

Item No. 4
July 14, 2016



TRINITY COUNTY PLANNING DEPARTMENT

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STAFF REPORT

July 14, 2016

From: Carson Anderson, Senior Planner
To: Planning Commission
Re: Continuing Discussion of Countywide Water Resource Policy Changes per Northwest California Resource Conservation and Development Council Input – Potential Recommendations to the Board of Supervisors

Requested Action

In response to a request from the Board of Supervisors, the Planning Commission is being asked to review;

1. The proposed changes introduced at the April 14th meeting.
2. Make a motion to recommend those changes to the Board to take under consideration.
3. Consider upcoming CEQA analysis of same for adoption by the Board at a later date.

Background

The Commission held a workshop session at its April 14, 2016 meeting to discuss possible changes to countywide water resource policy, and received new detail from staff concerning water resource policies in other jurisdictions, as well as a discussion on whether to take the approach of having a separate water resources element versus including the document as part of an update to the County's Conservation Element. The workshop was a follow-up to the Commission's December 10, 2015 meeting at which Mark Lancaster and Sandra Perez of the Northwest California Resource Conservation and Development Council/Five Counties Salmonid Conservation Program (5C hereafter) gave a PowerPoint presentation highlighting deficiencies in the County's current water policies, and that could, in part, create a situation where further regulatory requirements are imposed on the County in an effort to protect listed species. To resolve this, the 5C has provided a list of desirable potential updates to the Open Space and Conservation Element of the General Plan, Zoning Ordinance, and Subdivision Ordinance.

The Board of Supervisors received a similar presentation from 5C on August 4, 2015, and directed Staff to seek the Commission's input on the recommendations put forth by 5C. Attached please find the back-up detail provided the Board at its August 6, 2015 meeting (this was not given to you as part of your April 14th packet) along with the Commission's April 14th staff report (Exhibits A and B).

For the Commission's consideration, following is a synopsis of the policy discussion items touched upon during the April 14th workshop:

- 1) Whether to pursue a Water Resources Element in General Plan;
- 2) Greywater re-use standards (for non-human or incidental human contact);
- 3) Streamlined permitting for rainwater catchment;

4) Surface water use assessment of any surface water diversion proposed for a discretionary development proposal/assessing cumulative demand and effects on

surface water beneficial uses;

5) Water conservation design standards;

6) Required buffer zones from streams;

7) Trinity River as a water source in lieu of Trinity River tributaries;

8) Water resources stewardship education;

9) Updates to Conservation Element policies;

10) Align water purveyor capital improvement plans with desirable water resource policy;

11) Enact a major expansion of Critical Water Resources (CWR) Overlay zoning, and;

12) Specific amendments to County Subdivision Ordinance (including eliminating time extension allowance for dry weather period water supply).

5C Responses at April 14, 2016 Meeting

At staff request, 5C provided a number of corrections and clarifications to statements and questions presented as part of the April 14th staff report to the Planning Commission. In reviewing the detail contained in the April 14th staff report please cross-reference the following summary of 5C responses (please note that the numbering below reflects only those items where corrections or new information was provided by 5C):

2)3) Greywater: The “Water Resources Guide for Landowners” on the 5C web link provides greywater best management practices (BMPs) that can be used in crafting an ordinance. 5C also recommended that the County and State look at what other states are already doing and indicated that eventually the state legislature will need to be lobbied to make the greywater review and permitting standards in Title 24, Part 5 of the California Administrative Code more expansive to make greywater usage allowable “...wherever practical and feasible.” 5C also stated that greywater-related permitting costs for this within our County at present are considered prohibitive. Encouraging voluntary landowner participation is key. This can be incentivized through a County permit fee rebate program advertised by the County (leaflets; web page), with links to 5C web link how-to water conservation guidance (**Exhibit C**). The rebate is granted once the landowner demonstrates that the greywater BMPs were properly implemented.

4) CEQA analysis/cumulative effects analysis and data collection to better evaluate impacts to water resources: A framework for establishing thresholds for significant impacts and cumulatively significant impacts can be found by consulting the “Basin Plan” (i.e., Water Quality Control Plan of the North Coast Regional Water Control Board), Fish & Wildlife findings of effect—including thresholds for adverse effects on threatened fish species. 5C stated that we should assume that we are already at thresholds for impacts due to climate change and other human-induced factors and should work backwards from that assumption to draw conclusions concerning environmental impacts.

5) Stormwater is distinct from water catchment, and, it was noted that the current review process for well permits dates from the 1980s and is insufficient, and that the hydrological studies performed by our Environmental Health Division do not meet the standards 5C proposes.

6) Standards are discussed in clear detail in the back-up provided the Board (**Exhibit A**). 5C noted the conflict amongst the Fish & Wildlife Department, County policies, and Forest Practice Act standards for buffer zones. The Commission was asked to recommend adoption of the Cal Fire water course buffer standards (which reflect statutory requirements per the Forest Practice Act). It was also noted that Cal Fire has regulatory authority to enforce buffer zone compliance. Having a standard enforceable by Cal Fire would bolster the County’s limited code enforcement capabilities at present and remove some of the additional burden on planning staff for performing CEQA review and related enforcement actions.

7) Trinity River as a water source for new development to replace existing stream water diversion: Specific policy language has not been developed by 5C because regulation of waters

within the Trinity River falls under the authority of the Bureau of Reclamation and Corps of Engineers. As was discussed at a subsequent meeting by Brandt Gutermuth (Trinity River Restoration Program) planning for the River is governed by very detailed strategy found in the Trinity River Flow Evaluation Final Report and NEPA Record of Decision (2001), as refined by subsequent modeling studies and assessment guidance. Changing/adding to policy in this context would long-term process calling for much dialogue and requiring formal agreement.

8) 5C noted some progress made in taking some of the actions proposed as part of the water resources stewardship education effort. This includes the interactive map on ArcGIS that is now accessible via the Planning Department website (e.g., flood zone locations, drought conditions, Critical Water Resources zoning overlay locations topography, hydrography).

10) The thresholds related to stream setbacks are actually quite clear and are based on on-going documentation of current threats to water resource quality (e.g., Basin Plan, Fish & Wildlife findings—including impact-mitigation language contained in pending threatened species listings)

11) The “Critical Water Resources” (CWR) label in the Zoning Code would be removed and applied instead to a new set of areas considered water challenged. These newly defined water-challenged area are already essentially defined. The geographical boundaries of the current CWR zoning overlay are based chiefly upon section lines. 5C proposes that the boundaries be determined based on watershed boundaries.

12) Dry weather period water supply testing: An apparent typo in the staff report caused confusion. The text in the last paragraph of the staff report should be disregarded. Staff supports eliminating the time extension allowance for dry weather testing based on the justification provided by 5C.

Additional new information supplementing or revising that which was provided in the April 14th staff report is highlighted as follows:

Proposed Policy / Text Changes to Zoning Ordinance

As referenced in the April 14th staff report the CWR overlay currently applies to isolated areas in the County, chiefly in Hayfork outside the water district service area, and also Douglas City, Browns Creek and Little Browns Creek, Democrat Gulch, and the lower, upper, and east branches of East Weaver Creek. 5C’s recommendation is to extend the current CWR proof of water standards for all future subdivision actions to the entire county (as most residents living outside a community water systems district “...have more challenges meeting water needs in a dry year or drought”—particularly when multiple property owners draw from a common water source).

The existing standard would no longer be called CWR, but would be newly delineated as part of Zoning Code in Zoning Ordinance Section 29.2 – “Critical Water Resource Overlay Zone ‘CWR’” and Section 30 – “General Provisions and Exceptions.” Exhibit D shows the existing text in the zoning code in strikeout format followed by the proposed rewritten section with the wording underlined to highlight the changes. The proposed standards would impose new development standards in regards to water. Criteria for documenting proof of water would be much stricter and would also require a greater level of evidence. More standards for water conservation would be required as well (Exhibit D).

Proposed Policy / Text Changes to Subdivision Ordinance

As also referenced on April 14th, there are a number of proposed revisions to the County's Subdivision Ordinance, some of which carry forward some of the water supply/water availability policy changes referenced in the Zoning Ordinance discussion of CWR. A definition of "Surface

Water" would be added to the definitions in Section 16.08. Sections 16.48.123 and 16.48.124 would be modified "...for clarity and protection of water resources to prevent unsafe division of land..." that might otherwise occur because of the inadequate water supply. The time extension allowance for dry weather period testing also would be eliminated to assure all beneficial uses can adequately be protected. See Exhibit A (for the broader discussion provided the Board and Exhibit E, which focuses only on the changes to the text/policies in the Subdivision Ordinance.

Producing a Standalone Water Resources Element as Part of the General Plan?

In discussion with Staff, the Commission provided direction April 14th on the matter, recommending that updates to the Zoning and Subdivision Ordinances, per 5C input, become the current focus, with a more thorough-going effort on water resources policy documents to come at a later date.

The rationale for a separate general plan element is easily understood. Doing so would give a strong focus to water resource protection needs and draw sharper attention to current threats to water supply (e.g., prolonged drought, extensive cannabis cultivation, and wildland fire) that were not considered, or given inadequate consideration, when the existing Conservation Element to the County's General Plan was adopted in 1973. A fairly small number of county jurisdictions in Northern California have taken this route. The Butte and Plumas Counties Water Resources Elements were looked at and a copy of the Butte County document was provided as an attachment to the April 14th staff report (Exhibit B). Because Trinity County and Humboldt Counties are part of the same watershed 5C asked staff to consider the Humboldt County Water Resources Element as a more germane example (attached for reference as Exhibit F).

Also referenced was the alternative approach of breaking out the water resources discussion as a detailed sub-section in the Conservation Element. That approach was taken by Shasta County. Shasta County grouped ten topics as part of its "Resources Group" in the General Plan, including water resources, agricultural land, timberland, minerals, and energy among others.

Discussion in the Humboldt County Water Resources Element addresses the topics of surface water, groundwater, public water systems, conservation and reuse, import and export of water, watershed planning (including effects from ground-disturbing activities, including but not limited to widespread cannabis cultivation), and hydro-power project relicensing. Separate chapters present general standards applicable to water resources and implementation measures.

A Conservation Element is not a line item in the 2016-2017 fiscal year budget and due to the age of the Conservation Element and the need for major revamping the best approach would likely be crafting a standalone water resources policy document. Policy guidance is all the more important given the enactment of the Medical Marijuana Regulation & Safety Act (MMRSA) and potential County adoption of a commercial cannabis ordinance and permitting process this year or next. Water resource impacts could potentially increase significantly in magnitude were compliant commercial cannabis cultivation activity to be permitted without a clear stepped up ability to eradicate extensive unlicensed non-compliant grows that are causing significant impacts to water resources. Considering this, it is very appropriate that we make selective revisions and wait to embark on a more global change when we are looking at the General Plan as a whole. This will serve to prevent creating inconsistencies between various elements. 5C's recommended changes to existing General Plan Conservation Element text are highlighted on the next page.

It was also recommended that the discussion of water supply in the Open Space Element of the County's General Plan be updated. Statements that appear in the Open Space Element such

as "...Water supply is more than adequate to take care of both agriculture and domestic require-requirements for the foreseeable future.." are contradicted by the 2014 emergency drought declaration adopted by the County.

Conservation Element Policy / Text Updates

Current Text

GOAL 1: Protect streams and surrounding habitats to maintain and improve all beneficial uses of water for present and future generations.

Objective #1: Preserve existing water quantity and quality of streams and lakes by careful planning of future development.

Proposed

Policy 1.1: All future ministerial and discretionary activities should at a minimum maintain beneficial uses of water while protecting existing water rights.

Policy 1.2: Adopt numeric and performance-based stream setback standards that are consistent with California Forest Practices Act stream zones and permitted management activities (provided, however, that legal and/or permitted activities approved by the County in the past are protected in perpetuity). In lieu setbacks may be utilized when incentive-based restoration results in an overall improvement in beneficial uses of water.

Policy 1.3: Develop incentives via a grant program or something similar to encourage existing water users to conserve water, restore stream habitat, reduce impermeable surfaces and/or restore stream habitats.

Policy 1.4: Establish effective incentives via a grant program or something similar to encourage conservation such as but not limited to reducing regulatory review of projects, transfer of density credits, in lieu stream buffer standards, reduction of development fees and costs. Incentivize water use calculation by providing credits to those providing such data.

Current Text

GOAL 2: Work with water districts, mutual water companies and other water purveyors to assure reliable water supplies for present and future generations.

Objective #2.1 Assist water districts, mutual water companies and other water purveyors in developing capital improvement plans that re realistic and based on sound planning and development patterns.

Proposed

Policy 2.1: Direct future growth where sufficient water resources can be provided economically and sustainably.

Policy 2.2: Support districts, as resources allow, in all efforts to improve water delivery efficiency, upgrade infrastructure, maximize the efficient use of water and reclaim or conserve water.

Policy 2.3: Support expansion and/or consolidation of community and individual water projects to the mainstem Trinity River where economically and environmentally practical.

** It should be noted that a further overall goal contained in the 1973 Conservation Element is to develop a comprehensive program to sustain multiple uses of watershed lands.

2015-2016 Trinity County Grand Jury Water Committee Report

The County Grand Jury Water Committee Report, publically released on June 30, 2016, notes the significant value associated with Trinity County lakes, rivers and streams as an engine for our local economy (e.g., recreational and tourism dollars spent here), and points out a number of inadequacies in how the County regulates and protects water resources. The investigation notes the marked increase in the number of well permits issued by the County during the course of the last 10 years (64 in 2005 versus 300 during 2015) and the marked decline of water availability and quality in some of the county's streams during the recent drought; the growth in businesses that transport and sell water (a significant amount of this for illegal cannabis cultivation), and significant adverse impacts to water quality that are occurring as a result of surface runoff (**Exhibit G**).

Recent changes to State Water Code section 10720 (*et seq.*), requiring sustainable groundwater management and enforcement, are highlighted, including the adoption of a goal that all groundwater be sustainably managed, carrying capacity analysis conducted, and the establishment of local Groundwater Sustainability Agencies (GSAs). Key among the Grand Jury recommendations are tightened policies on the regulation of wells, including the testing of well water quality and quantity, establishment of sustainability goals for the County—particularly for water providers—based on a countywide study of carrying capacity, and the prompt adoption of a grading ordinance.

Groundwater

Although 5Cs recommendations summarized in this staff report are intended to reduce current impacts on groundwater, the discussion at the April 14th meeting indicated that new County policies would be needed to address the full range of groundwater impacts. Enactment of the policies recommended by the Grand Jury (referenced above), such as carrying capacity analysis and establishment of GSAs would reduce impacts to groundwater. Although many policies employed in other jurisdictions, particularly ones from the Central Valley, are not always feasible in Trinity County, additional options that could be studied include integrated water resource planning approaches, enactment of groundwater conservation and management ordinances (to address issues such as water transfers that could potentially adversely affect groundwater resources) (e.g., Butte County Water Resources Element), requiring discretionary projects to utilize a menu of best management practices (BMPs) provided by the County both to increase the pre-development absorption of run-off and to promote groundwater recharge (e.g., Humboldt County Policy WP-P24).

CEQA

The project purpose of the 5C "Trinity County Water Resources Planning Proposal to Supplement the NCIRWMP" is stated as that of minimizing adverse effects on water resources, including significant risks to drinking water and fishery needs, while still accommodating appropriate development. Each of the policy recommendations 1-12 summarized on pages 1-2 of this staff report reflects the project's effort to promote conservation of water and to reduce water resource impacts consistent with the NCIRWMP. The recommendations for revisions to current County water resources policies are based upon an evaluation of historic stream/river flows, watershed elevations and floodplains, community water system intakes and available well data, soil water holding capacity, development data, erosion hazard ratings, soil surveys, and wildlife and habitat considerations.

Per the CEQA Initial Study Checklist (Appendix G), relevant criteria for determining significant impacts to hydrology and water quality would include project actions which would:

- a. Violate any water quality standards or waste discharge requirements;
- b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite;
- d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;
- e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- f. Otherwise substantially degrade water quality;
- g. Place housing within a 100-year flood hazard zone as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation;
- h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows
- i. Expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam, and/or;
- j. Inundation of seiche, tsunami, or mudflow.

The policies proposed by 5C are supported by careful research and are consistent with regional water policy plans and extensive environmental analysis and planning for the Trinity River Watershed found in the Trinity River Flow Evaluation Final Report and NEPA Record of Decision (2001), as refined by subsequent modeling studies and assessment guidance. Those policies would conform to regional and State water quality standards and waste discharge requirements, would improve rather than degrade water quality, and would promote the recharge rather than depletion of groundwater. No policies call for the alteration of the course of a stream or river, or a significant increase in surface runoff or other actions that adversely change surface water runoff absorption rates or drainage patterns; nor are changes in the course or direction of water movement in streams or rivers proposed. Updates to the Subdivision Ordinance do not call for new housing to be located where impacts to existing water resources would be increased, and no policies call for development within known flood hazard areas.

Motion

Staff recommends that the Planning Commission recommend the following actions to the Board of Supervisors, finding that on the basis of the whole record before the Commission, including previous Trinity River Watershed planning and environmental studies, such as the North Coast Integrated Regional Management Plan, further assessment guidance conducted by the North Northwest California Resource Conservation and Development Council/Five Counties Salmonid Conservation Program (5C), and comments received, that the policy changes proposed (project) will not have a significant effect on the environment:

1. Recommend amending Zoning Ordinance Section 29.2 (“Critical Water Resource Overlay Zone”) as proposed in Exhibit C to this staff report;
2. Recommend amending Zoning Ordinance Section 30 D.7 and Section 30 H, as proposed in Exhibit C to this staff report;
3. Recommend amending Subdivision Ordinance Sections 16.08 and 16.08.195 (adding a definition of “Surface Water “), and 16.48.123 (“Public Water Supply”) and 16.48.124 (“Individual or On-Site Water Availability”), as proposed in Exhibit D to this staff report;
4. Recommend taking action amending Goal 1 and Objective 1 of the Conservation Element of the County General Plan by adding Policies 1.1 through 1.4 as proposed on page 5 of this staff report;
5. Recommend amending Goal 2 and Objective 2.1 of the Conservation Element of the County General Plan by adding Policies 2.1 through 2.3 as proposed on page 5 of this staff report;
6. Recommend taking action, as proposed on page 4 of the staff report, to amend Part III (Open Space Considerations) Section G, page 28 of the Open Space Element of The General Plan by deleting the assertion “...Water supply is more than adequate to take care of both agriculture and domestic requirements for the foreseeable future..”
7. Recommend the County take action, consistent with changes to State Water Code Section 10720 (*et seq.*), and the recent 2015-2016 Trinity County Grand Jury Water Committee Report, to establish a policy for the sustainable management of groundwater, including conducting carrying capacity analysis, and establishing well water quality and quantity testing protocols consistent with 5C guidance.

EXHIBIT A

BOS Backup Detail 08/04/15

Presentation to Trinity County on the “Trinity County Water Resources Planning Proposal to Supplement the NCIRWMP”

Background

In April 2007, Trinity County approved entering into an agreement (County contract 07-090) with Humboldt County as part of the North Coast Integrated Regional Water Management Plan (NCIRWMP) to perform a GIS based water resources planning project designed to facilitate a variety of local and regional planning for multiple objectives. The intent was to encourage and facilitate planning on a watershed scale (the mainstem Trinity River below Lewiston Dam) as a component of the NCIRWMP Phase II Work Plan. The focus was on assembling and analyzing relevant physical and social data that could then be used to develop and coordinate local and regional water management goals and strategies. Humboldt County performed a similar analysis for the downstream portions of the mainstem Trinity that lie within its county boundary.

Current and anticipated development activity within target mainstem Community Watershed Planning Areas was analyzed to identify places where water resources would be more likely to be overtaxed or inaccessible. Water is a critical resource and therefore of significant concern. Trinity County's frequent drought cycles and changes in rainfall patterns along with loss of habitat for listed salmon species exacerbate water management issues. The current threatened status of Coho salmon, in particular, poses significant concerns for decision makers because if its listing degrades to endangered, development and routine physical projects will be exponentially more difficult and costly to achieve. In the rural, economically disadvantaged communities of the Counties, the consequences of a listing would be dire. Therefore, County decision makers recognized the need to begin analyzing and addressing water resources needs as well as current and potential conflicts. Three scenarios were assessed: current conditions; continued development based on ministerial development patterns; and future development patterns based on rezoning some lands (in a manner consistent with actual then-recent requests for rezoning and general development activity). Most of the data analyzed assembled for this project was current to 2008. In order to facilitate the analysis, physical data was input into simple models for water availability to assess conditions within target areas. These approaches can be updated with current information using the tools and templates developed in the assessment. Information on each target area along with the simple model results and narrative summaries were compiled into a series of Technical Reports. Areas where the majority of factors would more easily accommodate development relative to water resources were illustrated. General recommendations based on the data analysis were developed in 2009 & 2010. The purpose of these recommendations was to minimize adverse effects on water resources and still accommodate development. Recommendations were provided, along with the data and final project report “Water Resources Planning in the Mainstem Trinity River Watershed: A Pilot Local General Plan Process & Template of the NCIRWMP Planning Grant” (Water Resources Mainstem report), to local decision makers, land use planners, and local service districts. Members of the public could access this information via the County Planning Department (due to the total size of the files, the full GIS dataset and maps are not available on CD or DVD). This work was completed by the Natural Resources Planning Division of the Planning Department, by staff working on the Five Counties Salmonid Conservation Program (5C). The results of this effort indicated that many areas within the County were at significant risk of not meeting beneficial uses for water (e.g., drinking water, fishery needs) and that the Weaverville area was already not meeting beneficial uses of water.

Several recommendations were made specifically for the County such as:

- developing a Water Resources Element as part of the General Plan in order to reduce potential conflicts between meeting beneficial uses of water and development;
- developing a County Ordinance establishing grey water re-use standards for non-human and/or incidental human contact uses such as landscaping, irrigation, or fire protection;
- encouraging rooftop water capture systems (for landscaping, irrigation, fire protection, etc) by developing simple, standardized plans, streamlining building permits requirements, and minimizing permit costs;
- assessing the cumulative demand and effects on stream beneficial uses when reviewing all discretionary development proposals that would consider demands of both existing and proposed development;
- conducting a surface water use assessment of any surface water diversion proposed for a discretionary development proposal;
- requiring water conservation design standards for all discretionary development activities that are not on community water systems to ensure that residents have sufficient potable and fire protection needs while not adversely impacting instream needs;
- amending the Trinity County Zoning Ordinance to require stream setbacks to help protect beneficial uses of water; and
- to the extent practical and feasible, utilizing Trinity River as a water source for new development and to replace existing stream water diversions.

These concepts were the results of the Water Resources Mainstem report completed in 2010. Specific tools to achieve those concepts were still needed to implement the recommendations. In January 2014, the County authorized the 5C, since transferred from the County to the non-profit Northwest CA Resource Conservation & Development Council, to pursue a grant through the North Coast Resource Partnership (formerly the NCIRWMP) via Resolution 2014-13 in order to create many of the actual tools mentioned in the Water Resources Mainstem report recommendations. The intent was that the tools would then be presented to the County for consideration. A proposal to create these tools and conduct similar work with local community water providers was approved by the NCRP for which a grant agreement was executed in April 2014. The work was completed in March 2015. The activities performed under that agreement "Trinity County Water Resources Planning Proposal to Supplement the NCIRWMP" (Water Resources Planning Proposal) that pertain to the County is what will be presented to the County Board of Supervisors for this Agenda Item.

Presentation Overview

Since the original assessment completed in 2010 of data through 2008, several factors changed in the County including the current drought that impacts individual landowners as well as community service districts and the boom of marijuana cultivation that has resulted in large scale changes primarily on undeveloped land with many adverse impacts on surface water. These more recent developments definitely exacerbated the need to develop tools to respond to water resources concerns in order to prevent unmet potable water demands on a wide scale, imperil endangered salmon populations, and leave the county more vulnerable to devastating fires. However the recent drought and marijuana boom did not create the problems outlined in the 2010 assessment to the County nor did they significantly change the strategy originally outlined in that assessment. The work completed in 2015 under the recent Water Resources Planning Proposal builds on the work completed in 2010 as part of

the Water Resources Mainstem report. The aspects of the 2015 work that are pertinent to the County will be summarized as follows:

1. Brief overview of sections of the current County General Plan that address water resources including: the Land Use, Open Space, and Conservation Elements, the five Community Plans, the Zoning Ordinance, and the Subdivision Ordinance.
2. Brief overview of the “Water Resources Planning in the Mainstem Trinity River Watershed: A Pilot Local General Plan Process & Template of the NCIRWMP Planning Grant” (Water Resources Mainstem report) that was completed in 2010 for background.
3. Synthesis of the information from the County planning documents, community water providers’ water master plans, and the Water Resources Mainstem report to assess the current planning approaches for managing water resources within the county.
4. Recommendations for the County Planning Commission and Board of Supervisors:
 - a. Expansion and/or refinement of Critical Water Resources overlay zoning.
 - b. Revisions to Subdivision Design Standards.
 - c. Revisions to the sections on proof of water in the Subdivision Ordinance.
 - d. Water conservation method landowner recommendations for discretionary projects.
5. A user friendly support network online resource library for landowners and the development community to facilitate good water resources stewardship.

These tools were drafted specifically for Trinity County and are not merely a slightly edited version of another County’s policies. These tools recognize that, unlike many of the larger counties in the North Coast region, Trinity County does not have a contemporary General Plan. It also has a tiny Planning Department staff of one planner (currently vacant) and a part-time administrative assistant and one code enforcement officer.

The presentation is meant to be interactive with the Board of Supervisors so that questions may be asked as material is presented. After the presentation, 5C staff would like feedback and direction from the Board of Supervisors on how to proceed with pursuit of the recommendations outlined.

Introduction

Trinity County is made up of a geographically dispersed group of rural communities, which are entirely disadvantaged, that collectively manage a large wealth of natural resources including threatened coho and other anadromous species. Water is a key resource of the county. A significant amount of the Trinity River flow is diverted south to the Central Valley Project and other state water projects. In the county seat of Weaverville, the main water provider – Weaverville Community Services District – has been near or at maximum capacity of water supply during the summer in the last several years. In another community, Lewiston, there are several disparate water providers, many of which have rudimentary systems that are in need of technical assistance. Many rural landowners do not have the option of relying on community water providers and must instead rely on instream pumps or wells. Some landowners are in watersheds that have exceeded the available surface flow and have to import water during the peak summer months. In recent years, the county has experienced a boom of marijuana cultivation that has resulted in large scale changes primarily on its undeveloped land with many adverse impacts on surface water.

On a large scale, these increasing demands on water, lack of surface water supply and snowpack, and projected climate change have the collective potential to result in unmet potable water demands on a wide scale, imperil endangered salmon populations, and leave the county more vulnerable to devastating fires. 2013 and 2014 were amongst the driest years on record in this region. Snowpack is practically non-existent. Landowners that already experience water shortages during the summer will no doubt have to scramble to provide for their household potable water needs. The dry climate also does not bode well for salmon, particularly threatened coho, which rely on high winter flows to migrate upstream.

The County is currently not prepared to address these issues. Unlike many of the larger counties in the North Coast region, the County does not have a contemporary General Plan. It also has a tiny Planning Department staff of one planner and a part-time administrative assistant.

In order to assist the County in responding to the drought, this project was proposed to summarize pertinent water resources management policies. It also proposed to develop recommendations on ways to improve policies and better manage water resources for the review and consideration of the County and local water providers. Under this proposal, strategies for improving water use efficiency and conservation would also be developed. The Council would work with community water providers to: engage in water conservation education and outreach; develop rate structures where cost recovery is proportional to water use; and develop recommendations for increased or additional water supply sources from sustainable and low impact sources. Another key component was the creation of a support network between the County, community water providers, local resource agencies, and the development community (e.g., real estate firms, contractors, and surveyors) that is specifically designed to assist landowners be good water stewards. This would be largely based on online web resources available to all interested parties and the public that would help to bridge the gap between County land use goals and written policies and practical implementation. The following is a list of products/deliverables. Each Task has a set of deliverables in Final Draft format.

List of Tasks and Deliverables

1. Review sections of the current County General Plan that address water resources. This includes the Land Use, Open Space, and Conservation Elements, the five Community Plans, the Zoning Ordinance, and the Subdivision Ordinance.
2. Obtain and review current water master plans from community water providers.
3. Review “Water Resources Planning in the Mainstem Trinity River Watershed: A Pilot Local General Plan Process & Template of the NCIRWMP Planning Grant” (Water Resources Mainstem report) that was completed in 2010 under the NCRP’s Prop 50 Planning grant via subcontract to Humboldt County.
4. Synthesize the information from the County planning documents, community water providers’ water master plans, and the Water Resources Mainstem report to assess the current planning approaches for managing water resources within the county.
5. Develop recommendations for the County Planning Commission and Board of Supervisors:
 - a. Expansion and/or refinement of Critical Water Resources overlay zoning.
 - b. Revisions to Subdivision Design Standards.
 - c. Revisions to the sections on proof of water in the Subdivision Ordinance.
 - d. Water conservation method landowner recommendations for discretionary projects.
 - e. Potential water quantity in lieu options for new discretionary projects.* Upon completion of the review of all current water resources management policies and drought data, it was noted that because of the extent of areas considered to have critically impacted water resources, the development of water quantity in lieu options was not pursued per se. However, the concept of creating financial incentives for use of water quantity in lieu options should be revisited by the County once the current recommendations have been evaluated and, if approved by the County, after most have been implemented.
6. Develop recommendations for community water providers:
 - a. Water conservation education and outreach.
 - b. Development of rate structure where cost recovery is proportional to water use.
 - c. Development of increased or additional water supply sources from sustainable and low impact sources.
7. Create a support network for landowners to facilitate good water resources stewardship:
 - a. Outreach to community water providers, local resource agencies, and the development community to participate in a support network.
 - b. Written plan to convene support network participants and outline roles and responsibilities for assembling and maintaining pertinent information.
 - c. Create support network online resource library and landowner interface

Summary of Trinity County water resources policies

County of Trinity

1. General Plan:
 - a. Land Use
 - b. Open Space
 - c. Conservation
 - d. Community Plans: Weaverville, Hayfork, Douglas City, Junction City
2. Ordinances:
 - a. Zoning
 - b. Subdivision

County of Trinity

1. General Plan:
 - a. Land Use
 - b. Open Space
 - c. Conservation
 - d. Community Plans: Weaverville, Hayfork, Douglas City, Junction City
2. Ordinances:
 - a. Zoning
 - b. Subdivision

NOTE: Only portions of the County's General Plan that are relevant to water resources are included. There are many other aspects of the County's General Plan that are targeted toward other objectives and purposes – such as wildlife habitat and safety – that are also beneficial for and instrumental in the protection of water resources. However, those policies that are specifically intended to protect and manage water resources are highlighted here.

General Plan: Land Use Element

County-wide Goal:

"Environmental

To strive to conserve those resources of the county that are important to its character and economic well-being:

- By assuring that developments occurring on these lands are compatible with the resources.
- By supporting necessary research within the county to understand more fully the relationship between uses of the land and the long-term effects these uses cause.
- By strongly supporting the county as "lead agency" or as an integral participant in any state or federal project within the county so that all agencies are made aware of local desires and all plans are coordinated.
- By utilizing a sound resource-related planning process in decision making.
- By protecting not only rare and endangered species, but also required habitat for the more plentiful species."

Hydroelectric Policies

Goal II

"To protect and enhance the environment of Trinity County.

- By insuring that no watershed transfers occur between streams, or their main tributaries, as designated within the Subdivision Ordinance or Open Space Element of the General Plan."

Environmental Findings and Policies:

- "Stream protection techniques should be developed with the goal being to keep all free-flowing streams in the county in as natural a condition as possible.

- Construction should be encouraged on safe, non-critical natural areas. Floodprone areas should be used for recreation, agricultural, and other resource production activities. Community development should be kept out of floodprone areas. No use should adversely affect the capacity of the stream, river, channel, tributary, or floodway.”

Land Use Designations

“Natural Resource (NR), General

Resorts that are otherwise consistent with Open Space, Resource, Agriculture, or Rural Residential will be allowed in these designations. However, the theme of any new development in these areas must emphasize and enhance the Natural Resource area in which they are located.

Open Space and Conservation designations identify those areas in Trinity County that are essentially non-developed and most appropriately used for resource production, protection of natural values or rehabilitation. Sparse residential development requiring minimal public services is also appropriate in limited areas.

Recreational developments such as campgrounds, recreational vehicle parks, marinas, boat launching ramps, picnic area, resorts, and small businesses serving recreationists should be permitted, to the extent that they do not damage sensitive environmental resources or significantly interfere with the utilization of natural resources of commercial value. Specific land use designations in this category include:

Open Space

Open Space areas are designated to indicate "natural areas" to be protected for scenic, wildlife habitat, and watershed values or for resource rehabilitation. Resource rehabilitation areas should be viewed as interim designations designed to be used for one of the other Natural Resource designations upon rehabilitation. Also included in the Open Space designation are areas of important natural processes, such as unstable areas, floodplain, and other natural hazard areas. Trails, unimproved camps, small mining operations and the like may be compatible on a case-by-case basis.”

Cultural Findings and Policies

“All community services districts (water and sewer districts) should be reviewed for adequacy of services, appropriateness of boundaries, and consideration of future expansion. Where problems are seen, recommendations should be made for the appropriate changes and implemented in coordination with this General Plan. In general, existing boundaries except where development already exists and the need for the extension of the service is evident. The only exception should be where a planned unit development is proposed that can bear the burden of facility expansion or where the maximum ultimate development of the land within the utility district will not exceed the present capacity of the utility.

Density of development should be sparse enough so as not to induce the need for community-wide sewer or water services. Existing services should be upgraded if needed to be adequate for the area served assuming a 3—5% growth rate over the next five years. New developments occurring in rural areas should not be so dense as to require community sewer and water services. If such services are required, then the developer and resident should incur the cost of development and maintenance of the system.”

Policies specific to certain areas

Note: these community plan policies reflect the original policies as described in the General Plan. They are included here to provide a more comprehensive picture of the County policies as captured directly in the General Plan Elements. A summary of water resources policies within the current set of Community Plans are found in separate documents. Those should be reviewed to obtain current relevant policies as well as to gauge the type of changes made to the original policies in different communities. .

Weaverville Policy:

- "2. SERVICES - provide adequate services. Do not allow growth to exceed service capacities.
- a. The County of Trinity will cooperate and coordinate its actions with the various special districts and utilizes serving Weaverville.
 - b. Detailed plans should be prepared for the extension and improvement of services in the Weaverville area, including water supply, fire protection, sewage disposal, traffic circulation, education, and other essential services.
 - c. New developments should be required to conform to the services, expansion and improvement plans, and the project developer should pay the costs of the extensions and improvements necessary to serve his development.
 - d. The demands of new development should not be permitted exceed the capacity of any essential service at any time."

Hayfork Findings:

- "Watershed protection to ensure an adequate and safe water supply for the valley is desired.
- Population densities, when not consistent with the capability of the land and surrounding land uses, result in increased need for public services and decrease the quantity and quality of individual domestic water supplies. This situation has occurred in the Hayfork Valley area.
- Population density and lot size within the Water District is rapidly approaching a point where a community sewer system will be necessary. Both the county and the community of Hayfork would like to avoid this situation."

Hayfork Policies:

"2. SERVICES - Upgrade existing services in central Hayfork, but constrain development to avoid the need for costly new services."

- "b. Develop plans for the improvement of the water system and of other essential services.
- c. Unfortunately, much land within Hayfork Water District boundaries is of prime agricultural value, and conversely, much land of little resource value which is outside water district boundaries lacks sufficient water supply to allow much development. Some means of "transferring development rights" should be developed so that water can be provided to areas outside existing district boundaries, and so that owners for resource lands within the district can be compensated for taxes they have paid over the years. Agriculture Preserve owners should be allowed to delete their lands from the water district at their request."

Hyampom Finding:

"Ground water resources should be protected. A community water system is not desired by the majority of the residents at this time or in the near future."

Hyampom Policy:

"1. GROWTH - New development should be consistent with the valley's character. Due to the area's remoteness, no new growth-limiting measures are thought necessary.

- a. The Hyampom area should be designated Village (V).
- b. A five acre minimum lot size should be maintained in the Hyampom area. Two and one-half acres may be permitted in the town's commercial area for commercial developments. This exception would not apply to any type of residential development. Minimum lot sizes are finally dependent on the site's ability (relative to the proposed development) to ensure proper sewage disposal and protection of domestic water sources."

North Lake Area Finding:

"Road construction and logging on steep slopes have resulted in some soil erosion damage. This, in turn, affects quality of the watershed and the domestic water supply."

North Lake Area Policy:

"2. SERVICES - A moderate level of services is desirable at Trinity Center and Coffee Creek. In remote areas, services should be kept at a minimum."

- "b. Areas outside Trinity Center should be designated according to land capabilities and development of these areas should be consistent with the land's carrying capacity. Consideration of the Community Expansion designation would allow for future development as necessary."

Trinity River – West of Helena (Down River) Policies:

"1. GROWTH - Encourage new development, especially recreational development, along the state highway and the Trinity River."

- "b. Provide for rural residential development in the highway/river corridor, consistent with the land's capability to support such development.

2. SERVICES - In general, the existing low level of services should be maintained, although some improvement of services, such as water supply and fire protection improvements, may be desirable in some of the "Village".

3. RESOURCES - Encourages resource production, especially on the more remote lands and on land unsuited for urban uses.

- a. No development should interfere with the restoration, enhancement or protection of the fishery of the Trinity River."

Southern Trinity Finding:

"Obtaining sufficient quantities of water, for domestic and other uses, from on-site underground wells, is often a serious problem in Southern Trinity."

Mad River-Ruth Area Policy:

"1. GROWTH - Encourage recreational development along Ruth Lake and the rivers. Provide for rural residential development.

- b. Residential and recreational development should be consistent with land capability."

Douglas City Goals:

"Goal III.

To guide development in such a manner that an acceptable balance is achieved between the costs for public facilities and services and revenues or improvements required of new developments.

Related Objectives:

- a. Encourage development within or adjacent to areas already served with public facilities or services.
- b. Discourage development which requires expensive facilities or long-range service costs unless an adequate funding source can be assured.

Goal IV.

To encourage development which is consistent with the land's natural carrying capacity.

- c. Insure that adequate water is available for future development and other beneficial uses."

Lewiston Goal:

"Goal III.

Guide development in such a manner that an acceptable balance is achieved between the costs for public facilities and services and revenues or improvements required of new developments.

Related Objectives:

- a. Encourage development within or adjacent to areas already served with public facilities or services.
- b. Discourage development which requires expensive facilities or long-range service costs unless an adequate funding source can be assured.

Junction City Goals:

"Goal III.

To guide development in such a manner that an acceptable balance is achieved between the costs for public facilities and services and revenues or improvements required of new developments.

Related Objectives:

- a. Encourage development within or adjacent to areas already served with public facilities or services.
- b. Discourage development which requires expensive facilities or long-range service costs unless an adequate funding source can be assured.

Goal IV.

To encourage development which is consistent with the land's natural carrying capacity.

- c. Insure that adequate water is available for future development and other beneficial uses."

General Plan: Open Space Element

County-wide Scenic Lands Objective:

"A prime objective of the county is:

To conserve, preserve and maintain the scenic lands of Trinity County which include those precious mountains, trees and water.

Water supply is a natural resource of the county. Major rivers in the county are the Mad, the Van Duzen, the North Fork of the Eel, and the Trinity and its tributaries: the North Fork, Stuart Fork, East Fork, and South Fork. Also the county is fortunate in having Trinity, Lewiston and Ruth lakes. Continual care must be taken to protect the banks of both the lakes and the rivers and streams in the county. The objective of the open space element therefore is:

To preserve the quality of the existing water in all forms in Trinity County and adequately plan for the protection of the county's water supply for future generations."

It references State Open Space requirements and definitions of open space. Of particular relevance here is:

“Open space land' is any parcel or area of land or water which is essentially unimproved and devoted to an open space use as herein defined, and which is designated on a local, regional or state open space plan as any of the following:

- (1) Natural resource land, as defined herein
- (2) Agricultural land, as defined herein
- (3) Recreation land, as defined herein
- (4) Scenic land, as defined herein
- (5) Watershed or ground water recharge land, as defined herein
- (6) Wildlife habitat, as defined herein.”

and

“Open space use" means the use of land for (1) public recreation, (2) enjoyment of scenic beauty, (3) conservation or use of natural resources, or (4) production of food or fiber.”

State Open Space Requirements as well as relevant sections of state law: Government Code, Business and Professions Code, Williamson Act for land conservation, and the Open Space – Subvention Act; which were in effect at the time of the development of the Trinity County Open Space & Conservation Elements, are also cited.

The Open Space Element also cites “An open space element then is intended to preserve those very mountains, trees and water which are presently such a tremendous natural resource to Trinity County.” as part of the need for Open Space.

The Hydrology section of the Open Space Considerations highlights that as the three major aspects of hydrology: “Ground water resources, water quality, and flood control are the most important land use determinants within the County.” It includes this description on water supply: “1. Water Supply. Water supply is more than adequate to take care of both agriculture and domestic requirements for the foreseeable future. The most important requirement is to reserve adequate water for the future generations in the County and to not allow excessive amounts to be exported.” However, this description is now contradicted by the 2014 emergency drought declaration adopted by the County Board of Supervisors (see attached declaration).

The Watershed and Water Recharge Lands section of the Open Space Plan describes the more significant bodies of water. It then goes on to assert that:

“All of the rivers and lakes in the county are - groundwater recharge areas whether they are in the narrow canyons of the South Fork, Mad or Van Duzen or in the wider Trinity River and Eel River Valleys along with the Trinity and Lewiston Reservoir each create groundwater recharge resources.

Extreme care must be taken to keep an adequate supply of usable water at a quality which is safe for human use and free from long range pollutants for the future populations of Trinity County. Every effort must be made to keep human waste and silt from residential development intruding into the waters of the County and lowering the water quality below permissible standards as well as robbing the County of its water heritage.

Objective:

To preserve the quantity and quality of the existing water supply in Trinity County and adequately plan for the expansion and retention of valuable water supplies for future generations.

Recommendations:

1. Implement detailed plans to determine the amount of water that shall be reserved for use of present and future Trinity County populations.
2. Institute a program of research to establish the need for any future facilities or water services throughout the County.
3. Carefully screen all sewage disposal facilities whether private, individual or public in order to maintain water purity throughout the County.
4. Disapprove of any developments which may pollute the existing streams and lakes or become a source of silt, which washes down into the water areas."

The Open Space Plan includes very broad objectives for preserving open space. The Action Program for Implementation describes ways of acquiring open space land or exerting land use controls over private property to meet Open Space and other land use goals. It encourages participation in the Land Conservation Act of 1965 (Williamson) for eligible areas: "The county has not entered into this program, however it should be encouraged to allot the program to the relatively small areas which are devoted to agriculture at this time." In places where land is suitable and meets certain criteria, the Plan also encourages the County to consider participating in the state's Open Space Subvention Act: "The County should investigate this program and determine the best way to proceed in initiating open space agreements within the County."

Q for ML: p64 of the Open Space Element says that "The county has not entered into this program, however it should be encouraged to allot the program to the relatively small areas which are devoted to agriculture at this time." In regards to the Land Conservation Act of 1965 (Williamson). I thought it did participate? It also mentions that the County doesn't participate in Open Space Subvention Act reimbursement program?

General Plan: Conservation Element

Functional aspects of conservation called out by the Conservation Element include:

- A. Land resources including forests, soils, wildlife, minerals, other natural resources, land and water reclamation, flood control, and erosion.
- B. Water resources which include all of the former and in addition water resources, rivers and lakes, flood control, water pollution, regulation in streams."

Conservation Element Objectives:

The "first objective" is "To conserve the land resources of Trinity County and to protect water resources as well.

The water resources are also important as an amenity of Trinity County, as they are a source of potable and irrigation water. They also supply a priceless recreational asset.

The prime objective in the conservation of water resource is: To protect and conserve the lakes, streams and reservoirs of the County as potable and agricultural water, for recreation areas but more important as wildlife habitat which will be beneficial to the residents, present and future of Trinity County."

In reference to many other beneficial uses such as agriculture and recreation, the Conservation Element notes that "The protection and conservation of the lakes, streams, forests and mountain environment are an important objective of the present plans of the County..." and that "The water resources of the County are necessities for both extensive agricultural pursuits and for the tourist oriented economy." It

also notes that “The history of the County evolves around water; the County's economy is now developing around the waters of the lakes, reservoirs and streams in the County and the recreational potential that is produced.”

It notes the various ways that the Conservation Plan may be implemented including: zoning ordinance, subdivision regulations, open space and recreation plans, and private open space development. It then describes various state and federal laws that directly relate to conservation such as the Subdivision Map Act, the Environmental Quality Act of 1970, OPR rules, Land conservation Act of 1965 (Williamson), Fish and Wildlife and state water board regulations, state public resources and forestry rules, fire regulations, and EPA rules.

Under the discussion of the need for conservation, the element cites increased land developments, including a “substantial” amount via lot splitting, and the impacts of those developments on natural resources both on the land being developed and in adjacent areas. Specific detrimental impacts cited include:

- “6. Diminished surface water.
7. Reduced ground water recharge.”

The Conservation Element references discussions, including Hydrology, in the Open Space Element which “can serve as the foundation upon which conservation and environmental plans are designed.” Also emphasized are the relationships between the individual topics such as open space, agriculture, water resources, etc.

Individual factors that contributed to the development of the Conservation Plan were then described. The most pertinent to water resources is the Watershed and Water Recharge Lands section, which states that: “All of the rivers and lakes in the County are groundwater recharge areas” regardless of their geographic location and that “each create groundwater recharge resources.” It goes on to say that:

“Extreme care must be taken to keep an adequate supply of usable water at a quality which is safe for human use and free from long range pollutants for future populations of Trinity County. Every effort must be made to keep human waste and silt, from residential development intruding into the waters of the County and lowering the water quality below permissible standards as well as robbing the County of its heritage.

Objective:

To preserve quality and quantity of the existing water supply in Trinity County and adequately plan for the expansion and retention of valuable water supplies for future generations.

Recommendations:

1. Implement detailed plans to determine the amount of water that should be reserved for use of present and future Trinity County populations.
2. Institute a program of research to establish the need for any future facilities or water services throughout the County.
3. Carefully screen all sewage disposal facilities whether private, individual or public in order to maintain water purity.
4. Disapprove of any development which may pollute the existing streams and lakes or become the source of silt which washes down into water areas.”

When introducing the Conservation Plan, it is noted that "Although this element of the General Plan is to discuss conservation, it recognizes that areas must be set aside for human settlement and commerce consistent with realistic growth projections." It states that a sufficient amount of land was set aside for such development but that "Adequate conservation practices must be used in all development of urbanizing areas." It goes on to emphasize the importance of working in partnership with other agencies in order to succeed in conservation. It specifically states "The Conservation Plan in the County can only be achieved by complete cooperation by all levels of government, including Federal, State, County and Districts. There is a great need to devise over-all environmental management goals for the County by both short and long term policy and positive actions in cooperation between all levels of government and the private sector. It is essential to develop goals which will include conservation practices which have meaning for the people of the County and which includes larger regional, state-wide and national interests. The role of the County is to coordinate with those branches of the State and Federal governments operating within the County and to require top conservation practices from the private sector. The attainment of good conservation practices and environmental resources management in public ownership."

The main goals of the Conservation Plan are very broad. They include:

- "1. Protect the physical environment, which now means that we must return it to its natural state insofar as possible and practical;
3. Insure the most effective and beneficial use of land and its natural resources;
4. Prevent pollution of water, air and land;
5. Practice area conservation and development of natural resources;"

The goals are followed by very broad but also fairly specific objectives, which underscore the broader goals. Not very many objectives are specific to water resources protection or management, but the general objectives certainly encompass those beneficial uses. The inter-dependency of the Open Space and Conservation Elements is emphasized once more.

County zoning and subdivision regulations are a crucial component of the implementation methods of the Conservation Plan. The Element states that:

"These two forms of regulatory mechanisms give the County the power to promote the public health, safety, morals and general welfare.

The powers are essentially the result of the whole community's rights being more valuable than the right of an individual in doing what he wishes with his land. Zoning and subdivision regulation are the primary methods of determining what and how the land may be used."

Similar to the Open Space Element, the Conservation Plan encourages participation in the Williamson Act for eligible agricultural areas and Open Space Subvention Act for eligible, suitable areas. It also encourages the use of land use controls to implement the Conservation Plan. Specifically it says: "It is the responsibility of the Planning Commission and legislative bodies of the County to exert control over public works projects and private development in controlling the following:"

- "(3) Pollution of water, air and land,"
- "(5) Diminished surface water,
- (6) Reduce ground water recharge,
- (7) Reduced storage capacities in reservoirs,
- (8) Increased flood hazards,"

CA Department of Water Resources

Water Conditions webpage: <http://www.water.ca.gov/waterconditions/waterconditions.cfm>

“California’s Water Year 2014 (October 1, 2013 through September 30, 2014) has been one of the driest in decades and follows two consecutive dry years throughout the state. In most years, California receives about half of its precipitation in the months of December, January and February, with much of that precipitation falling as snow in the Sierra. Only a handful of large winter storms can make the difference between a wet year and a dry one.

In normal years, the snowpack stores water during the winter months and releases it through melting in the spring and summer to replenish rivers and reservoirs. However, relatively dry weather conditions this year have reduced the amount of snowpack in California’s mountains. Each of this season’s first four snow surveys – conducted in early January, late January, late February and early April – found a statewide snowpack water equivalent far below average for the dates of the surveys. The water equivalent of the 2014 statewide snowpack began falling in early April after reaching a peak of 10.1 inches and by late May had almost completely melted away, compared to late May’s historic average of about 6 inches.

Rainfall also has been far below normal during this water year as recorded by weather stations throughout the state. Despite a few storms that brought rain in February and March, electronic readings indicate that precipitation at eight Northern California stations has been only about 60 percent of normal for late April. The electronic readings for San Joaquin stations show even drier conditions there – less than 50 percent of normal precipitation from October 1 to late May.

DWR’s late November experimental seasonal forecast for the water year predicted mostly dry conditions for the state, and that prediction has been accurate. Although Mother Nature sometimes surprises us, there’s little expectation of significant rainfall for the foreseeable future. Even a normal precipitation year would not be enough to overcome low soil moisture and water storage conditions. Most water users would require an exceptionally wet year to be made whole, and that’s not likely to be the end result of water year 2014. The drought has no end in sight.”

25

Trinity Journal articles describing local drought impacts (note only the beginning of each article is included):

<http://www.trinityjournal.com/>

Trinity included in drought disaster

Posted: Wednesday, February 12, 2014 6:15 am

Trinity Journal staff

Trinity County is one of 27 California counties named as a primary natural disaster area where farmers and ranchers are eligible for federal aid for damages and production losses caused by continuing drought conditions.

In all, the Feb. 6 announcement lists 47 counties in three states eligible for USDA emergency farm loans and disaster programs. In addition to the 27 primary disaster counties in California suffering from drought conditions declared on Jan. 22 and continuing, there are 12 other contiguous counties, as well as five in Oregon and three in Nevada, where farmers and ranchers also qualify for natural disaster assistance.

Drought prompts increased restrictions on fire in Shasta-Trinity Forest

Posted: Wednesday, June 25, 2014 6:15 am

The Shasta-Trinity National Forest has implemented fire restrictions, including within the Trinity Alps Wilderness (with the exception being the shorelines of Shasta Lake, Trinity Lake and Iron Canyon Reservoir, 50 feet from any flammable vegetation and within 10 feet of the water's edge).

The decision is based on very dry forest vegetation and current fire activity. Forest officials are implementing the restrictions to prevent human-caused fires and raise public awareness as the summer continues to get warmer and drier. With the increased fire risk, forest visitors are reminded to exercise caution when visiting the national forest. Travelers through the forest should remain on designated roads and never park on dry brush or grass.

High and dry

Posted: Wednesday, July 23, 2014 6:15 am

By Sally Morris The Trinity Journal |

Seeing the largest creek tributary to the Trinity River running dry before water reaches the river and stranding native fish in isolated pools has prompted calls to the Trinity County Board of Supervisors to declare a local state of emergency due to drought conditions, though no such action has been taken yet.

The board is tentatively scheduled to hear a presentation from the State Water Resources Control Board at its next regular meeting Aug. 12 and possibly consider other measures to increase enforcement against illegal dams and diversions of water.

RESOLUTION NO. 2014-93

A RESOLUTION OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF TRINITY
CONFIRMING THE CONTINUANCE OF A
LOCAL EMERGENCY DUE TO DROUGHT CONDITIONS

WHEREAS, on August 05, 2014 the Director of Emergency Services declared a local emergency due to drought conditions; and

WHEREAS, on August 12, 2014 the Board of Supervisors confirmed the existence of the local drought emergency; and

WHEREAS, the Board of Supervisors adopted Resolution Nos. 2014-64; 2014-72; 2014-81; and 2014-90 confirming the continuance of the local emergency; and

WHEREAS, Trinity County's Emergency Operations Plan states "the Board will review the need for continuing the local emergency at its regularly scheduled meetings at least every 21 days; and

WHEREAS, drought conditions described in the original proclamation, attached as Exhibit A, continue in Trinity County.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Trinity confirm the continuance of a local emergency due to drought conditions.

DULY PASSED AND ADOPTED this 28th day of October, 2014 by the Board of Supervisors of the County of Trinity by motion, second (Morris/Fisher), and the following vote:

AYES: Supervisors Fisher, Morris, Fenley, and Pflueger
NOES: None
ABSENT: Supervisor Chapman
ABSTAIN: None
RECUSE: None



JUDITH N. PFLUEGER, CHAIRMAN
Board of Supervisors
County of Trinity
State of California

ATTEST:

WINDY G. TYLER
Clerk of the Board of Supervisors

By:  _____
Deputy

Exhibit A

**PROCLAMATION CONFIRMING EXISTENCE
OF A LOCAL EMERGENCY**

WHEREAS, Section 2.40.070 (A)(1) of the Trinity County Code empowers the Director of Emergency Services to proclaim the existence or threatened existence of a local emergency when Trinity County is affected or likely to be affected by a public calamity and the Board of Supervisors is not in session; and

WHEREAS, The Director of Emergency Services of the County of Trinity does hereby find that conditions of extreme peril to the safety of persons and property have arisen in said county, caused by a prolonged drought recognized in the month of January, 2014, by the California Governor with a proclamation of a State of Emergency; and

WHEREAS, Trinity County has been under a U.S. Department of Agriculture Secretarial Disaster Designation for drought caused impacts to agriculture since August 2013; and

WHEREAS, The United States Drought Monitor lists Trinity County in the Exceptional Drought category, the highest rating possible; and

WHEREAS, Adverse drought impacts to public water delivery systems such as delivery curtailments have risen to emergency levels in some areas of the county and have necessitated the emplacement of mitigation measures including infrastructure repair and replacement; and

WHEREAS, Some rural area private County citizens have experienced significant water access reductions, including the complete failure of small water systems, including individual well and ground water supplies, resulting in the implementation of alternative water access methods, and

WHEREAS, the severe drought has caused several small streams and creeks within Trinity County to have substantial reduction in water or complete dry up of Streams and Creeks. The lack of water in streams and creeks have caused or will cause a significant fish kill off which will result in potential sever economic impact in Trinity County, and

WHEREAS, The severe drought conditions continue to present urgent challenges: Water shortages in communities, greatly increased wildfire activity, diminished water for agriculture production, degraded habitat for many fish and wildlife species, and increased concern for future water access and availability; and

That the aforesaid conditions of extreme peril warrant and necessitate the proclamation of the existence of a local emergency; and

WHEREAS, The Board of Supervisors of the County of Trinity is not in session and cannot immediately be called into session; and

DOUGLAS CITY COMMUNITY PLAN

RESOLUTION NO. 95-87

RESOLUTION APPROVING AMENDMENT TO THE GENERAL PLAN OF TRINITY COUNTY

If the County were to take no action to change existing trends, these are some of the changes which can be expected to occur in the Plan Area by the year 2000:

- Gradual degradation of water quality in the Plan Area as well as decreases in the amount of surface waters available for a variety of uses in the upper Indian and Browns Creek drainages.

These changes could occur because:

- Without the application of a critical water resource overlay in the southwestern portion of the Plan there is a greater likelihood of overutilization of water resources.

CHAPTER 1- INTRODUCTION

P.2

If the County were to take no action to change existing trends, these are some of the changes which can be expected to occur in the Plan Area by the year 2000:

- Significant losses of wildlife habitat and visual qualities in the Plan Area.
- Increasing conflict between property owners and recreationalists utilizing the Trinity River.
- Gradual degradation of water quality in the Plan Area as well as decreases in the amount of surface waters available for a variety of uses in the upper Indian and Browns Creek drainages.

These changes could occur because:

- Without the application of a critical water resource overlay in the southwestern portion of the Plan there is a greater likelihood of overutilization of water resources.

CHAPTER 4 - PUBLIC SERVICES AND FACILITIES

P.17

6. Water

Only an estimated 50 households rely upon community or mutual water systems. The continued reliance upon individual wells is expected to continue with future development, currently, most residents are dependent upon surface water supplies for household use.

Within the Plan Area surface water is more frequently utilized for domestic purposes than is deep well water. Development of surface water tends to be less expensive than development of deep wells. Additionally, concentrations of minerals including iron, magnesium and calcium have been reported in well water in portions of the Plan Area. Finally, competition between adjacent wells can decrease water availability.

Future growth, and land uses in general, must take into consideration the availability of water not only for development purposes, but also for wildlife and other beneficial uses. In addition, the Plan must incorporate provisions to protect existing water quality.

A large portion of the Plan Area (primarily Browns Creek Watershed, Weaver Creek Water shed and Upper Watershed of Indian Creek) are proposed to incorporate Critical Watershed Overlay Zoning to insure that **future land divisions in these areas must develop individual wells**. This is to insure adequate surface water for a variety of existing uses.

Due to the reliance on individual sewage disposal systems as well as the importance of protecting water quality, densities within the Plan Area must remain fairly low. The Health Department has specifically indicated that portions of the Poker Bar Area and southerly end of Steel Bridge Road are severely restricted for future development due to high groundwater and poor soils.

CHAPTER 8- NATURAL RESOURCES WATER RESOURCES (P 42)

The Trinity River is the most heavily utilized water source in the Plan Area. It is utilized not only for domestic or household consumption purposes but also for recreation, fish and wildlife purposes. Both the quantity and quality of water are important to these water consumers.

Residents adjacent to the river and its tributaries often utilize the river as a source for both household and agricultural purposes. Other areas within the Plan Area are generally dependent on springs, wells, and lesser creeks for water sources.

The decline of fisheries in the watershed has been largely caused by the upstream construction of Trinity Dam and, to a lesser extent, poor logging practices, road building, and land development. Protection and enhancement of water resources in the Plan Area will become increasingly important as population increases and resource dependent activities intensify.

Natural Resources Goal #2 (P.44):

Maintain, and enhance, the high quality of the area's natural resources. The Douglas City area is dependent upon the rational utilization of its natural resources both for employment opportunities and as in the case of water, residential consumption. Degradation of these resources in one particular area could have significant adverse impacts on other lands and uses. Therefore, it is imperative that the high quality of these resources be maintained and enhanced where possible. The Plan proposes to accomplish this goal by incorporating the following objectives.

Objectives:

- Insure that future development does not result in over utilization of the area's surface or ground waters.
- Explore the possibility of expanding the Critical Water Resource overlay zoning further upstream of Weaver Creek and Little Brown's Creek

Goal #3 (P45):

To protect and improve fish habitat within the Plan Area. The Trinity River and its tributaries constitute a significant fisheries resource for both the County and the north state. The Plan proposes to protect and enhance fisheries through implementation of the following objectives.

Objectives:

- Encourage the development and implementation of comprehensive resource improvement plans for major tributaries of the Plan Area.
- Encourage the development of stream restoration projects within the Plan Area.

Chapter 10 LAND USE CHAPTER

Goal #4 (P. 63):

To encourage development which is consistent with the land's natural carrying capacity.

This Goal is similar to those stated in the Natural Resources Element of the Community Plan. The importance of this Goal cannot be overstated. The characteristics of the area's lands to accommodate residential development, road construction, and timber harvesting must be considered in the development of the Plan. To assist in achievement of this Goal the Plan incorporates the following objective.

Objectives:

- Insure that adequate water is available for future development and other beneficial uses.

Chapter 11 Plan Implementation

NATURAL RESOURCES (p.67)

- Explore the possibility of Planning 1988 expanding the Critical Water Resource Overlay Zoning further upstream on Weaver Creek and Little Browns Creek.

HAYFORK COMMUNITY PLAN

EXISTING CONDITIONS AND TRENDS

1. Community Infrastructure

a. Community Water Supply

Trinity County Waterworks District No.1 (TCWD#1) was established in 1951 to construct and operate a municipal water system to serve the Hayfork area. TCWD#1 is governed by a five-member Board of Directors appointed by the Board of Supervisors.

The District encompasses approximately 4.6 square miles of area in and around central Hayfork. These boundaries and sphere of influence boundaries are depicted in Figure

4.1. The present population within the District area is estimated to be 1,350 permanent residents.

In 1994, TCWD#1 provided service to 530 users. Peak summer water usage in 1994 amounted to approximately 60 acre-feet (19.54 million gallons) per month, whereas wintertime usage was approximately 20 acre-feet (6.51 million gallons) per month. The breakdown of total water used and number of users per user category in 1994 is given in Table 4.1.

Water for TCWD#1 is obtained from the natural runoff of Ewing Gulch and from a diversion on Big Creek. Both of these flows end up in Ewing Reservoir. Ewing Dam Reservoir was constructed to provide for the water storage needs of the District to the year 2002. The current capacity of the reservoir is 920 acre-feet. The original design also provided, however, for an increase in dam height of about 12 feet which would provide for a total storage capacity of 1,440 acre feet of water (during 1996, the

California Department of Water Resources tentatively granted approval to TCWD#1 to raise the dam ten feet in height).

b. Individual Water Supply

i. Surface Water Availability and Quality

Water diversions for residential and commercial use, agricultural practices, residential septic systems, and industrial pollution all contribute to surface water quality and quantity problems within the Hayfork basin. Due to the number of current diversions and riparian water rights along Hayfork Creek, it is considered to be utilized to or beyond its maximum capability to support future development. While other streams in the Plan Area may experience year round flows, the amount available beyond current permitted withdrawals and riparian uses renders these streams likewise insufficient for future development.

Critical Water Resources (CWR) overlay zone

In response to the problem of limited surface waters, the Critical Water Resources (CWR) zoning designation was placed on the Hayfork Valley and adjacent areas in 1987. The CWR overlay requires that a source of water other than a surface stream be developed or provided for each parcel of land to be created by a subdivision. The findings made by the Trinity County Planning Commission to support the CWR designation were as follows:

- a. Application of the CWR Overlay Zone is consistent with the following objective of the Open Space and Conservation Elements of the General Plan: "To preserve quality and quantity of the existing water supply in Trinity County and adequately plan for the expansion and retention of valuable water supplies for future generations" by insuring that land divisions in the Hayfork Creek area have adequate water to meet domestic uses without decreasing the flow of Hayfork Creek and its tributaries.
- b. Development within the Hayfork Creek Drainage may have a detrimental impact on water resources in the drainage, such as those resulting from extractions of ground water and/or surface waters which would be beyond the capability of the resources, or by contamination of ground or surface waters.
- c. Water supplies within the Hayfork Creek Drainage area are inadequate to meet existing beneficial uses of water.

The Critical Water Resources overlay zone requires proof of water other than a stream for the subdivision of land. The CWR overlay does not, however, prevent newly created riparian parcels from having a riparian water right. A common outcome of land division under the CWR requirement, therefore, is that owners of newly created riparian parcels may utilize a non-stream source of water for some purposes but also legally draw water from the stream for many other uses. The conclusion that many residents and community groups (such as the Cattlemen's Association) have reached based on the above outcome is that, while the CWR overlay zone has provided new homeowners with some modest assurances for domestic water, it does not adequately conserve water supplies for economic and environmental needs.

2. Subsurface Water Availability

The underground water supply of the Hayfork Creek Drainage is severely limited. Some deep wells exist, but water supplies from deep wells are often limited to household use. Several dry holes in excess of 200 feet deep have been reported. Deep well water quality varies from excellent to low (high levels of iron, sulfur, and other mineral contaminants). Examination of 94 well logs by the Planning Department revealed that approximately twenty-six percent failed to meet the 3 gpm after a 4 hour pump test requirement contained in the County Subdivision Ordinance (Section 16.48.124).

Most wells in the Hayfork watershed are shallow "sump" wells that are linked to surface water supplies. Many of these wells dry up or suffer reduced flows during summer months and/or drought conditions. Many residents of Hayfork who live outside of the TCWD#1 boundaries haul water for domestic needs during dry months.

A hydrologic study conducted by the California Department of Water Resources (Water Resources and Future Water Requirements: North Coastal Hydrographic Area, 1965) provides additional information on the water bearing ability of the Hayfork area. This study reveals the following information:

"The bedrock is non-waterbearing, and consists of a granitic intrusive near the western edge of the valley and metamorphic rocks beneath the remainder of the valley. . . Water levels in the valley have not been measured over a period of time and the amount of fluctuation is not known, but the level probably declines considerably during the dry season. Domestic wells are subject to rather rapid de-watering at that time."

The Hayfork Valley-Watershed Investigation Report (December 1970, pg. 3) states that the "adequacy of the underground water supply (of Hayfork Valley) as a dependable source of water is questionable".

PUBLIC SERVICES AND FACILITIES FINDINGS

1. Surface and subsurface water supplies are a limiting factor for future development outside of Trinity County Waterworks District #1's boundaries.
2. In order to serve additional territories Trinity County Waterworks District #1 will need to expand its storage, treatment, and distribution facilities.

PUBLIC SERVICES AND FACILITIES GOALS AND OBJECTIVES

Goal #2 Provide for sufficient quantities of safe drinking water in the Plan Area.

Objective #2.1 Maintain or improve water supplies in the Plan Area.

Policies:

- a. Continue the existing application of the Critical Water Resources (CWR) overlay in the Plan Area.
- b. All subdivisions shall be designed to preclude the creation of new parcels with riparian water-rights.
- c. All new commercial or industrial developments requiring consumptive uses of more than one household equivalent of water should be served by Trinity County Waterworks District #1.
- d. Support efforts of TCWD#1 to expand their water storage and distribution system.

Objective #2.2 Improve the water quality of streams in the Plan Area.

- e. Encourage the development of a water conservation program.

NATURAL RESOURCES

2. Water

The agricultural/ranching operations in the Hayfork area that hold (and are exercising) riparian water rights are currently utilizing virtually all of the water available for agricultural uses for agriculture. There is, therefore, very little opportunity for additional or new agricultural operations under current conditions. There may be, however, the potential to increase agricultural output/opportunity without increasing total water consumption via increased efficiency of water delivery systems, growing lower water requirement crops and/or alternative irrigation practices. The Soil Conservation Service (Trinity County office) has been working with the owners of several of the large ranches in the Hayfork Valley to implement these (and other) efficient water-use practices. As the efficiency of water-use increases, there may be opportunities for new agricultural crops and uses in the future.

3. Water Diversions

As the population of the Plan Area grows, additional diversions on local creeks will occur unless otherwise prohibited. The reduction of flows in creeks during the summer increases the water temperature which can result in adverse impacts to aquatic wildlife. Reduced flows also reduce a stream's ability to absorb and dissipate sediment/pollutants (for more detail, see discussions under "Community" and "Individual" water supply in Chapter 4).

NATURAL RESOURCE FINDINGS

1. Public and private land managers should be encouraged to protect water, air, visual qualities, and recreational opportunities while managing timber lands.
8. Maintaining and protecting water quantity and quality for domestic use, fisheries, agriculture and wildlife is important when evaluating development in the watersheds of the Plan Area.
9. Due to limited and/or over-utilized groundwater resources, subdivisions should be designed and conditioned to preclude the creation of new parcels with riparian water rights.
10. While the “Hayfork Creek Watershed Project” has made progress in restoring riparian habitat and water flows within the Plan Area, lack of awareness among landowners has limited its implementation.

Goal #3 Provide for the continued utilization of the natural resources of the Plan Area for both humans and wildlife.

Objective #3.1 Maintain and protect water quality and quantity for domestic uses, fisheries, and wildlife in the basin.

Policies:

- a. Encourage Trinity County Waterworks District #1 to plan for the expansion and retention of valuable water supplies for future generations.
- b. Maintain and enhance the water quality and quantity of area streams by reviewing development proposals and public agency and private land management practices for potential impacts to water quality.
- d. Support efforts to improve and/or conserve the amount and quality of water resources in the Hayfork basin.
- h. All subdivisions shall be designed to preclude the creation of additional parcels with riparian water-rights.

JUNCTION CITY COMMUNITY PLAN

RESOLUTION

RESOLUTION APPROVING AMENDMENT TO THE GENERAL PLAN OF TRINITY COUNTY

If the County were to take no action to change existing trends, these are some of the changes which can be expected to occur in the Plan Area by the year 2000:

- Gradual degradation of water quality in the Plan Area as well as decreases in the amount of surface waters available for a variety of uses in the upper Indian and Browns Creek drainages.

These changes could occur because:

- Without the application of a critical water resource overlay in the southwestern portion of the Plan there is a greater likelihood of overutilization of water resources.

CHAPTER 1- INTRODUCTION

P.2

If the County were to take no action to change existing trends, these are some of the changes which can be expected to occur in the Plan Area by the year 2000:

- Significant losses of wildlife habitat and visual qualities in the basin area.
- Increasing conflict between property owners and recreationalists utilizing the Trinity River.
- Gradual degradation of water quality in the Plan Area.

These changes could occur because:

- Clear policies regarding maintaining water quality and quantity are necessary to reflect the importance of protecting water resources.

CHAPTER 4 - PUBLIC SERVICES AND FACILITIES

6. Water (P.8)

Only an estimated 45 households rely upon community or mutual water systems. The continued reliance upon individual wells and surface water is expected to continue with future development, currently, most residents are dependent upon surface water supplies for household use.

Within the Plan Area surface water is more frequently utilized for domestic purposes than is deep well water. Development of surface water tends to be less expensive than development of deep wells. Additionally, concentrations of minerals including iron, magnesium and calcium have been reported in well water in portions of the Plan Area. Finally, competition between adjacent wells can decrease water availability.

Future growth, and land uses in general, must take into consideration the availability of surface and ground water not only for development purposes, but also for wildlife and other beneficial uses. In addition, the Plan must incorporate provisions to protect existing water quality.

Because of the reliance on individual sewage disposal systems, as well as the importance of protecting water quality, densities within the Plan Area must remain fairly low.

“Due to the reliance on individual sewage disposal systems as well as the importance of protecting water quality, densities within the Plan Area must remain fairly low.”-

CHAPTER 8- NATURAL RESOURCES

Natural Resource Goals (p.31)

The Community Plan incorporates the following natural resource goals:

3. Protect and improve fish habitat within the Plan Area.

WATER RESOURCES (P)

The Trinity River is the most heavily utilized water source in the Plan Area. It is utilized not only for domestic or household consumption purposes but also for recreation, fish and wildlife purposes. Both the quantity and quality of water are important to these water consumers.

Residents adjacent to the river and its tributaries often utilize the river as a source for both household and agricultural purposes. Other areas within the Plan Area are generally dependent on springs, wells, and lesser creeks for water sources.

The decline of fisheries in the watershed has been largely caused by the upstream construction of Trinity Dam and, to a lesser extent, poor logging practices, road building, and land development.

Protection and enhancement of water resources in the Plan Area will become increasingly important as population increases and resource dependent activities intensify.

Natural Resources Goal #2 (P.40):

Maintain, and enhance, the high quality of the area's natural resources.

The Junction City area is dependent upon the rational utilization of its natural resources both for employment opportunities and as in the case of water, residential consumption. Degradation of these resources in one particular area could have significant adverse impacts on other lands and uses. Therefore, it is imperative that the high quality of these resources be maintained and enhanced where possible. The Plan proposes to accomplish this goal by incorporating the following objectives.

Objectives:

- Insure that future development does not result in over utilization of the area's surface or ground waters.

Goal #3 (P45):

To protect and improve fish habitat within the Plan Area. The Trinity River and its tributaries constitute a significant fisheries resource for both the County and the north state. The Plan proposes to protect and enhance fisheries through implementation of the following objectives.

Objectives:

- Encourage the development and implementation of comprehensive resource improvement plans for major tributaries of the Plan Area.
- Encourage the development of fisheries restoration projects in conformance with the Trinity River Restoration Program within the Plan Area.

Chapter 10 LAND USE CHAPTER

Goal #4 (P. 71):

To encourage development which is consistent with the land's natural carrying capacity.

This Goal is similar to those stated in the Natural Resources Element of the Community Plan. The importance of this Goal cannot be overstated. The characteristics of the area's lands to accommodate residential development, road construction, and timber harvesting must be considered in the development of the Plan. To assist in achievement of this Goal the Plan incorporates the following objective.

Objectives:

- Insure that adequate water is available for future development and other beneficial uses.

LEWISTON COMMUNITY PLAN

RESOLUTION NO. 118-86

CHAPTER 4 - PUBLIC SERVICES AND FACILITIES

Existing Conditions and Trends (p.15)

4. Water (p.16)

A majority of the development located within the community core area is served by mutual or private water systems. Approximately 130 additional water connections are possible within this core area. Development outside of the community core area and Bucktail Subdivision rely upon individual wells. Although the availability of water is generally good throughout the Plan Area, care must be taken to protect the water supplies from contamination by individual septic systems and other sources.

Goal #2: To provide an adequate level of public services to all residential areas of the community. Not only is it important to continue existing services, but it is also important to extend such services to unserved residential areas of the community. The Plan proposes the following objectives consistent with this Goal:

- Encourage annexation within the Plan Area of unserved areas with residential structures into the Lewiston Community Services District.

CHAPTER 7- NATURAL RESOURCES

Natural Resource Goals (p.31)

The Community Plan incorporates the following natural resource goals:

4. To protect and improve fish habitat within the Plan Area.

Goal #3: To protect and improve fish habitat within the Plan Area.

Chapter 10 LAND USE CHAPTER

Goal #3 (P. 64):

To guide development in such a manner that an acceptable balance is achieved between the costs for public facilities and services and revenues or improvements required of new developments.

During the preparation of the Community Plan it became apparent that neither County Government nor the Lewiston Community Services District has sufficient fiscal strength to subsidize the service or facility needs of a new development. New development should pay its own way and long-term maintenance costs or service responsibilities in addition to existing service levels should be minimized.

The Community Plan incorporates the following objectives designed to achieve this Goal:

- Encourage development within or adjacent to areas already served with public facilities or services.

Weaverville Community Plan

CHAPTER 1- INTRODUCTION

The Weaverville Community Plan contains the following major proposals:

1. Retention of the rural character of the Community by:
 - Retaining the basin's creeks in their natural conditions while recognizing that this does not preclude the development of a community water supply project, such as West Weaver Dam.

CHAPTER 4 - PUBLIC SERVICES AND FACILITIES

6. Water

I. INFRASTRUCTURE NEEDS

A. Community Water Supply

The Weaverville Community Services District (WCSD) supplies treated water to many of the Plan Area's residents. Although there are a number of residents, which utilize individual wells within the Plan Area, this discussion focuses on WQCSD because the District's boundaries already encompass most of the basin.

WCSD's current boundaries and Sphere of Influence are depicted on Exhibit "PS-1". Although the District's boundaries are quite large, this does not mean that the District is able to serve all territories located within these areas.

In 1980 WCSD adopted a moratorium ordinance, which prohibited additional hookups due to major distributional and water supply problems. After adding two small sources to the system, as well as correcting some distribution problems in 1984, WCSD lifted the moratorium for certain portions of the District.

WCSD has one supply project under consideration, which would need a substantial amount of grant funding to undertake. If constructed, the project would provide for approximately 1,000 additional hookups within the basin. This project is the construction of a dam and reservoir on West Weaver Creek.

The District has indicated that, with the exception of south Highway 299, no expansion of the existing service area is likely within the foreseeable future unless a major water supply project, such as the proposed dam and reservoir project, is constructed.

A major water supply project is essential to future growth in the basin. Although the District has previously indicated preference for the West Weaver Dam project, it is important that the cost effectiveness and environmental impacts of this and other possible sources, such as the Trinity River, be carefully considered by area residents.

Goal #2: Emphasize the extension of sewer and water services to restricted service problem areas in private ownership prior to extending such services to other areas within the parameters specified in the Major Proposals Section on page 2.

Objectives:

2.2 Due to limited infrastructure capabilities, priorities for extension of costly public services should be as follows:

- a. Private lands with failing septic systems.
- b. Private lands with other substandard community services (i.e. water pressure problems, etc.).
- c. Other private lands.
- d. Designated federal tradeout lands (only after the service needs of private lands have been provided for).

Goal #3: Continue the cooperation and coordination of public facilities and services improvements between Trinity County and the Special Districts serving the area.

Objectives:

3.1 Support efforts of the Weaverville Community Services District to develop a major water supply project.

In order to better serve area residents it is desirable that the County and Weaverville Special Districts coordinate their various improvement projects. Such coordination can be achieved by jointly reviewing long-term and annual capital improvement projects and scheduling joint improvement projects.

CHAPTER 6- NATURAL RESOURCES

The major potential sources for degradation of water resources within the Weaver Creek watersheds are (1) resource management, (2) urban/rural development and (3) water diversion.

Water Diversions

As the community grows, additional diversion on both East and West Weaver Creeks may occur. The reduction of flows in the creeks in the summer increases the water temperature and can result in adverse impacts to aquatic wildlife, as well as reduces the stream's ability to absorb and dissipate sediment/pollutants.

Natural Resource Goals

Goal #2: To conserve and maintain streams and forest open space as a means of providing natural habitat for all species of wildlife.

Objectives:

2.1 Retain riparian corridors, as portrayed in Exhibit "NR-1", along the West Weaver, Sidney Gulch, East Weaver and Weaver Creeks.

2.2 Plans to alter the present environment should be considered on the basis of protecting fish and wildlife and their habitat.

As previously stated, riparian corridors are disproportionately important because of the high wildlife usage associated with these areas. Therefore, it is important that the Plan emphasize the retention of these areas.

Goal #4: To maintain and protect the high water quality for domestic uses, fisheries, and wildlife in the basin.

Objectives:

4.1 Preserve the quantity and quality of the existing water supply in Trinity County and adequately plan for the expansion and retention of valuable water supplies for future generations.

4.2 Implement detailed plans to determine the amount of water that should be reserved for use of present and future generations.

Trinity County Waterworks District #1

Introduction

The recent Study completed by SHN Consulting was to prepare a feasibility study for development of potential water resources for the Trinity County Waterworks District #1. The overall objective of the Feasibility Study was to evaluate potential new water supplies and conveyance systems to meet new projected business water demands for economic recovery. The study was completed in 2004, before the installation of the reuse facility that captures and delivers filter blow-by water to irrigation users. However, it captures a lot of the more recent water resources issues and concerns than does the 1980 Water Master Plan. A brief summary of the outcomes of the reuse facility work follows the description of the SHN Study.

Study Summary

The Trinity County Waterworks District #1 operates and maintains the community water system, which serves approximately 2,450 persons. The District services an average yearly customer base of 534 metered connections to four diverse user groups. Water is supplied by diverting flows from Big Creek and other smaller tributaries to Ewing Reservoir, which can store 820 acre feet of water. From the reservoir, water is pumped to the District treatment plant on Reservoir Road where it is treated, stored in a welded steel reservoir and gravity fed to the community through the existing distribution system.

Even at the time of the study, pre-dating significant increases in demand from marijuana farmers, summer month's irrigation usage significantly increased, requiring the treatment plant to operate at 85 to 90 percent of maximum capacity. At these times, approximately 75 percent of the water is used for irrigation by four of the District's larger customers: the Fairgrounds, the two schools and the community park. The use of treated drinking water for irrigation significantly increased operational costs as well as severely restricted the ability of the District to serve new residential and commercial customers.

The Study evaluated four alternatives previously identified by Winzler and Kelly, Consulting Engineers. Those alternatives include:

- New Groundwater Sources,
- Increasing the Height of Ewing Reservoir,
- Utilizing Existing Diversions from Hayfork Creek,
- Using Reclaimed Wastewater.

In the course of preliminary investigations, SHN found that these four alternatives are either extremely costly and/or do not directly address the problem of providing increased water supply. SHN then searched for additional alternatives that would provide immediate increased water supply:

- Increased Drinking Water Treatment Plant Capacity,
- Pipeline From Ewing Reservoir To The High School Football Field,
- Pipeline From The Regulation Reservoir To The High School Football Field.

While these options did not provide a new water source for the District, they would immediately increase the amount of water available to the District for current and future needs.

Current Diversion and Storage Operations

The District is currently allowed to divert water from Big Creek beginning November 1 through June 30 each year; diversion usually starts in November if conditions permit. The maximum allowable diversion is 14 cubic feet per second (cfs), provided minimum flows (15 cfs) are set aside for fish and downstream irrigation demands in Big Creek. The District diverts their allotted portion into the reservoir usually up until June 30, or before if the minimum flows in Big Creek decrease below 15 cfs. At this point, Ewing Reservoir is normally filled to a maximum elevation of 2,430 feet, which is equal to 900 ac-ft of storage.

Existing Water Treatment Facility

The water treatment facility was found to be a primary limiting factor for growth. The District treatment facility consists of a regulation reservoir, with a storage capacity of one million gallons, a clarifier, with a capacity of 0.60 million gallons per day, and filters, with a capacity of 1.2 million gallons per day. Peak summer demand can become a strain on the system often pushing the system to 90% or greater of its treatment capacity. This results in significant treatment plant operation and maintenance costs.

Summary of Water Uses Pre-Marijuana Boom

Residential. Residential use water supplied to homes makes up 52% of the total water demand with an average of 59.65 million gallons per year (MGY) consumed (Table 3-1). Residential Water Use shows the top five water use months are June through October, with August being the month of highest demand.

Commercial. Commercial users are those businesses (restaurants, offices, etc.) that have similar potable water needs as residential users, primarily drinking water, with limited irrigation needs. Commercial users make up approximately 14% of the total water demand with an average annual use of 15.35 MGY (Table 3-1). The highest five water use months are May through September, with August being the month of highest demand.

Industrial. Industrial users are those that require water to perform a manufacturing process in addition to serving potable water needs. While the majority of the water is not intended for potable consumption, all water delivered to these users is potable. Industrial users consume 8.32 MGY on average, 7% of the total production (Table 3-1).

Other Public Authorities. Other public authorities are those public entities such as schools, parks, cemeteries and fairgrounds. These groups use potable water for both personal consumption and irrigation, for an annual average of 30.45 MGY, or 27% of the total production (Table 3-1). While the yearly use figures show fluctuations, over the last 10 years the water use has steadily increased from 28.40 MGY in 1990 to 34.70 MGY in 1999, with a peak year in 1998 of 38.80 MGY, as shown on Graph 3-5, Other Public Authorities Water Use.

The majority of water for Other Public uses is for irrigation (and this is pre-marijuana boom). Water usage increases in the summer months of June through September by these users. Using an average monthly consumption rate of 0.65 MGM for all public authorities (based on winter use figures of December through February) as a base level of potable water needs, these users consume 7.8 MGY. The

balance of water used is assumed to be non-consumptive and can be generally attributed to irrigation and consists of 19.2 MGY, or approximately 70% of the total water used by this group.

4.1 District Alternatives

4.1.1 New Groundwater Sources

The feasibility of developing groundwater sources to serve, or augment, the District's domestic water supply was investigated using the District's primary alternative of developing a high-capacity groundwater well capable of a sustained yield of approximately 200-300 gallons per minute (gpm).

Existing Well Information

SHN's investigation found that groundwater operations in Hayfork are limited mainly to shallow, low capacity wells ranging in depth from approximately 30 to 200 feet deep. Other wells have been drilled to depths greater than 200 feet, but have not proven to be any more successful. No evidence of a well with a yield higher than 100 gpm has been found. Although some wells were purported to produce approximately 50 gpm, the majority of the wells were actually reported to produce 20 gpm or less. Wells producing less than 50 gpm would not likely be sufficient for local irrigation demands. Any ranches with large irrigation demands in this area generally obtain water from diversions on Hayfork Creek rather than rely on well water. The average overall reported yield is about 16 gpm. The average reported yield of wells deeper than 200 feet is about 14 gpm.

Existing Groundwater Conditions

Groundwater is controlled by water table conditions within the Weaverville formation and the recent alluvium. The depth to groundwater varies from about 10 feet near the streams to 35 feet near the valley margins. Because of the large number of local septic systems located within this recent alluvium, the quality of groundwater will not likely meet domestic water standards. Groundwater levels probably decline considerably during the dry season. Shallow domestic wells, which occur in most of the area, would be subject to dewatering at that time.

Groundwater is recharged primarily by rainfall upon the valley floor and surrounding mountains, which infiltrates through the creek beds and into the groundwater body. **This study indicated that the most significant correlation is groundwater yield to the distance from surface water.** Wells that were drilled near perennial and semi-annual surface water sources have significantly higher flows than those far from surface water. Information provided by well log reports and conversations with well owners and drillers aided in comparing groups of wells located at varying distances from surface water sources such as a creek or gulch. **This correlation suggests that the majority of groundwater extracted in the Hayfork Valley is likely affected by surface water.**

Conclusions

Based on the geology and the groundwater characteristics of the Hayfork area, SHN has determined that:

- Wells with groundwater production of 200 to 300 gpm are not likely to be found in the area.
- Wells with groundwater production of approximately 100 gpm might be feasible, but further detailed investigations will be required and actual construction will not likely be cost

effective. Low permeability of the Weaverville formation and low water bearing bedrock decreases chances even more for finding sustained groundwater yield of 100 gpm,

- Wells with groundwater production of approximately 50 gpm is the most feasible of the three objectives, but would not likely provide sufficient water volumes to augment the Districts water needs.

4.1.2 Ewing Reservoir Enlargement

Ewing dam was designed for an eventual 12-foot enlargement, and that funding limitations prevented construction of the facility to its full height. Increasing the height of the dam would significantly increase storage capacity, allowing more water to be used during high demand (peak summer) months. The process of enlargement is dictated by stringent procedures administered by the DWR, Division of Safety of Dams. Dam construction is anticipated to run into the millions of dollars.

The current average annual demand of the Water District is 350 acre-feet, while the predicted amount for 1997 was 790 acre-feet. **Using DWR's predicted growth rate, Hayfork currently uses less than half of the average annual amount predicted for 1997. This should result in significant amounts of water available for use by the District. However, peak demands in Hayfork have increased much more than the annual water use. Irrigation use of treated water is believed to be a major reason for the discrepancy in average annual demand and peak daily demand.**

Conclusion

From these investigations, SHN concludes that the Ewing reservoir is currently capable of providing more than enough water storage for Hayfork's current and future demands and an enlargement of the dam appears to be unwarranted at this time. Enlarging the dam would not solve the current problem of peak demand issues (which are primarily related to treatment capacity) and may not be cost effective due to the very high construction costs.

4.1.3 Hayfork Creek Diversions

Potential diversion of surface water from Hayfork Creek was identified by the District as an alternative to meet partial irrigation demands in the community. As previously noted, District water supplies are entirely met through the treatment of surface water held in storage at Ewing Reservoir.

Stream Conditions

Hayfork Creek is a perennial creek exhibiting typical flow patterns for western US streams, with the water coming predominantly from precipitation events in the early winter and spring. Snow pack at the higher elevations provides snowmelt runoff in late spring.

Water Rights

While the District does not currently have an appropriated water right to divert water from Hayfork Creek, the Trinity County Fair does. This water right is for irrigation use, and an option may exist to utilize all or a portion of this water right to offset some of the District's summer demand. This water right is for 0.4 cfs with a maximum annual use of 118.8 acre-feet, from May 1 to September 30 each year for irrigation purposes. This translates into 248,366 gallons per day or approximately 38 MGY (which can only be used from May to September). Currently, the Trinity County Fair is not utilizing this water right and is irrigating with treated water provided by the District. Based on the maximum peak daily use by the fairgrounds of 176,000 gallons per day, using this diversion would supply the fair with all of its

needed irrigation water. Use of the water would be subject to the development of pumping and storage facilities (tanks) and separate irrigation lines to move this untreated water.

It has been speculated that the Trinity County Fair cannot utilize their water right because the required bypass for fish and wildlife, as defined by Department of Fish and Game (DFG), is greater than the existing summer stream flows. If this is the case, then the appropriated water is unavailable for use by the fairgrounds or the District. However, if stream flows are sufficient to meet both bypass requirements and appropriated water rights needs, then this option could be viable, assuming that the Trinity County Fair is agreeable.

Regulatory Constraints

Diversions of water from Hayfork Creek are regulated by several California state agencies. The DFG regulates all diversions of water from streams and lakes. Diversions are regulated through the 1600 Lake and Streambed Alteration Agreement process, in which application is made to DFG for evaluation, preparation of CEQA and subsequent approval with conditions. Permit conditions generally outline the type of constructed diversion, activities within the stream channel for the construction and maintenance of the diversion, timing of operations and the amount of bypass water required for use by fish and wildlife.

The State Water Resources Control Board (SWRCB) regulates water rights in California. Water rights are issued to applicants after the SWRCB reviews site specific conditions, such as existing stream flow, minimum bypass requirements for fish and wildlife and other in-stream appropriations and water rights.

The DFG has determined that bypass flow requirements for this portion of Hayfork Creek are between 10 and 15 cfs. However, the permit issued to the Trinity County Fair has a bypass requirement of 6.4 cfs (Vorpagel, personal communication). This means that the Trinity County Fair can divert water from Hayfork Creek beginning May 1 each year (permit start date) to approximately June 30 when the creek flows fall below 6.4 cfs. Yearly fluctuations in stream flow would require monitoring to determine end date.

Conclusion

From information presented above, it appears that use of existing diversions from Trinity County Fair or additional diversions from Hayfork Creek may be possible, but would not provide the District with water at a time of highest need (peak demand summer months). Hayfork Creek, at Hayfork, has a relatively small drainage area of 134 square miles. While numerous streams feed Hayfork Creek above the town, because of its average seasonal fluctuations (4.7 cfs in the summer to 410.8 cfs in winter) that rely on precipitation and snowmelt, the creek cannot provide a reliable sustained summer flow. Typical average summer flows are 5.4 cfs in August and 4.7 cfs in September.

If the District could use the Trinity County Fair water right for irrigation diversions, minimum flows required by DFG of 6.4 cfs would not allow the District to divert water from Hayfork Creek in the summer months when the water would be needed the most, to off-set other irrigation demands on the District.

4.1.4 Reclaimed Wastewater

Using reclaimed wastewater for irrigation can be a viable alternative to the use of treated drinking water. By providing some of the larger irrigation users in Hayfork with reclaimed wastewater, unused treated water could be used for economic development.

Conclusion

This alternative appears to be quite feasible, but a more in-depth analysis would be required to determine water quality standards, water yield and delivery to customers. The District has developed a wastewater treatment plant that appears to have the capacity to deliver reclaimed water to new customers, the desire to begin to develop reclaimed water as a salable commodity and the funding to implement the program (\$600,000 EDA Grant).

4.2 Additional Alternatives

In the course of preliminary investigations, SHN found that the four alternatives described above are either extremely costly and/or do not directly address the problem of providing increased water supply.

The following elements were examined:

- Source capacity available in the Ewing Reservoir,
- The capacity of the pump station located at the foot of Ewing Dam and the existing force main, which together, deliver raw water from Ewing Reservoir to the water treatment facility regulation reservoir,
- The treatment capacity of the existing water treatment facility,
- The capacity or limitations of the existing water distribution system.

Raw and Recovered Water for Irrigating Public Agencies

The main goal of the Raw and Recovered Water for Irrigating Public Agencies project was to reuse filter backwash water that is normally wasted, as a new source to provide non-potable water for public facilities that currently use potable water for non-potable needs. Work was completed in fall of 2010 and consisted of: installation of 14,000 feet of new PVC pipeline; installation of new meters; and improvement of solids settling ponds. The High School and Elementary School have been using water from the new system. It is estimated that a few million gallons of non-potable water will be used each year for irrigation instead of potable water. This work was funded by multiple sources including a Prop 50 grant through the NCIRWMP.

Weaverville Community Services District

Introduction

The existing District boundary encompasses approximately 12 square miles (7,780 acres). In the year 2001, the District served a population of about 3,800 with 1,498 individual services, and produced 302 million gallons of treated water.

Most of the District is in moderately hilly terrain with elevations varying from 2,720 feet (East Weaver Tank) to 1,650 feet (Douglas City). Most of the community, businesses, and industry are located along Highway 299 and Highway 3. The densest population centers are within a block of the two highways.

The District was formed in June of 1977 for the purpose of providing a public water system for the community of Weaverville. In May 1979, the District acquired and began operating the existing water system, which was previously owned by CF National (formerly Cal Pac). At that time, the water supply all came from a diversion on East Weaver Creek. The District began immediate improvements by covering a 2.1 MG open reservoir to meet California Health Department Standards. In 1984, the West Weaver Treatment Plant, which takes water from West Weaver Creek via the Moon Lee Ditch, was built to augment the water supply.

In 1987, further improvements were made to the system at the East Weaver Treatment Plant with the addition of a 0.42 MG tank, and installation of a new chlorine injection system. The West Weaver 0.42 MG water tank was also constructed during this time as well as major improvements to the distribution system with pipe sizes up to 12 and 14 inch diameter and several new pressure-reducing stations.

Even with these improvements, it was clear that the District would need a new water supply to make up for inadequate capacity in dry years and to allow for future growth. Consequently, in 1997 the Trinity River Treatment Plant (TRTP) was built in Douglas City, along with a 12-inch pipeline from Douglas City to Weaverville along Highway 299. To accommodate the plant a 0.3 MG tank, pump station, and PRV station were built near the old Gables restaurant site; furthermore, a 0.5 MG tank was erected at the end of Ransom road. A 2.0 MG tank was later erected to replace the in-ground 2.0 MG hydro-reservoir with the floating cover. The in-ground 2.0 MG reservoir has since had the floating cover removed and serves as an emergency water storage reservoir for firefighting helicopters. At the same time, the District expanded to include Douglas City and the residents of Union Hill, and new water distribution systems were built in these communities. In 1998, the East Weaver Water Treatment Plant was upgraded with new filters.

Study Summary

Current Capacity, Diversion, and Storage Operations

The Weaverville Community Services District 2011 Water Master Plan specifies that, considering minimal drought reduction, the current production capacity of 3.0 Million Gallons per Day (MGD) is enough to meet the District's Maximum Day Demand (MDD) of 2.1 MGD, which reflects the peak observed in 2007. The current average annual demand is 0.7 Gallons Per Minute (GPM) per customer. At the 1% projected growth rate in service connections, the projected 3.0 MGD capacity is estimated to

last until approximately 2050. The Plan concludes that because the District's rates are a bit higher than are neighboring agencies' and because the per capita usage rate is lower than for neighboring agencies, that the District is in a condition that mimics water conservation already.

Water Storage Facilities

Tank	Year Built	Capacity (gallons)	Surface Elevation	Water Depth	Type of Construction
East Weaver	1988	420,000	2,751	30 feet	Bolted Steel 31 ft. x 48 ft. Diameter
West Weaver	1988	420,000	2,341	30 feet	Bolted Steel 31 ft. x 48 ft. Diameter
Timber Ridge	1968	24,000	2,415	14 feet	Redwood 14.5 ft. x 18 ft. Diameter
Ransom Road	1997	500,000	2,261	28 feet	Welded Steel 29 ft. x 56 ft. Diameter
Gables	1997	300,000	1,863	28 feet	Welded Steel 29 ft. x 44 ft. Diameter
Trinity River	1997	120,000	1,645	7.5 feet	Concrete Basin 40' x 60' x 8' deep
Main Zone	1998	2,000,000	2,451	37 feet	Welded Steel 37.5 ft. x 96 ft. Diameter
Total Storage		3,784,000			

Storage tanks are typically kept full at 95-100% of capacity.

East Weaver Creek provides greater than 70% of all of the water produced annually. The District has a pre-1914 water right on East Weaver Creek for 269.15 Million Gallon (MG) per year. The Plan acknowledges that during low flow periods in late summer and fall, the District "has often diverted all the available water in the creek". The maximum diversion is estimated to be 1.7 cfs (or 1.1 MGD).

The District has a pre-1914 right from Moon Lee Ditch in the West Weaver Creek watershed and a direct West Weaver Creek water right to for 3.0 cfs. However, given the 1.0 cfs minimum bypass flows required by CA Department of Fish & Wildlife, the District can't take full advantage of the 3.0 cfs. The maximum District diversion when creek flow is less than 1.73 cfs can be up to 0.73 cfs. The fish by pass flows must be at least half of what is being diverted. The District typically operates the West Weaver Creek diversion at about 2/3 of its capacity.

The Trinity River water right, obtained in 1994, is for 2.9 cfs (1.87 MGD) with a maximum of 870 acre feet (283.5 MG) each year. The typical use is currently estimated at less than 700-800 Gallons Per Minute (gpm).

Current Demand During 2014 Drought Conditions

The District Manager estimates that during the peak month of usage in 2014, August, a total of 1.7 MG were sold to all customers. This included approximately 560,000 gallons that month that were sold to water trucks. The Manager reports that the normal customer base voluntarily reduced its collective usage by approximately 30% of average. Water truck sales, albeit at a much lower rate, continued through the winter months. The District developed a shortage contingency plan in 2014 that was never implemented. The District never had to draw down its reserve storage since it was able to produce enough water to meet demands. The District is also developing a tiered rate structure to encourage more conservative use of water, particularly during times of drought, as well as to better recover costs of production and delivery.

Water Resources Planning in the Mainstem Trinity River Watershed: A Pilot Local General Plan Process & Template of the NCIRWMP Planning Grant

Introduction

Trinity County Natural Resources undertook a GIS based water resources planning project designed to facilitate a variety of local and regional planning for multiple objectives. The focus was on encouraging and facilitating planning on a watershed scale. The products are is designed to assemble and analyze relevant physical and social data that can then be used to develop and coordinate local and regional water management goals and strategies

The project study area boundary was determined to include the mainstem Trinity River watershed from Trinity Dam downstream to the Trinity/Humboldt County lines. The majority of the population of Trinity County lives in the watershed and most of the major towns are within the study area. In order to better organize the data to be collected and report the data in meaningful units, Community and Watershed Planning Areas (CWPAs) and Watersheds (CWPAWs) were created based on watershed boundaries and Trinity County General Plan community planning areas.

Based on the information gathered as well as on current and anticipated development activity within the CWPAs, areas where water resources would be more likely to be overtaxed or inaccessible will be identified. Most of the data analyzed was assembled for this project in 2008. Areas where the majority of factors would more easily accommodate development relative to water resources were also illustrated. Recommendations to minimize adverse effects on water resources and still accommodate development were made. In order to facilitate the analysis, physical data was input into simple models for water availability to assess conditions within CWPAs and between CWPAs. Information on each CWPA area along with the simple model results and narrative summaries were compiled into a series of Technical Reports.

Background

Trinity River Watershed Summary

The physical setting of the County and mainstem Trinity River watershed were characterized. The waters of the Trinity River¹ are of state and national importance as well. At Lewiston Dam, approximately 70% of the Trinity River's flow is diverted to the Central Valley Project. It has been speculated that the cool, clean water from the Trinity River is an important element in maintaining habitat and water temperatures for Delta smelt and salmonids in the Sacramento River watershed. The diversion is also used to generate electrical power at several hydroelectric

¹ While many rivers have dams and regulated flows downstream, the Trinity River is only one of a few rivers worldwide that is actually diverted out of its watershed and into another river system.

facilities, including Lewiston, Whiskeytown and Keswick along its course. The various state and regional regulations and pertinent plans were described along with a list of beneficial uses from the Trinity River TMDL.

Due to its Mediterranean climate, Trinity County receives most of its precipitation in the late fall through spring and then enters into a drought for several months. Surface water flows are dependent on a series of factors including but not limited to: watershed size, soils and geology, topography (aspect, slope, and elevation), vegetation, hydrography, and other factors. High elevation watersheds, which are found throughout the County, tend to store more water in the form of snow with percolation into soils. This natural storage is vital to help maintain consistent streamflows in the drier months. Steep or lower elevation watersheds can experience rapid runoff of precipitation and shallow soils.

Study Area Description

The 1,086 square mile (695,000+ acres) Study Area is approximately 78.8% publically and 21.2% privately owned. The land is predominately federally owned including many large tracts in the Trinity Alps Wilderness and Shasta-Trinity National Forest. Accordingly, the majority of the Study Area is zoned as Unclassified public land followed by Timber Production and Unclassified Private.

Water Quantity

Approximately 30% of the study area is at a high elevation (4,000 ft or higher). Approximately 12% is above 5,000 in elevation, mostly in the Trinity Alps on the north side of the Trinity River. Snowfall tends to accumulate the most at 3,500 ft or higher. As described in the Trinity River Watershed summary above, precipitation tends to occur heavily in some years with many dry years in between.

Few community water systems exist within the study area (Trinity Dam to the Humboldt County border). The Weaverville Community Service District (WCSD) is the largest, serving a population of about 3,800 in Weaverville, Douglas City, and surrounding areas. The primary water sources for the WCSD are the Trinity River at a plant in Douglas City and gravity diversions in Weaverville on East and West Weaver Creeks. The West Weaver diversion continues past the WCSD plant via the Moon Lee Ditch. This ditch provides water to a number of homes on adjacent streets in addition to WCSD service. The average water consumption rate within the WCSD is 420 gallons per typical household equivalent per day (gal/HE/d). This was calculated based on WCSD Master Water Plan (2002), factoring out the consumption of major water users such as the schools and parks. This matches closely to estimates of 476 gal/HE/d that are based on: 1) data of individual water use on persons relying on a public water system from the US Geological Survey (USGS) for Trinity County in 2000 (208 gal/person/day); and 2) data for average household size in Trinity County of 2.29 persons (US Census 2000).

A few small water systems serve portions of the population in Lewiston. Their primary water sources are the Trinity River and tributary streams. There are a number of private water purveyors in the study area including the Lewiston Mutual Water Company, Lewiston Valley Water Company, and small purveyors in Big Bar,

Hawkins Bar (Trinity Village), Junction City (Coopers Bar), and others. The US Forest Service has a number of water systems that serve its campgrounds and facilities. Many rural residents rely on instream pumps, springs, or wells for their domestic water. There are 441 permitted wells (Trinity County Environmental Health, 2008) and an unknown quantity of undocumented wells within the study area. No substantial data is available on average water consumption rates in rural areas where users are not connected to a community water system, likely due to the variability of individual wells and pumps. The estimated water use for rural users, based on USGS data for self-supplied domestic use in 2000 (74.4 gal/person/day) as well as Trinity County's average household size in 2000, is 170 gal/HE/d. Because of its hot, dry climate it is assumed that on average surface water users are moderately conservative in their water application. This is illustrated by the relatively sparse lawns and gardens found at homes not served by water companies. While on average it is assumed that surface water users are conservative in use, each individual's system of pipes and ditches used to move water from its source to the end point is often not as efficient as a public water system.

Water scarcity has at times been an important issue in Trinity County. In the 1977 drought, drastic efforts to build an earthen dam on East Weaver Creek to trap water backfired. In the 1980's and 1990's Weaverville, the largest town, was facing a development moratorium due to a lack of community water. In Lewiston, older sewage treatment plants and requirements for cleaner water threatened to overwhelm service providers. In rural areas, minor subdivisions must address the effects of new surface water diversions on downstream landowner's water and more recently on fisheries. Expansion of water sources can take years to acquire or may be denied entirely in order to protect downstream water users or to protect the environment.

The Trinity County General Plan Open Space, Conservation, and Land Use Elements all contain direction regarding use and protection of streams, lakes and floodplains. In addition most of the Community Plans, adopted between 1988 and 1997, include more detailed discussion of riparian need and function and provide definitions of stream, riparian area and riparian zone of influence areas. The Land Use and Safety Elements and Community Plans contain Goals, Objectives and Policies regarding water resources. The Open Space and Conservation Elements contain direction to disapprove projects that damage streams or lakes or degrade water quality.

The General Plan Elements have not been updated in 20-35 years. During that time many policies have significantly changed including: state and federal laws; regulations and policies regarding wildlife, fisheries, water quality, and federal land; and fire management. These changes have had significant effects on local land use patterns. The conflicting requirements of local planning guidance and state and federal statutory requirements have, at times, caused frustration, uncertainty and delay of both new development and habitat restoration. Limited staffing and resources have hindered the County's ability to update and implement many of the

General Plan goals, objectives, and policies or respond to state and federal changes that impact land use.

The County has amended its Zoning Ordinance to increase protection of the 100 year floodplain of mapped streams and rivers and prohibits new development within Flood Hazard zoned areas. There are also provisions in zoning and subdivision standards to allow alternative parcel sizing and improvements that can protect or reduce effects on environmental resources.

Extensive site specific impacts to water quantity and quality have been noted by County Planning Department and Environmental Health staff, local restorationists, biologists and the public at large²:

- Marijuana Agriculture, which requires lots of water, often introduces nutrients and/or pesticides into local water bodies and can result in the removal of riparian vegetation.
- Over allocation of surface waters and loss of in stream beneficial uses.
- Complete dewatering of streams from over pumping by riparian water right holders.
- Reliance on imported water within some subdivisions to meet summer water demand.

Water Quality and Fisheries

Numerous management measures, plans, and regulatory strategies on the federal, state, and local levels have been developed that affect water management, fisheries, and water quality in the Trinity River and the North Coast region. Over the past 20 years, seven major state and federal actions or plans have identified impacts to water resources in the Trinity River: Northwest Forest Plan (US Forest Service, 1994); Federal listing of coho salmon as a Threatened Species (National Marine Fisheries Service (NMFS), 1998); Trinity River Record of Decision (ROD) (Bureau of Reclamation, 2000); Trinity River Total Maximum Daily Load (TMDL) allocation for sediment (US Environmental Protection Agency, 2000); Federal decision to not list steelhead salmon as a threatened species (NMFS, 2001); California listing of the coho as a state Threatened species (CA Fish and Game Commission (CFGC), 2002); and CFGC's adoption of the California Coho Recovery Strategy (CDFG, 2004). NMFS is working on a Federal Recovery Strategy for the coho salmon, but it has not been released to date.

Seven county plans, policies or studies have been identified that: affect water quality or quantity and fisheries as they relate to county managed lands; require development regulations; or have taken steps to protect and restore habitat. They consist of: Trinity County General Plan; Trinity County Grading Ordinance for Decomposed Granite Soils; Effects of County Land Use Regulations and Management on Anadromous Salmonids and Their Habitats: Humboldt, Del Norte, Mendocino, Siskiyou and Trinity Counties, California (UCCE, 1998); A Water Quality and Stream Habitat Protection Manual for County Road Maintenance in

² Letters to the Editor and articles in the Trinity Journal have noted impacts of unregulated grading and water diversion often associated with illegal activities including marijuana production.

Northwestern California Watersheds³ (Five Counties Salmonid Conservation Program (5C), 2002); Direct Inventory of Roads and Treatment (DIRT) (5C, 2002); Final Report: Trinity County Culvert Inventory and Fish Passage Evaluation (Taylor et al, 2002); and Road Design Guidelines for Low Impact to Hydrology (5C,2004).

The County General Plan contains Goals, Objectives, and Policies in the Land Use Element and in Community Plans that direct development to protect water and wildlife habitat. The Open Space and Conservation Elements contain direction to disapprove projects that damage streams or lakes or degrade water quality. As described under Water Quantity above, the County has lacked the resources to update and implement its General Plan. Similarly, the County has been unable to enforce its grading ordinance for decomposed granite soils or to fully monitor development projects for mitigation implementation or effectiveness (UCCE, 1999). Trinity County participates in the Five Counties Salmonid Conservation Program (5C), which implements conservation strategies and restoration projects in cooperation with its member counties.

Task 1 – Define NCIRWMP Community & Watershed Planning Areas

Fifteen CWPAs were identified in the study area:

- Big Bar
- Big Flat
- Burnt Ranch
- Cedar Flat
- Corral Bottom
- Del Loma
- Denny
- Douglas City
- Hawkins Bar
- Helena
- Junction City
- Lewiston
- Lower South Fork
- Salyer
- Weaverville

The process of determining these CWPAs began with the identification of the watersheds within the study area based on the Calwater hydrologic unit codes

³ Adopted by the Trinity County Board of Supervisors in 2004. In 2007 NMFS certified the manual for incidental take coverage under Section (4) Limit 10 of the federal Endangered Species Act

(CALWAA). These CALWAAs were then corrected to reflect true watershed boundaries in order to derive the CWPAs. Each CWPA was assigned to the most relevant General Plan community planning area. Then, CWPAs were determined by combining all of the watersheds assigned to the same General Plan community planning area. These CWPAs are what was used to analyze the majority of results within the Study Area.

The size of each CWPA and relative percent of the entire Study Area is shown in the table below:

Task 2 – Model Water Resource Management Technical Reports for Trinity County CWPAs

To develop watershed assessment information, several data on various physical factors including slope, elevation, geology, soils, floodplains, dam inundation, hydrography, landslides, fault lines, Wildlife Habitat Relationship habitat classes, salmonid fish presence, Deer Winter Range, CA Natural Diversity Database occurrences, and mapped Spotted Owl data was collected and overlaid in GIS. Readily available hard copy data such as stream flow was also inputted into a GIS friendly database format where practical. From these initial data layers, information on basic development potential and constraints began to unfold (e.g., areas that are on steep slopes in unstable soil types are fundamentally more constrained than those on favorable slopes and soils). Along with aspect and elevation, slope contributes to the ability of soils to hold and store water. Steep slopes generally have relatively shallow soils while flatter slopes tend to have deeper soils. Deeper soils have more water storage capacity. Assessing the nature of the slopes within each CWPA helped to illustrate water holding capacity of each area as well as that of the entire Study Area.

To this data, social factors such as community locations, roads, parcel boundaries, type of ownership, General Plan land use designations, zoning, community service district boundaries, fire infrastructure, recent (2002 – 2007) development and building activity, designated road and wilderness areas, wild & scenic corridors, research natural areas, mining operations, and community water source intakes were added. An example of this information is included in the following table, which summarizes road densities throughout the Study Area by CWPA. Road systems often interrupt the natural hydrology via stream diversions – sometimes between larger watersheds – and can also impact water quality. Understandably, the more urban areas and those along the major highways tend to have the highest road densities (refer to the table below).

Information on fire activity and wildland-urban interface areas was also added to the analysis. Additional layers were then created to illustrate sensitive areas of concern. For example, buffers around larger order streams were mapped based on CA Dept of Fish & Game general recommendations. Other information such as occupancy was derived where possible (e.g., based on assessor use codes and homeowner tax exemption and improvement values). This information was queried to derive basic information (e.g., statistics, qualities, trends) about the entire study

area and/or individual CWPAs that altogether would help to illustrate their character and current impacts on water and other natural resources.

At this time, current water supply and demand have been researched though future water needs have yet to be estimated. As described above in the Background, Water Quantity section, average consumption rates were estimated at: 420 gal/HE/d for households served by a community water system; and 170 gal/HE/d for households relying self-supplied domestic water. Most of the CWPAs within the study area do not contain a community water system. Based on these rates, water consumption was estimated for the entire Study Area as follows:

Table 12: Summary of Water Consumption by CWPA

CWPA NAME	Consumption (gal/yr)	% of Total
Big Bar	4,281,450	1.1%
Big Flat	1,178,950	0.3%
Burnt Ranch	7,135,750	1.9%
Cedar Flat	682,550	0.2%
Corral Bottom	434,350	0.1%
Del Loma	1,675,350	0.4%
Denny	1,985,600	0.5%
Douglas City	33,536,200	8.8%
Hawkins Bar	16,319,150	4.3%
Helena	372,300	0.1%
Junction City	22,151,850	5.8%
Lewiston	43,186,800	11.4%
Lower South Fork	1,923,550	0.5%
Salyer	14,147,400	3.7%
Weaverville	231,099,750	60.8%
TOTAL	380,111,000	

Note: Based on conservative consumption estimates derived from current land use data and consumption data (as described in Background, Water Quantity).

These estimates are conservative in that consumption rates for uses such as agricultural or industrial, which tend to be higher than that of residential and most commercial uses, were not assessed. This is because the data for actual acres of active agricultural use (vineyards, cropland) and water demand (e.g., crop type or irrigation method) is not available.

In order to combine various factors to assess and compare water resources and availability with the current level of development, a simple model on water availability was developed. The water model applied to each CWPA evaluates existing conditions and allows for a gross qualitative assessment of future effects from ministerial development within CWPAs. This simple model is not intended to be an authoritative tool that will drive land use decisions. However, multiple data included within the model address statewide priorities and requirements, which

should be a factor in local land use planning processes and policies. The model is only one example of an approach that looks at multiple factors in order to assess likely water holding capacity and therefore gross development suitability in a more comprehensive manner. The results of the model – which are based on physical features, biological, environmental and historic data, and regulatory requirements – outline a general water risk assessment as shown in the table below. The risk assessment reflects how likely it is that beneficial uses of water will not be met within a CWPA; the higher the risk, the less likely that the beneficial uses will be met.

Table: Risk of Not Meeting All Beneficial Uses of Water within a CWPA Assuming Ministerial Permitted Development Activity Levels

CWPAs Currently Not Meeting Uses	CWPAs at Moderate Risk	CWPAs with Low-Moderate Risk	CWPAS with Low Risk	CWPA with Minimal Risk
Weaverville	Lewiston	Junction City	Big Flat	Big Bar
		Douglas City	Cedar Flat	Del Loma
		Lower South Fork		Helena
		Burnt Ranch		Denny
		Corral Bottom		
		Hawkins Bar		
		Salyer		

Detailed model results were discussed. It should be noted that individual watersheds within a CWPA may not fit the predicted risk. A watershed level GIS analysis should be considered for discretionary projects in any CWPA with high to low-moderate risk of not meeting beneficial uses. Rezoning that allows higher density uses in a CWPA could increase its risk rating in the table above. Conversely restoration activities and conservation efforts could lessen risk within a CWPA or requisite watershed. The resulting datasets are intended to assist land use planners with: conducting cumulative impact assessments; and with identifying mitigations that will protect water resources but also accommodate build-out based on existing land use policies. The datasets may also be used in the first step in developing future General Plan Land Use, Conservation, Open Space and Safety Element updates.

The Technical Reports and Water Model produced will assist planners and decision makers in both long range and current project planning. Information may also be used for a variety of other purposes including: restoration activity development and prioritization by other entities at the local scale; and restoration monitoring or research.

The table below summarizes the potential for a CWPA to not meet all beneficial uses of water based on: current conditions; continued development based on

ministerial development patterns; and future development patterns based on rezoning some lands. The lower the risk, the less likely are impacts to beneficial uses. Future development projections used for this assessment are based on the existing zoning and an arbitrary decrease in the minimum parcel size for Ag-Forest Zoning, 10% conversion of TPZ to Rural Residential zoning⁴, and greater development of Unclassified parcels. These assumptions are not inconsistent with requests for rezoning and general development activity over the last several years. The assessment assumes that any new development will have a more significant effect of sediment, stormwater and instream flows as compared to past development. This assumption is based on GIS data and an empirical assessment that past development occurred along the flatter, more stable, and already accessible portions of the CWPAs. New development will be located on steeper slopes, require greater cut and fill slopes, and result in more cumulatively significant stream withdrawals.

Table: Assessment of Risk to Meeting Beneficial Uses of Water by CWPA

CWPA NAME	Current Condition	Ministerial Development	Increased Development
Big Bar	Minimal	Low (Drink)	Low (Drink)
Big Flat	Minimal	Low (Drink)	Moderate (Drink)
Burnt Ranch	Low (Sed.)	Low (Sed., Drink)	Moderate (Drink, Sed)
Cedar Flat	Low (Sed.)	Low (Sed., Drink)	Moderate (Drink, Sed)
Corral Bottom	Minimal	Low (Drink)	Moderate (Drink, Sed)
Del Loma	Minimal	Minimal	Low (Drink)
Denny	Minimal	Minimal	Minimal
Douglas City	Moderate (Fish, Sed.)	High (Fish, Sed)	At Risk (Fish, Sed)
Hawkins Bar	Minimal	Low (Sed., Drink)	Moderate (Drink, Sed)
Helena	Minimal	Minimal	Minimal
Junction City	Low to Moderate (Sed, Fish)	Low to Moderate (Sed, Fish)	Moderate (Sed, Fish)
Lewiston	At Risk (Sed.)	At Risk (Sed.)	At Risk (Sed, Sew, Fish, Drink)
Lower South Fork	Minimal	Low (Drink)	Moderate (Drink, Sed)
Salyer	Low (Sed.)	Low (Sed., Drink)	Moderate (Drink, Sed)
Weaverville	Not Properly Functioning (Sed, Fish, Drink)	Not Properly Functioning (Sed, Fish, Drink)	Not Properly Functioning (Sed, Fish, Drink)

Given these risks, updating the Trinity County General Plan to include a more significant water resource assessment would reduce potential conflicts between meeting beneficial uses of water and development. It could also accelerate the recovery of watersheds as called for in the Trinity River Sediment TMDL, maintain habitat for listed salmonids, and assist agencies and landowners in acquiring grants to restore or enhance forest, riparian and instream habitats. Lastly, the General Plan could document watershed recovery, which in turn could be evaluated by rule making agencies as they consider need for additional regulations.

⁴ Sierra Pacific Industries, the largest private landowner in Trinity County has already begun the process of removing lands from TPZ for future development and have marketed lands for non-timber uses.

STUDY AREA RECOMMENDATIONS

Study Area Recommendation #1: Work with Trinity County to secure funding to develop a County Ordinance establishing grey water re-use standards for non-human and/or incidental human contact uses such as landscaping, irrigation, or fire protection.

Study Area Recommendation #2: Facilitate the implementation of rooftop water capture systems that can be used for landscaping, irrigation or fire protection. This would be done by developing simple, standardized plans as well as streamlining building permits requirements, and minimizing permit costs.

Study Area Recommendation #3: Work with public water service providers to install meters on all user connections and to apply a service rate that is proportional to water use. This should be accompanied by water conservation educational outreach to landowners and businesses. In areas with water shortages or systems that have reached supply capacity, a maximum use rate for various land use types could also be developed such that additional impact fees would be collected for users drawing in excess of their established maximum. Those fees could be used to fund conservation incentives for users and/or efficiency upgrades to the water system.

Study Area Recommendation #4: Assess the cumulative demand and effects on stream beneficial uses when reviewing all discretionary development proposals. This would include assessing impacts on instream flows and would consider demands of both existing and proposed development.

Study Area Recommendation #5: Conduct a surface water use assessment of any surface water diversion proposed for a discretionary development proposal. This would go beyond Trinity County's informal policy of requiring in-stream dry weather testing to demonstrate flow. Refer to CWPA specific recommendations in Appendix B for recommended CWR Overlay Zoning Areas.

Study Area Recommendation #6: Develop water budgets for watersheds with water shortages or low available water supply – whether or not water is utilized by a public and/or private water system. Budgets would identify: the amount needed for existing landowners and other consumptive beneficial uses in the watershed; a minimum amount that would be required to maintain instream beneficial uses; and thresholds for maximum water use for new developments. If water use beyond the threshold amounts is proposed, the prospective developer would be required to use off-sets (see Recommendation 9 below) to meet proposed water use or pay fees to finance other water management efficiencies within the watershed.

Study Area Recommendation #7: Require water conservation design standards for all discretionary development activities that are not on community water systems and propose surface water diversion to meet permit or project compliance. Specific requirements would include:

- Placement of sufficient water storage facilities for at least 10 days of need (~4,200 – 5,000 gallons per household) at all times;
- Require minimum bypass flows for instream beneficial uses at all times using passive diversion devices designed to allow diversion of water only when minimum flow requirements are met or exceeded

Study Area Recommendation #8: To the extent practical and feasible, utilize Trinity River as a water source for new development and to replace existing stream water diversions.

Study Area Recommendation #9: Develop a water use off-set mechanism to accommodate development in areas where water shortage is the only hindrance to development. This mechanism would grant approval to prospective developers in water supply impacted areas so long as they finance water conservation measures in existing development/land uses within the same stream reach or water district that would reduce the existing water demand by twice the amount required by the prospective developer. The process would require documentation that the target water use reduction was achieved as well as an agreement from the conserver to maintain improvements. This would facilitate in-fill or urban development where water supply is the only barrier while also reducing the overall demand of the local water supply.

Study Area Recommendation #10: Incorporate goals, objectives, and measures into the General Plan to encourage in-fill development, home clustering, low impact development, on-site stormwater management, and discourage sprawl or resource intensive development. These measures will help to reduce the impacts of development to water supplies and infrastructure as well as to other natural resources.

Study Area Recommendation #11: Develop incentives to encourage voluntary⁵ stream and riparian area restoration efforts by willing landowners, including monetizing the value of restoration. Pertinent recommendations are:

- Amend the Zoning Ordinance and/or establish a new water resources restoration ordinance to monetize the following restoration actions:
 1. Voluntary rezone of stream riparian areas and riparian zone of influence areas (outside of designated 100 year floodplains on which development is already prohibited) as Open Space;
 2. Voluntary written relinquishment of unused riparian or other surface water rights for instream beneficial uses;
 3. Voluntary restoration of stream habitat including:
 - a. Installation of stormwater retention basins that adhere to basic design criteria to ensure long term function;
- Voluntary restoration projects accepted by the County would be eligible for one or more of the following benefits:

⁵ Voluntary means any effort not required of a landowner in order to obtain discretionary or ministerial project approval.

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1. Reduced property tax value assessment for the reserved area(s) based on its open space value and/or;
2. Restoration credit that the landowner could then sell to a third party conservation entity approved by the County, CDFG, and/or NCRWQCB. This entity could sell or otherwise transfer credits to other owners that need to mitigate for structures or activities in stream setback areas. Such transfers however should assure that there is an overall significant trend of improvement in habitat, critical low flow periods, and/or other stream improvements compared to what could occur without the program.

Study Area Recommendation #12: Develop and support grant and other incentives to encourage water conservation as well as stream and riparian area restoration efforts by willing landowners. Specifically, this could include the following approaches:

- Local conservation agencies and non-profits would work with landowners to pursue grants for restoration;
- Trinity County, local conservation agencies, non-profits, and/or the NCIRWMP could work with grant funding agencies and foundations to establish a single regional grant that would allow for implementation of numerous small restoration efforts rather than require individual grants which greatly increase costs and administrative requirements.

Study Area Recommendation #13: Amend the Trinity County Zoning Ordinance to require stream setbacks in which activities such as construction, grading, fill placement, landscaping, removal of native species, or forest conversion are prohibited. The ordinance would include the purpose and function of setbacks and desired future stream condition. Minimum setback widths should be established based on public review and published recommendations contained in adopted Community Plans, CDFG's 1994 Letter to Counties; CA Coho Recovery Strategy recommendations, and/or CalFire watercourse protection zone guidelines. Exceptions to the setback width are recommended largely for existing uses.

Study Area Recommendation #14: Provide for stream setback width and area reductions if it would allow reasonable development while providing equal or greater stream benefit. Pertinent setback adjustment mitigations could include:

- Installation of water conservation devices that would increase instream flows during critical low flow periods
- Reservation of off-site stream setback areas on otherwise developable portions of the same or an adjacent parcel within the same stream reach;

Task 5 –Water Resource Element Process Guidelines & Template

Per the discussions in the previous tasks, a Water Resource Element was not pursued nor was a process for its adoption. Budget constraints and reduced staffing levels resulted in Trinity County delaying its entire General Plan update process. However, as discussed throughout this report, several state, federal, and regional priorities and data were considered in the development of the GIS and the subsequent analyses.

Summary

Water is a critical resource and therefore of significant concern. Trinity County's frequent drought cycles and changes in rainfall patterns along with loss of habitat for listed salmon species exacerbate water management issues. This project assembled physical, spatial information in a manner that allows landowners, planners, decision makers, and others to compare and contrast water resources within and between community planning areas. The physical parameters assessed within the model can be used to gain a better understanding of watershed processes as they relate to water resources. This report and the Water Model are intended as a starting point from which additional and improved interpretations about physical, biological, environmental, regulatory, and historical information can be distilled.

The data and results of this project may be used for various purposes. It will aid Trinity County whenever they are able to conduct an update to the General Plan. It will also assist County planners in performing reviews of current development applications because the information gathered is far more extensive than what is now typically used to conduct research on proposed development areas. It will prove invaluable in overlaying and evaluating local, state, and federal priorities, regulations, and/or concerns in terms of water management and conservation as well as in developing and prioritizing restoration projects.

Recommendations for the County Planning Commission and Board of Supervisors

Revisions to the Open Space and Conservation Element and/or Consideration of a Water Resources Element.

The County's Open Space Element states that:

"1. Water Supply. Water supply is more than adequate to take care of both agriculture and domestic requirements for the foreseeable future. The most important requirement is to reserve adequate water for the future generations in the County and to not allow excessive amounts to be exported. (Open Space Element. p. 28)"

The optimistic water supply assessment of the 1973 Open Space Element is contradicted by a number of significant water shortages, fish kills, and emergency water supply measures. Climatic variation, drought, increased water withdrawals (legal and illegal), infrastructure changes, recurrent summer water shortages on numerous streams and declining fisheries and habitat conditions indicate the need to either amend the Open Space and Conservation Elements or to adopt a Water Resources Element.

With the adoption of the Trinity County General Plan in 1973, the County espoused broad narrative objectives to assure growth would be coordinated with water supply and the protection of streams. However, it provided no numeric direction to achieve those objectives. The Open Space and Conservation Elements included direction to provide stream protections as follows:

"Continual care must be taken to protect the banks of both the lakes and the rivers and streams in the county. The objective of the open space element therefore is:

To preserve the quality of the existing water in all forms in Trinity County and adequately plan for the protection of the county's water supply for future generations." (Open Space Element p.4.

Disapprove of any developments which may pollute the existing streams and lakes or become a source of silt which washes down into the water areas." (Open Space Element, p.56 and Conservation Element p.32)

*"The prime objective of the conservation of water resources is:
To protect and conserve the lakes, streams and reservoirs of the County as potable and agricultural water, for recreation areas, but more important as wildlife habitat which will be beneficial to the residents, present and future of Trinity County." (Conservation Element, p.2)*

The following General Plan Land Use, Open Space and Conservation Elements Goals, Objectives and Policies should be implemented (note that language is suggested here to convey the recommended concepts):

Goal#1: Protect streams and surrounding habitats to maintain and improve all beneficial uses of water for present and future generations.

Objective #1- Preserve existing water quantity and quality of streams and lakes by careful planning of future development.

- Policy #1.1 All future ministerial and discretionary activities should at a minimum maintain beneficial uses of water while protecting existing water rights.
- Policy #1.2 Adopt numeric and performance based stream setbacks that are consistent with CA Forest Practices Act stream zones and permitted management activities; provided however that: legal and/or permitted activities approved by the County in the past are protected in perpetuity; and in lieu setbacks may be utilized when incentive based restoration results in an overall improvement in beneficial uses of water.
- Policy #1.3 Develop incentives to encourage existing water users to conserve water, restore stream habitat, reduce impermeable surfaces and/or stormwater runoff rates, improve water quality, and/or restore stream habitats.
- Policy #1.4 Establish effective incentives to encourage conservation such as but not limited to: reduced regulatory review of projects, transferable density credits; density bonuses, in lieu stream setback standards, reduced building and development fees; water use calculation credits.

Goal #2: Work with water districts, mutual water companies and other water purveyors to assure reliable water supplies for the present and future generations.

Objective 2.1- Assist water districts, mutual water companies and other water purveyors in developing capital improvement plans that are realistic and based on sound planning and development patterns

- Policy #2.1 Direct future growth where sufficient water resources can be provided economically and sustainably.
- Policy #2.2 Support districts, as resources allow, in all efforts to improve water delivery efficiency, upgrade infrastructure, maximize the efficient use of water and reclaim or conserve water.
- Policy #2.3 Support expansion of community and individual water projects to the mainstem Trinity River where economically and environmentally practical.

Redefining Critical Water Resources overlay zoning and creating new proof of water and water conservation standards

Currently, the Critical Water Resources overlay zoning (CWR) only exists in isolated areas of the County, predominantly in Hayfork outside of the water district, Douglas City, Browns Creek, Democrat Gulch, Little Browns Creek, lower Weaver Creek, and upper East Branch of East Weaver Creek. On some physical maps, there may still be references to "CWRN", which is an old designation. CWRN is meant to specify that there is no CWR overlay because the Board has found that the use of water is not needed for any human or animal consumption or irrigation. Any parcels zoned CWRN may not have any building, septic, or "other like" permits issued. While this sounds like a restriction over water use, in reality, it assumes that owners of such parcels will not use water and would comply with permit requirements for any development. With the recent boon in illegal and covert marijuana operations, where entire buildings are erected with no permit and acres are converted from forest to gardens, it is obvious that the impacts of this type of use can be rampant and highly detrimental to several resources. One cannot safely assume that parcels with a CWRN will not have any water use, let alone adverse impacts. Therefore, it is suggested that for these reasons, the CWRN designation is unnecessary and may be detrimental. It is recommended that the "CWRN" designation be deleted.

It is recognized that the majority of people living in areas not served by a community water system can have more challenges meeting their water needs in a dry year or drought, especially where multiple landowners draw water from a common source. In several stream systems there is sufficient water for domestic use but insufficient summer flows for other beneficial uses (agriculture, fire protection, wildlife, fisheries and recreation). Examples include East Weaver Creek, Little Browns Creek, Conner Creek, Garden Gulch, Sidney Gulch and others. Conversely there some streams with sufficient flows for agricultural uses (e.g. Summit Creek, Salt Creek, Browns Creek, Reading Creek, Barker Creek, Big Creek and others) but do not have adequate flows to meet domestic needs and other beneficial uses.

Because of the significant changes in precipitation patterns, total rainfall and snow pack over the past 40 years in Trinity County, it would be more useful if the current CWR proof of water standards for future subdivision were expanded County wide. Refer to the attached proposed zoning Section 30 General Provisions and Exceptions as well as new proposed standards for the Subdivision Ordinance.

Furthermore, it is proposed that the CWR zoning overlay be applied more equitably according to watershed. Currently, CWR is applied mostly by section lines within certain areas. Because of the proposed county-wide standards, CWR is proposed to have new standards (refer to deliverables 5a). CWR would represent areas where development standards in regards to proof of water are much stricter and require a greater level of evidence to support the ability to meet multiple beneficial uses. Specifically, within the proposed CWR zoning overlay district, additional water conservation standards would be required not just for new subdivisions but for those new ministerial and discretionary activities that require water.

Modification of General Provisions and Exceptions (Section 30) Trinity County Zoning Ordinance

Section 30 D.3.c.7: In order to make Section 30 of the Zoning Ordinance consistent with the proposed CWR overlay districts, section D.3.c.7, Special Regulations for Second Dwelling Units would specify that the requirements of the CWR overlays apply to second dwellings (refer to the attached proposed Section 30 General Provisions and Exceptions).

Section 30 H (added): Refer to the attached proposed Section 30 General Provisions and Exceptions adding Section “H. Waterbody Protection Setbacks” for recommended setbacks and permitted uses.

Revisions to Section 16.48.124 for proof of water of the Trinity County Subdivision Ordinance.

The County’s Subdivision Ordinance states as part of its purpose “To prevent division of land which is actually or potentially dangerous by reason of flood hazard, inundation, proximity to excessive noise, inadequate access, inadequate water supply or fire protection, insufficient sewerage facilities, hazardous geological conditions, unless such land is for open space purposes only.” However the Subdivision Design Standards do not currently consider beneficial uses of water other than at the point of diversion.

Section 16.48.124(A)(1) does not address downstream flows, methods of water withdrawal, or cumulative diversions impacts of surface water diversions on all beneficial uses. The Ordinance does require analysis of impacts to neighboring water uses for wells for subdivisions of 5 or parcels but not require similar analysis for surface water diversions. Documented lack of summer surface water in Browns Creek, Little Browns Creek and other streams have resulted in landowners having to import water in tanks, both creating health and fire protection issues.

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The requirements of Section 16.48.124 for dry weather period testing allow for extended testing periods which may be acceptable for public health but may impact other beneficial uses including agriculture, fisheries and water quality. The time extension for testing should be eliminated to assure that all beneficial uses can adequately be protected.

It is recommended that Sections 16.48.123 Public Water Supply and 16.48.124 (Individual or On-site Water Availability) be modified with language that is clearer and more protective of water resources in order to prevent division of land which is actually or potentially dangerous by reason of inadequate water supply. There should be provisions for subdividers within a service area of a public water system to be able to comply by demonstrating proof that the proposed subdivision will be entirely served by the water system. It is recommended that the Subdivision Ordinance be amended to encourage the use of Trinity River water when practical. Refer to the attachments "Task5bc_TCSubdivisionOrdinance..." for specific language recommendations.

Water conservation method and general development guide with landowner recommendations for discretionary projects.

It is also recommended that the County Planning Department provide development proponents with the Water Resources Guide for Landowners, a brochure which includes an online link to the 5C water conservation webpage <http://www.5counties.org/waterconservation.htm>. The webpage features weblinks to several online resources including the County Water Resources Web Map, the 5C Program Stormwater Management Guide, and water rights brochure with local contacts. It is further recommended that the County consider future financial incentives for voluntary use of water management best management practices (BMPs) such as greywater reuse or stormwater management where it isn't required of them. Another voluntary measure could be conversion of an existing land use to one that required significantly less water consumption. This could take the form of a rebate on building permit fees once the landowner demonstrated that such voluntary conservation BMPs were properly implemented.

Water supply, out of basin transfers, recover funds for local restoration and water resources management support.

Since 1964, Trinity County has exported water from the upper mainstem Trinity River to the Sacramento River for numerous out of basin uses via the Trinity Lake/Dam reservoir. The County does receive hydroelectric power generated at the dam for use within the County as operated by the Trinity Public Utilities District. However, the County does not receive any monetary compensation with which it may fund efforts to mitigate for the downstream impacts of the diversion. The impacts of the diversion are very well captured in various documents including the Trinity River Record of Decision and accompanying EIS/EIR. Although the Bureau of Reclamation established the Trinity River Restoration Program (TRRP) to undertake projects on the mainstem, as well as to fund watershed restoration work, those efforts are very specifically targeted towards reducing sediment inputs and restoring fish passage. The TRRP objectives do not adequately account for the impacts of the diversion and reduced flows on flows for habitat and downstream water quality. Because downstream users (Trinity and Humboldt Counties, tribes, and private landowners) have to share the reduced flows, all beneficial uses are not met. Development in some areas of the County could be facilitated by additional allocations of water to existing and new community water systems. Given that the diverted water is sold to Sacramento River water users, it seems that the County is being shortchanged. It is recommended that the Trinity County

Board of Supervisors consider requiring that a nominal fee per cfs (or acre foot, whichever is being tracked at the dam) be collected on all diverted water, with the revenue being placed into a fund account to be used to mitigate the effects of the dam. Given the average volumes of water diverted on an annual basis, this would yield significant revenues to the County each year. That would ensure: that restoration objectives could be achieved and that there would be sufficient water supplies for development along the Trinity River corridor and to communities served by community water systems that rely on river water.

EXHIBIT B

Staff Report for 04/14/16 Planning
Commission Meeting



TRINITY COUNTY PLANNING DEPARTMENT

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STAFF REPORT

April 6, 2016

From: Carson Anderson, Senior Planner
To: Planning Commission
Re: Countywide Water Resource Policy Changes per the Northwest California Resource Conservation and Development Council -- Follow-up Discussion and Potential Recommendations to the Board of Supervisors

At its December 10, 2015 meeting the Planning Commission heard a presentation from Mark Lancaster and Sandra Perez of the Northwest California Resource Conservation and Development Council/Five Counties Salmonid Conservation Program concerning its recommendations to the County on supplementing the North Coast Integrated Regional Water Management Plan. That presentation called attention to the issues associated with the County's current water policies and provided a list desirable potential updates to the Open Space and Conservation Element of the General Plan, Zoning Code, and Subdivision Ordinance. The Commission is being asked to review the proposed changes and make a recommendation to the Board of Supervisors to take them under consideration for adoption. Following is a synopsis, for the Commission's consideration, of the policy action items touched upon in that presentation.

1. Develop a Water Resources Element as part of the General Plan;
2. Develop a County Ordinance establishing greywater re-use standards for non-human and/or incidental human contact (viz., irrigation, fire protection);
3. Encourage rainwater catchment actions (rooftop rainwater for non-potable use), and streamline building permit requirement and related permit costs; provide standardized plans for the public to use;
4. Conduct a surface water use assessment of any surface water diversion proposed for a discretionary development proposal and assess cumulative demand and effects on surface water beneficial issues;
5. Require water conservation design standards for all discretionary development activities not served by community water systems;
6. Amend the County Zoning Ordinance to require buffer zones from streams;
7. Encourage use of the Trinity River as a water source in place of water diversions from Trinity River tributaries;
8. Water resources stewardship education of the general public should be promoted by County (e.g., online resource library);
9. Update the water resources discussion in the Conservation Element by adding the policies to maintain beneficial uses of water while protecting existing water rights, adopt performance-based stream setback standards, develop incentives to encourage conservation and stream restoration practices by existing water users, and establish effective water resource conservation incentives;
10. Work with water purveyors in developing capital improvement plans that direct future growth where sufficient water resources can be provided economically, efficiently and sustainably, and incentivize water projects using water from the mainstem of the Trinity River (rather than its tributaries) where environmentally/economically appropriate;

11. Require a major expansion, and new performance standards, as part of the Critical Water Resources (CWR) Overlay zoning, and;
12. Amend County Subdivision Ordinance. Eliminate time extension allowance for dry weather period water supply testing to assure all beneficial uses can adequately be protected.

1. Develop a Water Resources Element as part of the General Plan

Staff Discussion

A clear rationale for a separate general plan element is to give greater focus to reducing potential conflicts between development pressures and meeting beneficial uses of water in the face of current threats to water supply (e.g., prolonged drought and wildland fire)—factors that were not fully understood at the time the County's current water policies were adopted (April 1973). At present, a fairly small number of county jurisdictions in Northern California have taken this route. These include, among others, Butte and Plumas Counties (see Exhibit A – Butte County Water Resources Element).

Another approach, which may be somewhat easier to implement given the current organization structure of the General Plan, is to break out water resources as a detailed sub-section in the General Plan. During the past decade or more, counties have offered a more detailed discussion of water resources as part of their conservation elements (e.g., Shasta County General Plan – which groups ten topics as part of its "Resources Group", including agricultural land, timberland, minerals, energy, and water resources among others). Often the jurisdiction has commissioned water resource plans to guide the enactment of planning policy (viz., Shasta County).

A discussion of what is considered desirable water resources content for a Conservation Element is provided in the State Office of Planning & Research (OPR) *General Plan Guidelines* (2003). Steps taken as part of the analysis include inventorying existing water demands, supply and providers; assessing future water demands promulgated by General Plan policy land use policy build-out; describing programs for water conservation; inventorying existing ordinances implementing water management issues among other topics. A good deal of this work and related data collecting is likely available to the County based on studies completed by the Northwest California Resource Conservation and Development Council, the Five Counties Salmon Conservation Program, and may also be found in the background analysis for the North Coast Integrated Regional Water Management Plan.

2. Develop County Ordinance establishing greywater re-use standards for non-human and /or incidental human contact (viz., irrigation, fire protection)

3. Encourage rainwater catchment actions (rooftop rainwater for non-potable use, and streamline building permit requirement and related permit costs; provide standardized plans for the public to use)

Staff Discussion

Both the Trinity County Building & Safety and Environmental Health Departments have commented that the County does not have official policies either promoting or discouraging greywater use. Commonly, the public is referred to the provisions in Title 24, Part 5 of the California Administrative Code, which outlines greywater review and permitting requirements (Exhibit B – 1997 "Revised California Graywater Standards"), per the California Plumbing Code. The 5C Program's "Stormwater Management Guide" (available online) also provides detailed guidance. Staff recommends that the County adopt these state standards as its own ordinance.

A challenge the County faces is that in requiring redundant systems that accommodate both blackwater and greywater installation of a septic system or hook-up to a community wastewater system, related code enforcement problems have arisen (e.g., County approval conditions not being complied with that require conveyance of greywater away from building to say a garden area). Residents often do not understand the need to install the required back-up systems. Such redundancy is required for public health code reasons to prevent the spillage were the greywater system to break down, and also preserves the rights of future property owners who may not wish to operate a greywater system.

Staff is studying water conservation policies in other jurisdictions, and at the Commission's direction, can bring back further details for future policy consideration. Some examples follow:

Water use "Forbearance" agreements entered into with the North Coast Regional Water Quality Control Board (NCRWQCB) provide another means of incentivizing rainwater catchment actions because a lower "permit" fee schedule is offered.

As part of the Mendocino Water Resources and Water Conservation Plan, Mendocino City would require all new development to incorporate proven water conservation technology (e.g., appropriate plumbing fixtures, appliances, water catchment infrastructure, drought-tolerant landscaping) while preserving, as open space, existing natural drainage areas, floodplain and aquifer recharge areas that provide the best sites for groundwater recharge.

The San Luis Obispo Countywide Water Conservation Program is an additional example. Its key strategy is requiring new development to be water neutral through a combination of waste water prevention programs, agricultural water offset programs, agricultural policy and education, turf removal incentive programs, and plumbing retrofits.

4. Conduct a surface water use assessment of any surface water diversion proposed for a discretionary development proposal and assess cumulative demand and effects on surface water beneficial issues

Staff Discussion

Much of this is already the County's discretionary operating policy. CEQA analysis is required for all projects that are not specifically exempt. The CEQA checklist contains several questions related to impacts to water quality, drainage, stormwater runoff, groundwater depletion, and increased risk due to flood hazard (Checklist Item IX, a) through i). At the time of project review, comments received from other departments and outside agencies highlight whether water resource impacts are likely, and these sometimes point to the potential for cumulative impacts. Hydrologic studies are routinely required by the Environmental Health Department for new development in locations known to have soil with slow water percolation characteristics. Consistent with this policy recommendation, stepped up efforts should be made, to catalog, cross reference and track compliance outcomes of projects with the potential to cause adverse surface water impacts (e.g., projects approved with water resource-related mitigation measures).

Appendix B, Section II, Item B and Section III, Item E of the NCRWQCB Order Number R1-2015-0023 also contain detailed surface water resource protection guidance related to commercial cannabis cultivation (Exhibit C). Water "forbearance" agreements can be a means to address and reduce surface water diversion impacts associated with commercial cannabis cultivation uses. In addition, data collected through the NCRWQCB "Waiver" program, and shared, will ultimately enable the County to more readily assess cumulative impacts.

5. Require water conservation design standards for all discretionary development activities not served by community water systems

Staff Discussion

The rationale is to ensure adequate water supply (e.g., wells, streams), to protect wildlife and not hamper fire-fighting capabilities. This concern is being addressed, in part, by the County's current discretionary operating policy through conditions of approval generated by the CEQA review process; however, adopting the policy would ensure a more systematic process. The scope of potential measures includes water catchment, water efficient plumbing and landscape irrigation features, the use of composting and gabions in landscaped areas to help retain moisture, avoid runoff, and allow more water to percolate into the ground to replenish groundwater resources. The effort could also potentially include providing incentives for the installation of other water efficient infrastructure.

6. Amend the County Zoning Ordinance to require buffer zones from streams

Staff Discussion

This measure is intended to protect the beneficial uses of the water. Although not fully reflected in the County's Zoning Code,¹ this is informal Planning and Building & Safety practice currently, and reflects policy contained in the County Subdivision Ordinance (e.g., septic system separation distances of 50 to 100 feet from streams and sensitive habitat areas), as well as CA Fish & Wildlife and the RWQCB permitting criteria. Staff supports the adoption of reasonable buffer requirements combined with reasonable exception criteria.

7. Encourage use of the Trinity River as a water source in place of water diversions from Trinity River tributaries

Staff Discussion

Although seemingly counterintuitive, this measure is intended to protect beneficial uses along tributaries where water supply is potentially threatened during times of drought. It also serves to protect fish spawning habitat that is more commonly found in the river's tributaries rather than along the mainstem. Staff is seeking further input from the Northwest California Resource Conservation and Development Council (NWCRC&DC), and on screening criteria on when this is appropriate, and what limitations should be placed on such actions. Representatives of the NWCRC&DC's Five Counties Salmonid Conservation Program (5C) will be asked to address the matter at the Commission's meeting.

8. Water resources stewardship education of the general public should be promoted by County (e.g., online resource library)

Staff Discussion

Staff supports the recommendation and thinks it can implement this cost-effectively by adding information to the County website and by creating a flyer available at the public counter at Building & Safety/Planning with a list of web links. The 5C and NWCRC&DC websites already offer good online resources for this. Staff will continue looking at what other jurisdictions are doing and can periodically update the list of web links as part of an online resource library and publications for flyers.

¹ The CWR Overlay Zone requires a minimum 100-foot setback from any stream, and drilled to a minimum depth of 50 feet (Ordinance 315 Section 29.2, C).

9. and 10. SPECIFIC RECOMMENDED CHANGES TO GENERAL PLAN POLICIES**

Current Text

GOAL 1: Conservation Element Goal protect streams and surrounding habitats to maintain and improve all beneficial uses of water for present and future generations.

Objective #1: Preserve existing water quantity and quality of streams and lakes by careful planning of future development.

Proposed

Policy 1.1: All future ministerial and discretionary activities should at a minimum maintain beneficial uses of water while protecting existing water rights.

Policy 1.2: Adopt numeric and performance-based stream setback standards that are consistent with California Forest Practices Act stream zones and permitted management activities (provided, however, that legal and/or permitted activities approved by the County in the past are protected in perpetuity). In lieu setbacks may be utilized when incentive-based restoration results in an overall improvement in beneficial uses of water.

Policy 1.3: Develop incentives to encourage existing water users to conserve water, restore stream habitat, reduce impermeable surfaces and/or restore stream habitats.

Policy 1.4: Establish effective incentives to encourage conservation such as but not limited to- reducing regulatory review of projects, transfer of density credits, in lieu stream buffer standards, reduction of development fees and costs. Incentivize water use calculation by providing credits to those providing such data.

Current Text

GOAL 2: Work with water districts, mutual water companies and other water purveyors to assure reliable water supplies for present and future generations.

Objective #2 Assist water districts, mutual water companies and other water purveyors in developing capital improvement plans that re realistic and based on sound planning and development patterns.

Proposed

Policy 2.1: Direct future growth where sufficient water resources can be provided economically and sustainably.

Policy 2.2: Support districts, as resources allow, in all efforts to improve water delivery efficiency, upgrade infrastructure, maximize the efficient use of water and reclaim or conserve water.

Policy 2.3: Support expansion of community and individual water projects to the mainstem Trinity River where economically and environmentally practical.

** It should be noted that a further overall goal contained in the 1973 Conservation Element is to develop a comprehensive program to sustain multiple uses of watershed lands.

Staff Discussion

Staff is seeking clarification regarding what the appropriate performance standards should be for governing stream setback standards (as proposed in Policy 1.2). Chapter 14 of the California Forest Practices Act contains a wide, detailed set of requirements for the protection of water quality using federal anti-degradation requirements based upon water quality tiers. Representatives of the NWCRC&DC's Five Counties Salmonid Conservation Program (5C) have been asked to provide clarification on this topic at the Commission meeting.

Threshold criteria for when the expansion of water projects along the mainstem Trinity River is appropriate. Determining what a tipping point would be in terms of cumulative impacts would be guided in part by input from the NWCRC&DC and 5C.

11. SPECIFIC RECOMMENDED CHANGES TO CRITICAL WATER RESOURCES (CWR) OVERLAY SECTION OF ZONING CODE

Staff Discussion

According to the NWCRC&DC and 5C, currently the CWR overlay applies to isolated areas in the County, chiefly in Hayfork outside the water district service area, and also Douglas City, Browns Creek and Little Browns Creek, Democrat Gulch, and the lower, upper, and east branches of East Weaver Creek. As an interim measure, the NWCRC&DC recommendation is to extend the current CWR proof of water standards for all future subdivision actions to the entire county. In the longer term, the county would research and define more inclusive boundaries for an expanded CWR zone.

In addition, the current CWR standards would be contained in Zoning Ordinance Section 30 (General Provisions and Exceptions) and in Section 16.48.124 of the Subdivision Ordinance (proof of water provisions).

- a) Significant expansion of CWR zone overlay area
- b) Proof of water availability shall be demonstrated by means of a hydrological study approved by the County for new subdivisions not served by an existing community water service district. Data for the study shall be gathered during the dry season, prior to start of the rainy season. Water sources on all parcels shall be collectively evaluated for overall impact to local groundwater supplies.
- c) Require implementation of water resource conservation best management practices to preserve sufficient stream flows for downstream beneficial uses (per the California Constitution and Porter-Cologne Act).
- d) Recommended best management practices (BMPs) include the requirement that greywater systems are in place prior to final approval of a building septic tanks permit; use of stormwater collection and storage per the 5C Programs online Stormwater Management Guide, and; use of Trickle Fill (passive diversion) devices (these allow diversion during times of sufficient flow)
- e) When existing parcels are not currently served by an existing operating community water system and request ministerial and discretionary permits or development entitlements requiring additional water the installation of onsite water storage facilities shall be required as a condition of approval (per a minimum domestic standard of 2,500 gallons of storage per parcel—above what may be required for fire protection storages requirements set for the in the Safety Element of the General Plan.

f) Require implementation of water resource conservation best management practices to preserve sufficient stream flows for downstream beneficial uses.

g) Develop financial incentives to promote water conservation by the public, such as rebate programs. Possible options being to levy a Planning Department surcharge on top of Building permits fees that gets rebated if property owner satisfactorily demonstrates that such voluntary conservation BMP's were properly implemented

12. SPECIFIC RECOMMENDED CHANGES TO SUBDIVISION ORDINANCE

a) Eliminate time extension allowance for dry weather period testing to assure all beneficial uses can adequately be protected

b) Modify Sections 16.48.123 and 16.48.124 to prevent unsafe subdivision actions due to inadequate water supply Provisions for subdividers within a service area of a public water system to be able to comply by demonstrating proof of community water system service. Encourage the use of Trinity River water rather than its tributaries when practical (protect fish habitat and avoid overdraft of stream water resources)

Staff Discussion

Staff supports, in principle, the proposed recommended changes to the Subdivision Ordinance. The county should reserve, however, the right to consider exceptions to a blanket elimination of dry weather testing, when evidentiary circumstances justify it. Staff will provide further detail on this point at the meeting and will invite comment by NWCRC&DC/5C representatives.

EXHIBIT C

5C Program's Stormwater Management Guide

[http://www.5counties.org/
stormwater.htm](http://www.5counties.org/stormwater.htm)

- User-friendly, guide outlining best management practices for managing stormwater with minimal watershed impacts
- Includes:
 - Background information
 - Do-it-yourself instructions
 - Calculators
- Additional resources

5C Program's Stormwater Management Guide



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