) The area within their sphere north of Hwy 299. They may actually combine these areas into one proposal to LAFCo and “square” off the boundaries of the current sphere. The City has proposed land use designations for this area and are currently working on the EIR. The impetus for the annexation was from concerned citizens as to the future development around the city. There was a desire to see a definite distinction between Blue Lake and Fieldbrook/Glendale with some type of greenbelt (this may be something to consider when developing Sketch Plan 3).
- There currently is water only north of HWY 299 and water and sewer south of HWY 299. Water capacity is fine (two storage facilities currently) and the City believes they can serve the areas proposed for the annexation within their sphere. According to Wiley Buck, Fieldbrook does not have water lines available at the very NW portion of their sphere, and it would be much easier for the City to serve as they have a storage facility in this area (KG stated that there might be some kind of county CSD that could be set up through LAFCo that could facilitate this).
- Liscomb Hill Road septic system subject to failure – may require a “septic maintenance operating system” permit from the City if annexed.
- Proposed annexation will not affect fire protection services as the Blue Lake Volunteer Fire Department currently serve the areas within their sphere.
- The City does have some I&I issues with regards to sewage capacity during the wet season. The City is actively working to replace aged clay lines over time and utilizing plastic liners in some cases. This should solve their I&I problem and provide for allowance of their full design capacity for planning purposes.

## Eureka

Services provided include water and sewer. According to the Building Communities report, the numbers of existing connections are: 9550 for sewer (7214 residential) and 9550 for water (7214 residential). Maximum sewer capacity is 1.84 mgpd with current use flow of 1.13 mgpd (per BC Table 5-3) leaving an available flow of 0.71 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.0 mgpd. According to the Master Service Element (December 2000) in 1993 the City had approximately 10,500 sewer connections, of which approximately 87% or 9,135 connections, were residential. Maximum domestic water capacity is 6.5 mgpd with a current use flow of 4.4 mgpd leaving an available flow of 2.1 mgpd. The City sewage disposal system has significant inflow and infiltration issues and is in need of upgraded design. Currently in the feasibility/planning stages is the Martin Slough Interceptor project and other upgrades to deal with wastewater disposal issues. The city also accepts wastewater from HCSD for treatment at their STP, and HCSD disposal services provide for the treatment of approximately 1.42 mgpd (up to 30% of the plant capacity). The City faces some significant difficulties with expanded service related to difficulties in operating and maintaining an aging system of collection pipes and numerous pump stations. In the planning stages are efforts to address this situation, including the Martin Slough Interceptor project, which is currently undergoing feasibility and environmental review, but is yet to be funded.

<b>Eureka</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	9550 (7214)	1775	0
Water	9550 (7214)	3000	N/a

Eureka Sphere of Influence - See HCSD

Eureka Service Issues:

- The City does not have any current plans for annexation; however, if the County develops land use plans that are inconsistent with the City's "strategic visioning process", they may want to annex. They want some type of control over ultimate buildout scenarios. They are interested in how the City will handle parks, traffic, small commercial facilities and services.
- The city is investigating the sewer treatment plant's capacity next year. It is likely that the treatment plant will reach capacity before the Martin Slough interceptor is built (thought they would be in construction by 2006). They are not in a panic yet, but do see a need to upgrade/expand in the near future. They don't feel there is an issue with disposing solid materials at this time.
- Infiltration of lines has been a problem for the City sewer system; however, City staff believe that the problem is occurring on private line laterals. They propose trying to find the worst areas and fixing those first as opposed to a complete overhaul of the system (way too expensive).

Ferndale

Services provided include water and sewer. The numbers of existing connections are: 545 for sewer (518 residential) and 723 for water (630 residential). Maximum sewer capacity is 0.75 mgpd with current use flow of 0.25 mgpd (per BC Table 5-3) leaving an available flow of 0.5 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.81 mgpd. Maximum domestic water capacity is 0.5 mgpd with a current use flow of 0.19 mgpd leaving an available flow of 0.31 mgpd. The city has experienced excessive wet weather sewage flows and was the subject of a Clean Water Act citizen's lawsuit. The available sewer connections do not reflect these wet weather flow issues, and the city is pursuing remedies for this problem.

<b>FERNDALE</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	545 (518)	2025	55-67
Water	723 (630)	442	N/a

<b>City of Ferndale Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	0	0	0	0

Fortuna

Services provided include water and sewer. The numbers of existing connections are: 4103 for sewer (3709 residential) and 4382 for water (3988 residential). Maximum sewer capacity is 1.2 mgpd with current use flow of 0.9 mgpd (per BC Table 5-3) leaving an available flow of 0.3 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.27 mgpd. No data are reported for MSR. Maximum domestic water capacity is 1.15 mgpd with a current use flow of 1.1 mgpd leaving an available flow of 0.05 mgpd. Available domestic water appears to be limited for the city. Like Ferndale, the city has experienced excessive wet weather sewage flows and was the subject of a Clean Water Act citizen's lawsuit. The city is working on ways to address this problem.

<b>FORTUNA</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	4103 (3709)	750	675
Water	4382 (3988)	71	N/a

<b>City of Fortuna Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	95	81	46	46

**Fortuna Service Issues:**

- State forced Fortuna to accept Palmer Creek into sphere and take sewage.
- Fortuna requires all proposed annexations to be up to Fortuna sewer/water/roads standards and would require a new assessment district where there are deficiencies.
- Carson Woods area gets water from the City and the area has an interest in subdivision. The area has prescriptive easements and a hodge podge of water line laterals.
- Palmer Creek area is constrained by a contractual agreement for sewage with the City.

**Garberville Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 640 for sewer and 380 for water. Maximum sewer capacity is 0.06 mgpd with current use flow of 0.59 mgpd (per MSR) leaving an available flow of 0.01 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.0 mgpd. Available number of connections per the MSR is 0 for sewer and 0 for water. Maximum domestic water capacity is 0.360 mgpd with a current use flow of 0.219 mgpd leaving an available flow of 0.141 mgpd. MSR suggests the district has some capacity for domestic water, but no surplus capacity for sewer at this time.

<b>Garberville CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Sewer	307	No data	0	Operating within 15% of capacity
Water	380 (no data)		N/a	201

<b>Garberville Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	39	49	27	69
District (serviceable area)	38	48	26	14
Sphere	4	4	3	56
Out of Sphere	0	0	0	0

<b>Garberville Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	28	37	23	10
District (serviceable area)	38	48	26	14
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary Conclusion for Garberville: The 201 available water connections is less than the potential 240 dwelling units possible within the district and existing sphere, but would be sufficient to provide water to the existing district

and service area potential of an additional 180 residential units. Water treatment and storage capacities will need to be increased to accommodate additional demand or to offer fire protection.

**Humboldt Community Services District**

Services provides water and sewer service. The sewage disposal system is a collection system only, and the sewage is delivered to the City of Eureka sewage treatment plant. The numbers of existing connections are: 5767 (5594 residential) for sewage and 6990 (6780 residential) for water. Maximum sewer capacity is 1.84 mgpd with a current use flow of 1.13 mgpd leaving an available flow of 0.81 mgpd. Maximum domestic water capacity is 4.68 mgpd with a current use flow of 2.43 mgpd leaving an available flow of 2.25 mgpd. Current improvement plans call for a water pipeline and water tank projects to replace and augment existing pipeline facilities.

<b>HCS D</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Sewer	5767 (5594)	2025	See Eureka	
Water	6990 (6780)	3214	N/a	

<b>HCS D Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	582	1342	504	2408
District (serviceable area)	698	2299	508	2411
Sphere	6	23	3	2
Out of Sphere	3	232	0	0

- **Service areas outside the district**

<b>HCS D Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	482	1274	294	1662
District (serviceable area)	494	1948	337	1806
Sphere	4	19	2	1
Out of Sphere	2	230	0	0

- \* **Service areas outside the district**

Summary conclusion for HCSD: According to the *Building Communities Report*, the district has 2,025 available sewer connection and 3,214 available water connections. The potential number of additional units in the district's sewer serviceable area is 3,754. The potential number of additional units in the district's water serviceable area is 4,710. These numbers exceed the number of available connections for these services.

**Hydesville Water District**

Services provided include water only. The numbers of existing connections are: 400 (all residential). Available number of connections per the MSR is 100 for water. Maximum domestic water capacity is 0.09 mgpd with a current use flow of 0.07 mgpd leaving an available flow of 0.03 mgpd. Current improvement plans call for a water pipeline and water tank retrofit project to replace and augment existing pipeline facilities. This project will add reliability and redundancy to the system and improve fire flows. There are no capital improvement plans for upgrading capacity of existing facilities. The MSR estimated capacity of 100 additional customers would probably necessitate the drilling of a third well in order to maintain sufficient reserve for peak usage and fire protection.

<b>HYDES-VILLE WD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Water	400 (400)	28	N/a	100

<b>Hydesville Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	68	166	64	103
District (serviceable area)	76	173	70	110
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

Summary conclusion for Hydesville: Hydesville's potential for 283 additional units within their district far exceed the 28 available connections.

**Loleta Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 239 for sewer (226 residential) and 239 for water (226 residential). Maximum sewer capacity is 0.10 mgpd with current use flow of 0.07 mgpd (per BC Table 5-3) leaving an available flow of 0.03 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.032 mgpd. Available number of connections per the MSR is 239 for sewer and 60-70 for water. Maximum domestic water capacity is 0.06 mgpd with a current use flow of 0.06 mgpd leaving an available flow of 0.0 mgpd. There are no capital improvement plans for upgrading capacity of existing facilities.

Given the existence of an approved subdivision for 39 additional lots and the need to have some reserve, there is currently no additional available capacity for sewer for this district. In their MSE, the district indicated that they are in the process of developing a new well and are targeting a capacity of 0.144 mgpd, which would give them an additional 120 connections.

<b>Loleta CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Sewer	239 (226)	75	80-112	Not reported; 0 per district reps
Water	239 (226)	0	N/a	60-70 (120 w/ new well)

<b>Loleta Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	9	28	5	45
District (serviceable area)	10	28	6	78
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

<b>Loleta Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	0	0	5	45
District (serviceable area)	10	28	6	78
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Loleta: Loleta's potential for 106 additional units for water and sewer within their district exceeds the 75 available sewer connections and 0 available water connections. A new well being planned could provide an additional 120 water connections, however, there remains constraints based on availability of sewer services. An existing approved subdivision (Shadowbrook Phase 2 could potentially take up all existing capacity. Loleta CSD in May 2004 passed an ordinance declaring a moratorium on new connections until capacity is increased.

**Manila Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 356 for sewer (336 residential) and 357 for water (336 residential). Maximum sewer capacity is 0.14 mgpd with current use flow of 0.04 mgpd (per BC Table 5-3) leaving an available flow of 0.10 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.085 mgpd. Available number of sewer connections per the LAFCO Master Service Review is: 375. Maximum domestic water capacity is ??? mgpd with a current use flow of 0.15 mgpd leaving an available flow of ??? mgpd. The district has not reported domestic water capacity, but contracts for water from HBMWD, which has ample water. Available sewer capacity based on MSR (2003) data is calculated at 357 connections at this time.

<b>Manila CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Sewer	356 (336)	250	212	357
Water	357 (336)	No data	N/a	"Ample"

<b>Manila Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	91	143	33	61
District (serviceable area)	100	144	34	61
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

<b>Manila Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	20	22	31	52
District (serviceable area)	100	144	34	61
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Manila: Manila's potential for 205 additional units for water and 205 additional units for sewer is within their capacity. Their available 250 sewer connections would be more limiting, as the district's water is supplied by HBMWD which has ample capacity.

**McKinleyville Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 4250 for sewer (4050 residential) and 4513 for water (4310 residential). Maximum sewer capacity is 1.18 mgpd with current use flow of 0.86 mgpd (per BC Table 5-3) leaving an available flow of 0.32 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.0 mgpd. Available number of connections per the MSR is not reported. Maximum domestic water capacity is 2.8 mgpd with a current use flow of 1.19 mgpd leaving an available flow of 1.61 mgpd. The district contracts for water from HBMWD, which has ample water. The district has experienced some dry weather wastewater disposal problems in the past and relies heavily on land application during summer months when the Mad River flow is low. The district is in the feasibility/ planning stages for adding two constructed treatment wetlands, one for polishing domestic wastewater and one for dealing with stormwater on a more community-wide basis. Capital improvement plans call for the addition of additional domestic water storage and some sewer main extensions, both of which would serve to increase capability in the central McKinleyville area which is currently planned and zoned for single family residences by remain undeveloped.

<b>McKinleyville CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Sewer	4250 (4050)	800	0	Not reported
Water	4513 (4310)	2300	N/a	Not reported

<b>McKinleyville Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	394	1299	298	1594
District (serviceable area)	432	1447	305	1597
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	1	1

<b>McKinleyville Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	371	1246	164	1314
District (serviceable area)	371	1246	164	1314
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for MCSD: MCSD's potential for 3044 additional units for water and 2560 additional units for sewer exceeds their available capacities of 2300 for water and 800 for sewer.

**Miranda Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 88 for sewer (all residential) and 135 for water (all residential). Maximum sewer capacity is 0.05 mgpd with current use flow of 0.03 mgpd (per BC Table 5-3) leaving an available flow of 0.02 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.001 mgpd. Available number of connections per the MSR is: not reported. Maximum domestic water capacity is 0.06 mgpd with a current use flow of 0.06 mgpd leaving an available flow of 0.0 mgpd. The district has reported no surplus capacity for sewer or water at this time.

<b>Miranda CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Sewer	88 (88)	50	2	0
Water	135 (136)	0	N/a	0

<b>Miranda Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	19	51	8	17
District (serviceable area)	23	86	8	17
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

<b>Miranda Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	18	50	3	10
District (serviceable area)	23	86	8	17
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Miranda: Miranda's potential for 17 additional units for water and 17 additional units for sewer exceeds their available capacities for these services.

**Phillipsville Community Service District**

Services provided include water only. The numbers of existing connections are: 69 (69 residential). Available number of connections per the MSR is 0 for water. Maximum domestic water capacity is 0.04 mgpd with a current use flow of 0.04 mgpd leaving an available flow of 0.0 mgpd. There are no capital improvement plans for upgrading capacity of existing facilities.

<b>Phillipsville CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Water	69 (69)	0	N/a	0

<b>Phillipsville Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	26	11	5	2
District (serviceable area)	28	13	10	9
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Phillipsville: Phillipsville 's potential for 22 additional units for water exceeds their available capacity of 0 for water.

**Orick Community Service District**

Services provided include water only. The numbers of existing connections are: 142 (126 residential). Available number of connections per the MSR is 36 for water. Maximum domestic water capacity is 0.18 mgpd with a current use flow of 0.05 mgpd leaving an available flow of 0.13 mgpd. There are no capital improvement plans for upgrading capacity of existing facilities. Funding in order to design and construct a wastewater system for the district is currently being explored according to the 2003 MSR.

<b>Orick CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Water	142 (126)	185	N/a	36

<b>Orick Water Service Areas</b>

Area	# of Vacant Parcels in Service Area	# of Potential Units on vacant parcels	# of Underdeveloped Parcels in Service Area	# of Potential Units on underdeveloped parcels
Currently Serviced (parcels)	40	30	9	37
District (serviceable area)	56	56	16	66
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

Summary conclusion for Orick: Orick's potential for 122 additional units for water in the serviceable area is within their available capacity of 185 for water as reported in *Building Communities*, but exceeds the 36 available connections reported in their MSR .

### **Palmer Creek Community Service District**

Services provided include water only. The numbers of existing connections are: 110 (110 residential). Available number of connections per the MSR is 0 for water. Maximum domestic water capacity is 0.06 mgpd with a current use flow of 0.02 mgpd leaving an available flow of 0.04 mgpd. There are no capital improvement plans for upgrading capacity of existing facilities.

State forced Fortuna to accept Palmer Creek into sphere and take sewage (see discussion above on Fortuna). Fortuna requires all proposed annexations to be up to Fortuna sewer/water/roads standards and would require a new assessment district where there are deficiencies. Palmer Creek area is constrained by a contractual agreement for sewage with the City.

Palmer Creek CSD	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Water	110 (110)	57	N/a	Not reported

<b>Palmer Creek Water Service Areas</b>				
Area	# of Vacant Parcels in Service Area	# of Potential Units on vacant parcels	# of Underdeveloped Parcels in Service Area	# of Potential Units on underdeveloped parcels
Currently Serviced Area (parcels)	28	100	50	175
District (serviceable area)	28	100	50	175
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

Summary conclusion for Palmer Creek: Palmer Creek 's potential for 275 additional units for water exceeds their available capacity of 57 for water.

**Redway Community Services District**

Services provided include water and sewer. The numbers of existing connections are: 450 for sewer (all residential) and 611 for water (all residential). Maximum sewer capacity is 0.19 mgpd with current use flow of 0.17 mgpd (per BC Table 5-3) leaving an available flow of 0.02 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.0 mgpd. Available number of connections per the MSR is 0 for sewer and 0 for water. Maximum domestic water capacity is 0.425 mgpd with a current use flow of 0.2 mgpd leaving an available flow of 0.225 mgpd. The MSR (2003) reports that at the present time 40% of the wastewater capacity is being used by 524 existing connections.

<b>Redway CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Sewer	450 (450)	50	0	786
Water	611 (611)	321	N/a	371

<b>Redway Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	97	136	70	188
District (serviceable area)	101	153	70	188
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

<b>Redway Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	53	99	61	163
District (serviceable area)	101	153	70	188
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

Summary conclusion for Redway: Redways's potential for 341 additional units for water and 341 additional units for sewer exceeds their available capacities of 321 for water and 50 for sewer. The District is currently in the process of developing a five to twenty year plan. This plan includes a proposal for the Water System to upgrade the water transmission and distribution lines.

Reserves are set aside for completion of this proposal, however, they are not addressed in the adopted budget below.

Wastewater services for the Redway community services District are at 100% capacity. According to March 1994 Wastewater System Improvements Engineering Report by SHN, design flow for Year 2015 equals 186,900 gpd (a capacity of .19 mgd) and according to their MSR report, the average dry weather flow of the wastewater system is .19 mgd. An engineering study should be performed to evaluate expansion measures for the Redway Wastewater treatment facility. Based upon discussions with the operator, it is understood that the main issue to be addressed is related to the hydraulic capacity of the system. The District believes that the lower number for available sewer connections is based on a faulty flow meter and that they currently have about 40% capacity available during the dry season. The most recent information submitted September 1, 2004 by the district indicates an average flow of 118,671 g/d and a design capacity of 186,000. Average daily use per connection with 450 connections was 264 g/d. At this usage rate, the district would have approximately 255 available sewer connections, which is sufficient to serve vacant and underdeveloped parcels within their serviceable area.

**Rio Dell**

Services provided include water and sewer. The numbers of existing connections are: 1036 for sewer (990 residential) and 1083 for water (1055 residential). Maximum sewer capacity is 1.0 mgpd with current use flow of 0.41 mgpd (per BC Table 5-3) leaving an available flow of 0.59 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.032 mgpd. Available number of connections per the MSR (not reported). Maximum domestic water capacity is 0.5 mgpd with a current use flow of 0.3 mgpd leaving an available flow of 0.2 mgpd. The State has a 40-unit moratorium on building in the city for the next four years (Times-Standard 3-18-04). In 2003 the City received a \$5M grant to update the water system, including adding a new tanks, new water main pipes and hydrants.

<b>RIO DELL</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Sewer	1036 (990)	1479	532	No data
Water	1083 (1055)	286	N/a	No data

<b>City of Rio Dell Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	5	5	4	1

**Rio Dell Service Issues:**

- Scotia is currently not in the CPA with Rio Dell (they are not in any CPA boundary). The town of Scotia is owned by Pacific Lumber (the houses are rented to PL employees). We may want to revise the boundaries to include Scotia in the planning area. The majority of Scotia is zoned Unclassified; however, the commercial and industrial areas were recently rezoned to allow for expansion and/or retrofits of the mill site.
- The town of Scotia is served by a private water and sewer system. Rio Dell has their own water and sewer system and there is no discussion of “merging” these systems (Jim Grabow believes that their system is better

than Rio Dell's); however, there has been some discussion of annexation of Scotia into the City boundaries. At the least, Scotia should be added to the community planning area.

- Jim Grabow stated that the City was looking at the Monument Road area, old Eel River Sawmills (north of Hwy 101) and ag lands NW of HWY 101 for future annexation sites. Tom/Kirk stated that the ag areas NW of Hwy 101 were in the flood plain and on prime ag soils, and not a good candidate for annexation. The City sees the Eel River Sawmills site as a future industrial park (currently not in their sphere). Currently there are no industrially zoned lands in Rio Dell. No areas have been dedicated for Big Box Development either.
- The City is limited to 40 new water and sewer hookups through 2007 from RWQCB until they can develop an alternative sewage disposal system (Their wet weather storage system is over capacity. Designed for 1.2 million gallons and had over 3 million gallons this year during storms). The City currently issues 10 new building permits per year. They have recently implemented a pilot program that utilizes an infiltration system .
- The City draws their water directly from the Eel River using mobile pumping system. They were recently approved for the installation of a permanent water intake system up to 2.67cfm.
- The City has hopes of eventually adding some highway commercial or industrial (50-100 year time frame) as they currently have none.

**Riverside Community Service District**

Services provided include water only. The numbers of existing connections are: 96 (71 residential). Available number of connections per the MSR is 3 for water. Maximum domestic water capacity is 0.06 mgpd with a current use flow of 0.03 mgpd leaving an available flow of 0.03 mgpd. The district has little resources for expansion.

<b>RIVERSIDE CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.	Available Connections based on MSR
Water	96 (71)	42	N/a	3

<b>Riverside Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	28	25	4	0
District (serviceable area)	32	29	4	0
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Riverside: Riverside 's potential for 29 additional units for water within their available capacity of 42 for water.

**Shelter Cove Resort Improvement District**

Services provided include water and sewer. The numbers of existing connections are: 287 for sewer (all residential) and 343 for water (324 residential). Maximum sewer capacity is 0.17 mgpd with current use flow of 0.06 mgpd (per

BC Table 5-3) leaving an available flow of 0.11 mgpd. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.114 mgpd. No data are reported for MSR. Maximum domestic water capacity is 0.50 mgpd with a current use flow of 0.08 mgpd leaving an available flow of 0.42 mgpd. The higher number of available connections for sewer is based on average existing use per connection, which may be low for this area as a number of home are used as vacation or second homes. There are no capital improvement plans for upgrading capacity of existing facilities.

<b>SHELETER COVE RID</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection -400 gpd/connect.
Sewer	287 (287)	225	285-585
Water	343 (324)	600	N/a

<b>Shelter Cove RID Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	4029	3852	8	54
District (serviceable area)	4029	3852	8	54
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

<b>Shelter Cove RID Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	2025	1885	40	10
District (serviceable area)	2025	1885	40	10
Sphere	0	0	0	0
Out of Sphere	0	0	0	0

Summary conclusion for Shelter Cove: Shelter Cove's potential for 3906 additional units for water and 1895 additional units for sewer exceeds their available capacities of 600 for water and 225 for sewer.

### **Trinidad**

Services provided include water only. The numbers of existing connections are: 308 (all residential). Available number of connections per the MSR is 100 for water. Maximum domestic water capacity is 0.09 mgpd with a current use flow of 0.07 mgpd leaving an available flow of 0.03 mgpd. The city currently serves some users out of

their district. The Master Service Element prepared for the City by Winzler and Kelly in 2001 found the system at 78% capacity with 308 connections. The approximate maximum capacity of Leffenholtz Creek was determined to be 39.5 million gallons/year with a current use of 30.9 million gallons/year (MG/yr) and current per capita demand of 0.1 MG/yr. This equated to 86 available hook-ups and the city expected a demand of 40 new water requests in the next 10 years with the City limits and service area. There are approximately 40 vacant lots within the City that could be developed. There are no funded capital improvement plans for upgrading capacity of existing facilities.

<b>TRINIDAD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR	No. Vacant Parcels in Service Area
Water	308 (308)	0	N/a	86	40

<b>City of Trinidad Sphere</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Sphere	20	19	0	0

#### **Trinidad Service Issues**

- No sewer service in the City of Trinidad. No immediate plans to have sewer. The soils within the City have been conducive to on-site septic and the Health Department has been willing to work with property owners with existing lots to accommodate development. Trinidad to implement a “Septic Maintenance Operating System” permit procedures to monitor existing septic systems.
- The city gets their water from Lufenholtz Creek (primary source) and Mill Creek (secondary source); both intake and water storage areas located outside the city limits. They looked at setting up a system to receive water from HBMWSD but it was too expensive so they decided that they would improve their existing system. Water capacity is not a problem; it is water storage. They currently can store approx. 300,000 gallons of water and have plans to bump this to 1,000,000 gallons (within the next 2-3 years). It was primarily pursued because of the need for increased fire protection capabilities but it can also be used to accommodate future development.
- Currently there is some water delivery along Westhaven Drive where city water lines connect from storage facility at Lufenholtz Creek. Water service along Westhaven Dr. was approved during the original LCP hearing process. The City never intended to expand service to this area, however. Some residents did connect to the City system (different rate schedule dependent upon whether you are in the city limits). In the following years, LAFCo determined that new water connections could not be approved to residents outside the city limits. New water connections are now prohibited by LAFCo to this area unless they are annexed into the City.
- Community of Westhaven wants city water but does not want to be annexed.
- The City believes that logical areas to be annexed in the future would be north on Patrick’s Point Drive and Stage Coach Road and the Baker Ranch area. The sphere would contain both Mill Creek and Lufenholtz Creek so that they can continue to comment on development around their water source.

- The City is interested in an Area of Influence to protect the watersheds from which they draw their water. They also suggested that the Sphere of Influence should be watershed based for Lufenholtz and Mill Creek, however, Planning's concerns are that these are not necessarily areas that they plan to service. A possible solution: an overlay zone to help protect City's water source.

**Westhaven Community Service District**

Services provided include water only. The numbers of existing connections are: 199 (197 residential) plus 12 entitlements. Available number of connections per the MSR is 0 for water. Maximum domestic water capacity is 0.08 mgpd with a current use flow of 0.08 mgpd leaving an available flow of 0.0 mgpd. There are no capital improvement plans for upgrading capacity of existing facilities.

<b>WESTHAVEN CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Water	199 (197)	0	N/a	0

<b>Westhaven Water Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	12	12	0	0
District (serviceable area)	141	141	2	1
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Westhaven: Westhaven 's potential for 142 additional units for water exceeds their available capacity of 0 for water.

**Weott Community Services District**

Services provided include sewer. The numbers of existing connections are: 134 for sewer (all residential). Maximum sewer capacity is not reported by the district. RWQCB reported distance to capacity based on 2000/2001 ave. dry max as 0.014 mgpd. Available number of connections per the MSR is: not reported. The district has reported no surplus capacity for sewer at this time.

<b>Weott CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Sewer	134 (134)	No data	35	Not reported

<b>Weott Sewer Service Areas</b>				
<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	18	19	2	15
District (serviceable area)	24	40	4	18
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Weott: Weott's potential for 58 additional units for sewer exceeds their available capacities of 35 for sewer.

### **Willow Creek Community Service District**

Services provided include water only. The numbers of existing connections are: 940 (883 residential). Available number of connections per the MSR is 1000 to 1200 for water. Maximum domestic water capacity is 1.75 mgpd with a current use flow of 1.40 mgpd leaving an available flow of 0.35 mgpd. The district has prepared plans for development of wastewater services in the central business district of Willow Creek utilizing a septic tank effluent pump system and a central treatment plant with subsurface disposal. Onsite wastewater treatment would remain to be used in the remaining areas of the district. Funding for this project remains to be obtained.

<b>WILLOW CK. CSD</b>	Existing Connections (residential)	Available Connections based on BC Table 5-1, 5-3 400 gpd/du sewer 700 gpd/du water	Available Sewer Connections Based on RWQCB Ave. dry max flow & ave. existing use/connection - 400 gpd/connect.	Available Connections based on MSR
Water	940 (883)	500	N/a	1000-1200

<b>Willow Creek Water Service Areas</b>
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<b>Area</b>	<b># of Vacant Parcels in Service Area</b>	<b># of Potential Units on vacant parcels</b>	<b># of Underdeveloped Parcels in Service Area</b>	<b># of Potential Units on underdeveloped parcels</b>
Currently Serviced Area (parcels)	250	326	71	157
District (serviceable area)	280	437	75	167
Sphere	NA	NA	NA	NA
Out of Sphere	0	0	0	0

Summary conclusion for Willow Creek: Willow Creek's potential for 604 additional units for water exceeds their available capacity of 500 for water as reported in *Building Communities*, however, the MSR states that the district could provide for an additional 1000 to 1200 connections. Plans for development of Wastewater Services in the central business district of Willow Creek are described in the April 2002 Preliminary Wastewater/Septage Engineering Feasibility Report. The report states that: "To allow for viable community growth the Willow Creek CSD Board of Directors anticipated the need for solution of wastewater problems associated with additional development in the central business district...to maintain water quality for beneficial uses and for the prevention of nuisance."

The report recommends a septic tank effluent pump system, which would pump wastewater to a central treatment plant and hence be disposed to the subsurface, would be the most cost effective system alternative. Onsite wastewater treatment will remain to be used in the remaining areas of the District.