Siskiyou County Comprehensive Land & Resource Management Plan

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Part 1. *Introduction and Statement of Purpose*

The management and regulatory actions of federal and State agencies within Siskiyou County have a profound impact on the citizens of the county. The Constitution of the United States and the Constitution of the State of California provide for a republican form of representative government with specific limitations and separations on the governing powers of federal and State bodies of government and the executive, legislative and judicial branches therein; as in respect to one another and to the people in which sovereign power resides. The limited power of government in relationship to the individual citizen is expressed, in part, by the recognition of certain rights as inalienable by governance and the enumeration of specific guarantees of protection in regards to many others.

The duly elected Board of Supervisors of the County is empowered by the citizens of Siskiyou County with administering the general law of California in respect to the "police powers" of regulation in regard to the public health, safety, welfare and morals within the territorial boundaries of the County and in accordance with a sworn duty to protect and defend the Constitution of the United States. As such, the Board of Supervisors of Siskiyou County embodies the convergence of both generally and specifically delegated authority and the political jurisdiction to represent the interests of the citizens of Siskiyou County in the administration of civil governance by all agencies affecting citizen actions as well as individual rights within the territorial boundaries of Siskiyou County.

The National Environmental Policy Act and the many other federal and state laws creating agencies, as well as authorizing the agencies to manage and regulate resources, require that the agencies consult and coordinate with the County in decision making when proposing actions that have physical, social or economic impacts on the County or its citizens. In discharging its responsibilities in this regard, the Board of Supervisors of Siskiyou County recognizes various cultural populations within the boundaries of the County that are distinct from one another yet linked in identity by customs, social communities, life styles, values and institutions; and defined largely by common resources-based economic activity that warrant specific consideration in agency decision making processes.

The Siskiyou County Comprehensive Land & Resource Management Plan seeks to describe these distinct cultural populations in terms of common actions, economic enterprises and uses of real and personal property as exist within the boundaries of Siskiyou County. The purpose of such description is to advise federal and state agencies of the existence of these cultural populations and the need to protect conserve and enhance the cultural and economic diversity within the County and to take no actions which diminish, or tend to diminish the political and legislative jurisdiction of the State of California or the County of Siskiyou in the civil governance of its citizens in regard to the interests of the health, safety, welfare or morals of its citizens and the general prosperity of its communities and the county as a whole.

Accordingly, the Board of Supervisors of the County of Siskiyou declares that it is the policy of the county to require each and every federal (see Appendix I) and state[1] agency administering, managing or regulating lands or natural resources within the county to fully coordinate with the county at the initiation and throughout the planning process, whenever proposed plans, actions, regulations, restrictions or establishment of productivity levels are being considered.

Furthermore, the County of Siskiyou has adopted Resolution No. 93-2-84, which provides for County participation in environmental review and coordination when federal and state agencies are proposing actions within the County which affect or may affect a wide range of County and citizen interests.

Part II *Examples*

Examples of an agency and/or regulatory entity actions or undertakings that invoke, or may invoke consideration of this plan, including, but not limited to the following:

1. Federal: Proposed National Forest Management Plans and Bureau of Land Management Plans or changes thereto, including the setting of timber harvest levels; changes in policies regarding salvage of dying and dead timber; changes in grazing fees and policies; changes in mining policies; proposed changes to tribal trust lands; changes in percentage of forest receipts to the county as in lieu payments; proposed creation of natural areas; proposed creation or designation of historic areas; proposed land exchanges; proposed purchases of private land; proposed changes in habitat requirements for endangered, threatened and sensitive species; proposed additions to wildlife areas; proposed changes to access to public lands; proposed changes in wetlands and riparian designation and management; proposed biological surveys; proposed National Parks and Monuments; proposed reallocation of water resources.
2. State Agencies: Proposed changes in regional water plans; proposed changes in wildlife habitat requirements; proposed changes in endangered, threatened and sensitive species designation; proposed changes in game and fish species designation and management; proposed changes in lists of beneficial uses of water; proposed changes in classification of navigability of streams; proposed changes in pesticide regulations; proposed changes in Forest practices regulations; proposed changes in mining and reclamation regulations; proposed changes in air quality regulations; proposed designation of wildlife preserves; proposed changes in stream discharge requirements; proposed changes in stream bed & bank alteration requirements; proposed additions to wild, scenic and recreational rivers; proposed changes in water management practices on agricultural lands; proposed land exchanges; proposed water diversions and/or well drilling for state purposes; proposed purchases of private land, proposed State Parks and Monuments; proposed reallocation and/or export of water.

[1] California Environmental Quality Act; California Administrative Procedures Act and other applicable acts.

Part III. *General Processes, Methods and Goals of an Analysis by Agencies*

Plans or actions by agency, inter-agency or other decision-making groups shall contain information and discussion to facilitate a coordinated planning effort between the agency and county government. Participation by the county in multi-interest planning, advisory or decision-making processes does not replace, abridge or satisfy the requirements for coordinated consultation and coordination between county government and the decision making agency(s).

This information for a coordinated planning effort shall include effects on the physical, social and economic environment. This includes the physical environment, historic customs, culture, usage, property rights, economic welfare, general prosperity and economic stability of communities in Siskiyou County. Actions or plans with non-significant impacts or negative impacts on the physical environment shall also be included since those actions or plans may have significant social and/or economic implications, including cumulative impacts.

Since the majority of land in Siskiyou County is non-private land, and the County's major industries – livestock, farming, timber, mining and recreation are tied to that land and pertinent resources either directly or indirectly, then all economic or social and natural or physical environmental effects are interrelated. When federal and state agency actions will potentially impact the physical environment, social, cultural, economic factors and/or property rights, then the following information should be provided:

The purpose and need for the actions should indicate the underlying purpose and need that brought about the proposed plan, program or project. The perceived purpose or need for an action or plan should be addressed in a manner to permit consideration of alternatives accomplishing or satisfying the needs and purpose. Alternatives for accomplishing the purpose or need should also be included. Each of the alternatives should be described. Descriptions should indicate limitations or factors (including costs) that may prohibit alternatives, - as well as benefits accruing from each alternative.

The affected or created physical, social and economic environment shall be described. Since these efforts are to permit coordinated planning with county government such descriptions shall be germane to county units. The maximum level of aggregation is as a county. Due to cultural and climatic differences and geographic isolation, discussions should include descriptions of affected or created impacts on sub county units including the principal valleys of Butte, Shasta and Scott as well delineated historically and generally by water drainage.

The Tulelake area would be considered distinct from Butte Valley for historical developmental, cultural and physical reasons. The Klamath River corridor, particularly in the western stretches of the county and the mountainous Salmon River area in western Siskiyou County are also considered separate areas for social and economic discussions.

Economically the I-5 corridor is a functional unit. However, operationally and for these planning processes, it consists of north (Yreka and vicinity) and south (Weed, Mt. Shasta, Dunsmuir and McCloud complex) county working areas.

Objectives of the planned projects or actions shall be evaluated for impacts on the human environment. These objectives and their definitions, defined for specific sites (areas), must include the commodity and amenity outputs or production thresholds needed to ensure continuity and diversity of the heritage of customs, culture and usages of the citizens of Siskiyou County; the integrity of private property rights and investment backed expectations; and to achieve the values that have been determined to be important or necessary to the wellbeing, general community prosperity and economic welfare of the citizens of Siskiyou County. These objectives and production or output levels will then become the goals and evaluation criteria against which all related proposals and alternatives shall be evaluated.

Desired future conditions, such as vegetative mosaic, landscape, watershed or watercourse conditions, determine production or output levels to meet objectives, within the physical capabilities of the natural resources. Since different landscape, watershed and watercourse descriptions will produce different levels of output, Siskiyou County must be involved in designing landscape, watershed and watercourse descriptions to best preserve the quality of the physical environment, continuity of the heritage of customs, culture, and usages integrity of private property rights, economic stability of communities and economic welfare of County citizens when choices have to be made between conflicting management objectives.

Discussions of effects on the County's natural resources and environmental quality should include but are not limited to:

1. fisheries and wildlife resources
2. forest and timber resources
3. range resources
4. dryland crops
5. watershed resources
6. private surface and ground water rights and irrigated cropland
7. mineral resources
8. recreational opportunities
9. environmental quality of air, water, and soils
10. integrated resource planning and management in which county private parties and/or public interests are involved
11. multiple use, sustained yield and range resource laws
12. private investments, property interests and regulations into public land resources
13. impacts on privately owned land, improvements and resources or adjacent to federal or state managed land where the plan, program or project is proposed

Discussions of effects on the County's culture, governance, schools, social services and other local programs include but are not limited to:

1. The culture of the county due to potential population loss

2. The culture of the county from possible limitations and restrictions on cultural beliefs and practices, diversity and choice of lifestyle, and maintenance of cultural, community, generational and familial cohesion and kinship.
3. Cultural and community aesthetics, including historic sites, natural resource vistas, river ways and landscapes.
4. The County's ability to protect and provide services for the health, safety, and social and cultural well-being of its citizens.
5. The County's ability to finance public programs and services through bonding, lending and other financing mechanisms
6. Local governments (towns, etc.) and schools from identified tax revenue loss
7. Local emergency medical services, law enforcement, fire (and wildfire) protection and nuisance abatement
8. The local infrastructure, including transportation, community water, sewer, power, electric power generation and transmission systems, (including irrigation and reclamation districts), service districts, and landfill services.
9. Local community well-being, stability of governance, and the education and welfare of children from cumulative and log-term impacts
10. Pest and predation control, and weed abatement

Discussions of effects on the County's economy, customs, usages, services and businesses to include but are not limited to:

1. Economic diversity
2. Private investment backed expectations
3. Direct, indirect and cumulative employment (including those who are self-employed) and wages
4. The industries of cattle, farming, timber, mining and recreation – specifying unit cost effects (e.g. economic value of animal unit months (AUMs), million board feet (MMBF), measurements of cubic feet per second (cfs) or acre feet of water, yield per acre, acres in production), recreational user days or other units of measurement as appropriate.
5. Local businesses directly and indirectly related to the resource decision or plan.
6. Housing, real estate values, residential energy, water, sewer and sanitation needs.
7. Variable thresholds for business demand and markets.
8. Marketability of workforce skills
9. Business and financial planning and the ability to obtain financing dependent upon continued availability and productive use of a natural resource.
10. The level of manufacturing or processing technology required of local industry, dependent upon the availability of suitable raw materials.

11. Local community well-being, stability and ability to maintain current and future debt service by long-term and cumulative impacts.

Direct and indirect impacts on economics, and ramifications of planned activities on local economics shall use appropriate multipliers. Discussions shall include any effects on property rights and protectable interests in the County. In addition to these requirements, there shall be an evaluation of the impacts on property rights, as subject under California Executive Order D-78-89 on Regulatory Takings, the United States Presidential Executive Order No. 12630, entitled "Government Actions and Interference with Constitutionally Protected Property Rights", and the Attorney General's guidelines entitle "Evaluation of Risks and Avoidance of Unanticipated Takings", mandating that the following tests or criterion be used in assessing possible taking of private property rights:

1. Whether the plan, program or project constitutes an actual physical intrusion or actual taking
2. Whether the plan, program or project constitutes a regulatory taking
3. Potential for partial or full loss of economic value or investment backed expectation
4. Related effects on custom, culture and usage
5. Whether the agency action conforms to constitutionally protected property rights and commonly accepted notions of fairness and due process
6. Cost of compliance

Discussions shall include cumulative, long-term effects on the County's economy, culture, usage, services and businesses. Plans, programs or actions may have insignificant impacts when analyzed individually, however, cumulative long-term impacts when combined with plans that have similar direct or indirect impacts may be significant. Infrastructure of economic sectors, culture, customs, usage, services and community stability must be evaluated and protected from cumulative effects.

Alternatives shall be described in a manner permitting comparative evaluation among the options by decision makers and the public. This shall include all reasonable alternatives and why alternatives were eliminated, including reasonable alternatives not within the jurisdiction of the lead agency and the alternative of no action. Identification shall be made of the preferred alternatives.

It is the policy of Siskiyou County that federal and state agencies shall not approve plans, programs or projects as proposed if there are feasible alternatives or mitigation measures available that would, if implemented reduce or eliminate significant impacts to both the physical, social and economic environment. Mitigation plans for alternatives will provide detailed and realistic alternatives in accordance with NEPA. These plans shall identify each impact that the mitigation measure is intended to address. This should include the responsible agency for implementation and monitoring of the mitigation measure. These mitigation measures shall also be evaluated by:

1. How impacts may be avoided altogether by not taking certain actions.
2. How impacts may be minimized by limiting the degree or magnitude of the proposed actions.
3. How impacts may be rectified through repair, rehabilitation or restoration of the affected environment.
4. How impacts may be reduced or eliminated over time through preservation and maintenance actions during the life of the action.
5. How the agency could compensate for the impact by providing substitute resources of equal utility or economic value.

Each mitigation measure should also discuss its legal authority, technical feasibility, fiscal and economic feasibility, social, cultural and political feasibility. To help ensure implementation of the mitigation plan a monitoring plan based on specific objectives and performance standards shall be implemented. Monitoring and the mitigation plan shall be regularly provided and discussed with the Siskiyou County Board of Supervisors or designee.

Appendix 1 Regulations, Jurisdiction and Coordination

US Supreme Court Decision: Jurisdiction of State & Local Courts

On May 20, 1991, the United States Supreme Court declared that the federal agencies are required to submit to the jurisdiction of state and local courts.[2] In a unanimous decision, the court declared that federal agencies sued under State law in a State court cannot seek to have the case removed to federal court. The question before the Supreme Court was whether the National Institute of Health, an agency of the federal government, could force a case under State law to be heard in federal district court. The Supreme Court ruled that cases involving federal agencies could not be automatically removed to federal court. The Court concluded that although persons or officers of the federal government specifically named in a State action in State court can cause a case to be heard in federal court, federal agencies named as sole defendants cannot cause a case to be removed to federal court. Individuals or county governments seeking to protect their rights under State or local law, in State or local courts, against the federal government should name only the federal agency creating the statutory violation rather than naming individual employees.

The key elements for achieving **consistency and coordination** trace back to the doctrine of concurrent jurisdiction::

> federal jurisdiction to manage the resources on public lands, and local/State jurisdiction to protect the health, safety, economic welfare and rights of its citizens

The statutes related to federal-local consistency and coordination in land use planning are highlighted below. For a more in-depth presentation of all the federal and State statutes related to coordination with County governments, see Appendix I, The Legal and Administrative Environment.

Siskiyou County economy is primarily dependent upon federally-managed lands and resources. The National Environmental Policy Act (and other relevant laws discussed later) contain provisions for Siskiyou County to plan in regards to public, as well as private land to protect its natural environment and to protect the customs and culture social and economic well-being of Siskiyou County citizens. Siskiyou County's primary planning mechanism for planning on public lands is to coordinate with federal land agencies to reach **consistency** between federal land agency plans and Siskiyou County land resource plans.

[2] International Primate Protection League. Et. Al. v. Administrators of Tulane Educational Fund. Et al., No. 90-x9.

Federal statutes and regulations require federal agencies to consider and protect from adverse impacts, the economic structure of counties. Furthermore, federal agencies must consider and protect more than just economic structures. For example, the National Environmental Policy Act (NEPA) requires all federal agencies to assure safe, healthful, productive, aesthetically and culturally pleasing surroundings, to preserve cultural aspects and maintain an environment supporting a variety of individual choices. More significantly, federal agencies must specify mitigation plans to reduce or eliminate adverse impacts to local communities.[3]

The US Forest Service and Bureau of Land Management regulations require the agency to consider effects of its actions on communities adjacent to, or near, public lands, and on employment in affected areas. The spirit and the letter of the statutes and regulations require agencies to protect a community's way of life—the delicate fabric holding families together—as well as a community's economic base, before taking actions that might prove harmful. This comprehensive plan refers to the federal agency's obligation in terms of protecting and preserving the community's economic base as either "economic stability" or "community stability".

SISKIYOU COUNTY & THE NATIONAL ENVIRONMENTAL POLICY ACT:

The NEPA is the basic national charter requiring consideration of the environment. It establishes policies, sets goals, and provides the means for carrying out policies and attaining goals. NEPA is extremely important to county governments. While it is a federal law, each State is expected to assist in implementation of NEPA. Under the concept of "federalism", states and local governments can develop their own environmental plans under NEPA.

NEPA: Congressional Declaration of Policy

Public land and resource agencies are required to carry out the mandates of NEPA within Siskiyou County. This requires that these federal agencies consult, coordinate and jointly conduct environmental studies, plans, reviews and hearings with Siskiyou County's Environmental Plan.

As the umbrella environmental law, NEPA declares:

> "…that it is the continuing policy of the Federal Government, in **cooperation with State and local governments,"[4]… "to** use all practicable means, consistent with other essential considerations of national policy, to improve and **coordinate** Federal plans, functions, programs, and resources to the end that the Nation may—"[5] "…assure for all Americans safe, healthful, **productive** and aesthetically and **culturally pleasing surroundings:"[6] and "…preserve** important historic, **cultural,** and natural aspects of our national

[3] 40 CFR § 1502.14(F),1502.16(H),1508.20
[4] 42 USC 4331(a)
[5] 42 USC 4331(b)
[6] 42 USC 4331(b)(2)

> heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice."[7] [Emphasis added]

NEPA: Protection of Culture & Custom

NEPA not only requires that the federal government consider to impacts of its actions on the environment, but it also requires federal agencies to preserve culture and heritage, NEPA states that cooperation and coordination will occur with "local governments", and that the culturally pleasing surroundings and cultural aspects of community will be preserved so as to support diversity and variety of individual choice.

Each county under NEPA must determine and define its local custom and culture and then act to protect them. Siskiyou County has defined its custom and culture. Once a county government has identified and defined its custom and culture, it must inform the federal agencies of the definition and request that custom and culture be preserved under NEPA. State agencies should also be informed and requested to comply, accordingly.

Mandate to Federal Agencies Under NEPA

NEPA mandates specific performance requirements which are crucial to the Siskiyou County Comprehensive Plan:

> All agencies of the Federal Government shall…© include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on…
>
> (i) The environmental impact of the proposed action;
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented;
>
> (iii) alternatives to the proposed action;
>
> (iv) the relationship between short-term uses of man's environment and the **maintenance and enhancement** of long-term productivity; and
>
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

A significant element of (i) above is the cumulative effects or impacts:

[7] 42 USC 4331(b)(4)

> Cumulative impacts can result from individually minor but collectively significant actions taking place over a time period[8]… Effects include …historic cultural, economic, social or health, whether direct, indirect or cumulative.[9]

In addition, means of mitigation, (reducing the negative impacts) shall be detailed and provide realistic alternatives[10]. In order to develop realistic mitigation plans and alternatives, it is necessary to coordinate with local government officials to adequately identify, at a minimum, the fiscal relationships between federal agencies and local governments. Identifying mitigation alternatives in a coordinated way between Siskiyou County Supervisors and federal agencies is the key element to **achieving consistency** between the Siskiyou County Plan and federal agency plans.

FURTHERMORE, NEPA REQUIRES

Prior to making any detailed statement, the responsible federal official shall consult with and obtain the comments of any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and view of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 652 of title 5, and shall accompany the proposal through the existing agency review processes;

(G) Make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment[11];

Siskiyou County should be alerted to any federal proposals, plans, legislation, or other federal actions that fall under the prevue of this plan and request, when necessary, that an environmental impact statement be prepared, if one is not otherwise prepared, by the involved federal agency.

The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive [pertaining to NEPA substance] requirements…"[12] A major objective of the NEPA regulations is:

> (b) Emphasizing cooperative consultation among agencies before the environmental impact statement is prepared rather than submission of adversary comments on a completed document.[13]

NEPA requires agencies to circulate both the draft and final environmental impact statements, except for certain appendices and unaltered statements, to appropriate

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[8] 40 CFR § 1508.6
[9] 40 CFR § 1508.8
[10] ibid at 19
[11] 42 USC 4332(2)(C)(i)-(v) and (2)(G).
[12] 40 CFR 1.500 (a)
[13] 40 CFR 1501.1 (b)

Federal, State, and local agencies authorized to develop and enforce environmental standards.[14]

Joint Environmental Planning:

NEPA provides the following guidelines for federal coordination with county governments to integrate federal environmental plans with local planning processes:

> (b) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall, to the fullest extent possible, include:
>
> (1) Joint planning processes;
> (2) Joint environmental research and studies;
> (3) Joint public hearings (except where otherwise provided by statute); and
> (4) Joint environmental assessments
>
> (c) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements, unless the agencies are specifically barred from doing so by some other law…such cooperation shall to the fullest extent possible include joint environmental impact statements. In such cases, one or more federal agencies and one or more State or local agencies shall be joint lead agencies. **Where State laws or local ordinances have environmental impact statement requirements in addition to…those in NEPA, federal agencies shall cooperate in fulfilling these requirements as well as those of Federal laws so that one document will comply with all applicable laws.**
>
> (d) To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws, (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.[15]

The NEPA process is intended to help public officials make decisions that are based on environmental consequences, and that take actions to protect, restore, and enhance the environment and preserve local custom and culture. NEPA and the implementing CEQ regulations require all federal agencies to coordinate with county governments as outlined above. County governments can always resort to use of the NEPA process regardless of the federal agency, law, program, or action involved. Significantly, pertinent federal agencies (e.g., US Forest Service, US Bureau of Land Management, US Fish and Wildlife Service, and US Park Service) are mandated in a wide range of laws to comply with NEPA. Accordingly, the Council on Environmental

[14] 40 CFR 1502.19 (a)
[15] 40 CFR 1506.2 (b),(c),(d)

Quality has promulgated regulations to guide federal agencies through the NEPA process.

Four major federal statutes—the NEPA, the Intergovernmental Cooperation Act (ICA), the National Forest Management Act (NFMA), and the Federal Land Policy and Management Act (FLPMA)—mandate intergovernmental coordination and cooperation, especially where local and State governments can be or are affected by federal agency decisions. Furthermore, these federal statutes mandate resource allocation decisions and land uses on public lands must be made through a comprehensive public planning process. The complex mixture of data collection, analysis of impacts, review of alternatives, and implementation of strategies includes extensive public review and involvement by county government.

The Intergovernmental Cooperation Act:

In addition to NEPA, the ICA requires federal agencies to coordinate and review with State and local governments, federal government programs and project plans. ICA:

> …provides opportunities for strengthening the consultation and coordination between federal, local and State governments through coordination and review of proposed federal assistance and direct federal development programs.[16]

Furthermore, the President of the United States issued Executive Order 12372. It requires federal agencies to coordinate with State and local governments. It requires federal agencies to comply with State processes for intergovernmental review and coordination of federal programs and actions.

Executive Order 12372 states:

> Section 1. Federal agencies shall provide opportunities for consultation by elected officials of those State and local governments that would provide the non-federal funds for or that would be directly affected by proposed federal financial assistance or direct federal development.
>
> Section 2.
>
> (a) …federal agencies shall to the extent permitted by law….determine official views of State and local elected officials.
>
> (b) Communicate with State and local elected officials as early in the program planning cycle as is reasonably feasible to explain specific plans and actions.
>
> (c) Make efforts to accommodate State and local elected officials' concerns with proposed federal financial assistance and direct federal

[16] Intergovernmental Cooperation Act, § 401 and 3 USC § 301

> development…where the concerns cannot be accommodated, federal officials shall explain the basis for their decisions in a timely manner.
>
> Section 3. (a) The State process referred to in Section 2 shall include those where States designate, in specific instances to local elected officials the review, coordination, and communication with federal agencies.

It should be noted that under ICA and the Executive Order 12372, the review body has the unique authority to appeal federal decisions **directly** to the US Secretaries of Agriculture and Interior departments. At present, only these government entities can appeal federal land decisions and plans directly to these cabinet heads. Furthermore, under the new federal appeals process, the general public and special interest groups will not be afforded liberal appeals as in the past; only the Executive Order 12372 ICA organizations will have the unique appeal access to these cabinet heads.

US Forest Service Land & Resource Planning/NEPA Processes:

Laws require the US Forest Service (USFS) to cooperate and coordinate with Siskiyou County government in its planning processes. The discussion below highlights the major policies of the Forest Service.

The Multiple Use and Sustained Yield Act of 1960 directs the Secretary of Agriculture "to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained from there."[17] The Act authorizes the Secretary of Agriculture "to cooperate with interested State and local governmental agencies and others in the development and management of the national forests."[18] The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) strengthens the opportunity for county input. In Section 3, the RPA recognizes the importance of renewable forest and range resources, and directs the Secretary of Agriculture to prepare a Renewable Resource Assessment. The RPA elevates the relationship between the USFS and county governments from one of cooperation to one of **coordination** with the following requirement:

> 6(a) As a part of the Program provided for by section 3 of this Act, the Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, **coordinated with** the land and resource management planning processes of **State and local governments** and other federal agencies.[19] [Emphasis added]

The RPA was extensively amended by the National Forest Management Act of 1976. Significantly, Section 6(a) of the RPA, quoted above, was not amended. The National Forest Management Act requires that each plan developed "be revised (A)

[17] 16 USC 529
[18] 16 USC 530
[19] 16 USC 1604(a)

from time to time when the Secretary finds conditions in a unit have significantly changed, but at least every fifteen years."[20] It must coordinate land use planning efforts with those of county governments under this Act and through the NEPA process:

> The resulting plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long-term net public benefits in an environmentally sound manner.
>
> (b) Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. Regional and forest planning will be based on the following principles:
>
> (5) **Preservation of** important historic**, cultural**, and natural aspects of our national heritage;
>
> (9) **Coordination with** the land and resource planning efforts of other federal agencies, **State and local governments**, and Indian tribes:
>
> (13) Management of National Forest System lands in a manner that is sensitive to **economic efficiency**; and
>
> (14) Responsiveness to changing conditions of land and other resources and to changing **social and economic demands of the American people.**[21] [Emphasis added]

Specific requirements for accomplishing the purposes of planning coordination with county governments are provided as follows:

> (a) The responsible line officer shall **coordinate** regional and forest planning with the equivalent and related planning efforts of other federal agencies, **State and local governments**, and Indian tribes. [Emphasis added]
>
> (c) The responsible line officer shall review the planning and land use policies of other federal agencies, State and local governments, and Indian tribes. The results of this review shall be displayed in the environmental impact statement for statement for the plan (40 CFR 1502.16(c), 1506.2)

US Bureau of Land Management Land & Resource Planning/NEPA Processes:

The guiding statute for the Bureau of Land Management (BLM) to administer public lands is the Federal Land Policy and Management Act of 1976. The statute defines the term "public lands" as any land and interest in land owned by the United States

[20] 16 USC 1604(f)(5)
[21] 36 CFR 219.1 (a),(b),(5),(9),(13),(14)

within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except: (1) lands located on the Outer Continental Shelf; and (2) lands held for the benefit of Indians, Aleuts, and Eskimos. FLPMA specifically requires the BLM to prepare land use plans:

(a) The Secretary shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and, when appropriate, review land use plans which provide by tracts or areas for the use of the public lands. Land use plans shall be developed for the public lands regardless of whether such lands previously have been classified, withdrawn set aside, or otherwise designated for one or more uses.[22]

It is significant to note that FLPMA provides explicit directives for the BLM to coordinate public land use planning with county governments, and to ensure that federal land use plans are consistent with local plans to the maximum extent possible. The statute details the BLM's mandate as follows:

> (c) In the development and revision of land use plans, the Secretary shall—
>
> (9) ...to the extent consistent with the laws governing the administration of the public lands, **coordinate** the land use inventory, planning, and management activities of or for such lands **with the land use planning and management programs** of other federal departments and agencies and of the **State and local governments** within which the lands are located, including, but not limited to, the statewide outdoor recreation plans developed under the Act of September 3, 1964 (78 Stat. 897), as amended, and of or for Indian tribes by, among other things, considering the policies of approved State and tribal land resource management programs. In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of State, **local**, and tribal **land use plans;** assure that consideration is given to those State, local, and tribal plans that are germane in the development of land use plans for public lands; **assist in resolving, to the extent practical, inconsistencies** between Federal and non-Federal Government plans, **and shall provide for meaningful public involvement of State and local government officials,** both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands, including early public notice of proposed decisions which may have a significant impact on non-Federal lands. Such officials in each State are authorized to furnish advice to the Secretary with respect to the development and revision of land use plans, land use guidelines, land use rules, and land use regulations for the public lands within such State and with respect to such other land use matters as may be referred to them by him. **Land use plans** of the Secretary under this section **shall be**

[22] 43 USC 1712(a)

consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of the Act.

(f) The Secretary shall allow an opportunity for public involvement and by regulation shall establish procedures, including public hearings where appropriate, to give Federal, State, and local governments and the public, adequate notice and opportunity to comment upon and participate in the formulation of plans and programs relating to the management of the public lands.[23] [Emphasis added]

Both the Forest Service and the BLM regulations require coordination and consistency with State and local governments. The requirements pertain to both long-range plans (e.g., forest plans) as well as coordination and consistency with county governments in plan implementation; that is, project planning and development.

SISKIYOU COUNTY ENVIRONMENTAL PLANNING & REVIEW:

Purpose of the Environmental Review Plan

Under NEPA guidelines Siskiyou County shall establish and implement environmental review to protect the resources for future generations as well as protect the economic and community, customs, customs usages and cultures, stability for present and future generations. The planning process is designed for early detection and mitigation of possible negative impacts of proposed State or Federal decisions on resources in Siskiyou County, and on the custom, culture and the economy of the citizens of Siskiyou County. To carry out this plan coordination between Federal and State agencies and Siskiyou County is important.

Intergovernmental Coordination

Federal statutes and Presidential executive orders provide the framework for coordinated planning between Siskiyou County, State and federal agencies. Federal statutes and regulations require these agencies to coordinate with local governments in the initial planning stages.[24] They also require that federal agencies work in close consultation when there are changes in their federal resource plans. To date, such coordination has not happened in a coordinated or consistent way.

In addition, the Intergovernmental Cooperation Act (42 USC §4231) specifies coordinated planning requirements between local, State and federal agencies. Under ICA, the Presidential Executive Order 12372 further mandates that federal agencies coordinate federal actions and project with local governments,

Plan Elements for Environmental Review

The Major elements of Siskiyou County Environmental review shall be:

A. Coordinated Environmental Planning and Review

[23] 43 USC 1712(c)(9),(f)
[24] 16 USC § 1604 1604 a, and 43 CFR § 1601.0-5,c,c

B. Environmental Assessment (Social and Economic)
C. Impacts on Private Property Rights
D. Cumulative Effects
E. Mitigation Plans

Siskiyou County economy is dependent upon federal and State-managed lands to a large extent. It is, therefore, necessary that county, State and federal agencies and regulatory entities work closely to determine the effects of resource plans and decisions. By pooling local, State and federal resources, the general public will be better informed about resource decisions and the process will provide an unique opportunity to cooperatively develop realistic mitigation alternatives to reducing negative environmental, social and economic impacts.

NEPA provides the legal framework for intergovernmental coordination:[25]

1. Joint environmental planning approach
2. Joint environmental research
3. Joint public hearings
4. Joint preparation of environmental documents
5. Cumulative effects
6. Joint mitigation planning to include:
    - realistic alternatives
    - detailed alternatives

Siskiyou County Supervisors shall promulgate environmental review to protect natural resources, stabilize the economy, and protect the custom, culture usages and social resources and property rights of the people of Siskiyou County.

California Environmental Quality Act

All applicable portions shall be applied.

California Administrative Act

The California Administrative Procedures Act mandates any state agency that proposes to impose a new rule order or regulation, or proposes to change any existing rule, order or regulation, upon Siskiyou County or its citizens, to first consider all reasonable alternatives and create a formal "...statement that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective or less burdensome to affected private persons than the proposed regulation." This Act clearly shows the California Legislature's intent that its agencies carefully consider the customs, culture and economics of California citizens during the process of consideration and adoption of new or changed rules, orders and/or regulations in Siskiyou County.

[25] 40 CFR § 1506.2

California Administrative Procedures Act

Definitions

Section 11342. In this chapter unless otherwise specifically indicated:

(b) "Regulation" means every rule, regulation, order, or standard of general application or the amendment, supplement or revision of any such rule, regulation, order or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure, except one which relates only to the internal management of the state agency....

Statement of reasons for Adoption or Amendment; Specific technology or Equipment; Alternatives

Section 11346.14. The initial statement required by Section 11346.7 shall also include, but not be limited to, the following:

(a) Where the adoption or amendment of a regulation would mandate the use of specific technologies or equipment, a statement of the reason why the agency believes such mandates or prescriptive standards are required.

(b) A description of the alternatives to the regulation considered by the agency and the agency's reasons for rejecting those alternatives, and a statement that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective or less burdensome to affected private persons than the proposed regulation. In the case of a regulation which would mandate the use of specific technologies or equipment or prescribe specific actions or procedures, the imposition of performance standards shall be considered as an alternative.

Any statutory reference to Section 11346.7 shall be construed to also be a reference to this section.

Notice of Proposed Action; Mailing; Delivery; Publication; Effective Period; Notice of Adoption, Amendment or Repeal after Completion and Approval; California Regulatory Register

Section 11346.4. (a) At least 45 days prior to the hearing and close of the public comment period on the adoption, amendment, or repeal of a regulation, notice of the proposed action shall be:

(1) Mailed to every person who has filed a request for notice of regulatory actions with the state agency

Express Terms of Proposed Action, List of Small Business Enterprises and Initial Statement of Reasons; Availability to Public; final Statement of Reasons and Updated Informative Digest; adoption or Amendment of Federal Regulations

Section 11346.7. Every agency subject to this chapter shall;

(a) Prepare, submit to the office with the notice of the proposed action, and make available to the public upon request, a copy of the express terms of the proposed action as described in subdivision (b) of Section 11346.5, a list of the small business enterprises or their representatives to whom the notice of adoption,

amendment, or repeal of a regulation will be mailed and an initial statement of reasons for proposing the adoption, amendment, or repeal of a regulation. The statement shall include, but not be limited to, all of the following:

(1) A description of the public problem, administrative requirement, or other condition or circumstance that each adoption, amendment, or repeal is intended to address.

(2) A statement of the specific purpose of each adoption, amendment, or repeal and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose for which it is proposed.

(3) An identification of each technical, theoretical, and empirical study, report, or similar document, if any, on which the agency is relying in proposing the adoption, amendment, or repeal of a regulation.

(4) A description of any alternatives the agency has identified that would lessen any adverse impact on small businesses. It is not the intent of this subdivision to require the agency to artificially construct alternatives or to justify why it has not identified alternatives.

(b) Prepare and submit to the office with the adopted regulation a final statement of reasons which shall include all of the following:

(3) A summary of each objection or recommendation made regarding the specific adoption, amendment, or repeal proposed, together with an explanation of how the proposed action has been changed to accommodate each objection or recommendation, or the reasons for making no change. This requirement applies only to objections or recommendations specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the action.

(4) A determination with supporting information that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

(5) An explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses.

Appendix 2 Custom and Culture

Culture is an outgrowth of the natural environment. People respond to specific environmental force in a manner that environmental forces produce a material way of living as a way subjected to it. It produces ways to overcome natural obstacles. Cultures evolve as different ways of meeting the same problem, such as developing or producing a salable product to be exchanged for raw material or products not available locally.

A culture consists not of people but of ways people in a given environment act. Culture is the integrated system of learned behavior patterns, it is non-instinctive. Standards of rightness and wrongness (value) and of usages and effectiveness (customs) are relative to the given culture.

Relating to custom and culture, NEPA requires:

> It is the continuing responsibility of the Federal Government to use all practical means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—
>
> (2) assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings,...
>
> (4) preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment which supports diversity and variety of individual choice.

Culture, as used in NEPA, is defined as:

> The body of "customary beliefs, social forms, and material traits constituting a distinct complex of tradition of a racial, religious or social group"—that complex whole that includes knowledge, belief, morals, law, customs, opinions, religion, superstition and art."

As stated in the above definition, culture includes custom.

Custom is defined by Black's Law Dictionary as:

> "A usage or practice of the people, which by common adoption and acquiescence, and by long and unvarying habit, has become compulsory, and has acquired the force of a law with respect to the place or subject-matter to which it relates... An habitual or customary practice, more or less widespread, which prevails within a geographic or sociological area."

Custom, as used in the context of the Comprehensive Plan, refers to land or resource usages and practices that have "acquired the force of a tacit and common consent. Such land uses and practices, livestock grazing, logging, farming, mining, recreation and hunting, to mention just a few, are concrete, readily identifiable and are the foundation of Siskiyou County's economy.

Culture is a people's identity and the foundation upon which political society and an economy are built. The people of Siskiyou County are unique products of the complex web of land and resource uses and practices; values and beliefs that nurture

their communities, sustain their economies, empower their local government and give form and shape to their spiritual and physical environments.

The importance of custom and culture resides ultimately in the principle of community stability. ***Community stability is equated to economic stability the condition under which communities can change, adapt, and develop by the dictates of custom and culture rather than by the commands of outside groups and governments.*** Community stability entails an environment where people and their customs and cultures are left to their own democratic means; where every community is the arbiter of its own survival; where people, subject only to the rule of nature and free markets, are masters of their own destinies.

Obviously, community stability depends on the right of people and communities to pursue and protect the custom and culture most essential to their well-being and most suited to their personal visions. Public policies that injure or diminish custom and culture by injecting elements of outside control, (whether intended to be beneficial – e.g. subsidies, or invasive and destructive e.g. regulations), are ultimately disruptive of community stability. Such policies take away from local people the degree of independence, political integrity, economic discretion and responsiveness necessary to retain a way of life commensurate with custom and culture. In Siskiyou County, federal and State land or resource laws and regulations have disrupted community stability by denying both local government and local citizens their legal sovereignty in matters of local land or resource use.

For these reasons, the people of Siskiyou County have concluded that a proper goal of comprehensive land and resource use planning is to ensure community stability. In an environment where private lands are increasingly subject to arbitrary federal and State control, and where federal and State properties comprise an overwhelming majority of the county's land base, that goal can best be achieved by empowerment; by protecting the integrity of property rights, and independence of every citizen; and by making custom and culture an issue of local rather than national consensus. A planning strategy based on these assumptions is attainable only by allowing the people who use and live upon the land to participate and make the crucial decisions that determine their welfare and the welfare of the environment at large. ***No plan can, or for that matter should isolate or protect community stability and custom and culture from the force of change in response to nature and the free markets.*** This plan should, and does, insulate Siskiyou County from the abuses stemming from national and State public policy and from the actions of those whose ambitions are directed at denying individual and local self-determination. Such abusive practices and policies constitute cultural genocide.

There is one last aspect of custom, culture and community stability that is essential to the goal of the comprehensive plan. A peoples' custom and culture and the economic stability of their community is not only a political and moral issue of great import, but it is also an obligation placed upon the federal government and the State through collaborative agreements by law and regulation. The federal government is constrained by specific statutes and associated regulations from adversely impacting

custom, culture and community stability in Siskiyou County or in any county in the United States.
In fact, the policy of the federal government, from the establishment of forest reserves in Siskiyou County, to the passage of the National Forest Management Act and the Federal Land Policy and Management Act, to the passage of the National Environmental Policy Act of 1969, has repeatedly asserted the rights of local communities, the inviolability of custom and culture, and the key consideration of community stability in the promulgation of land and resource use laws, regulations, and policies.

Identification and Recognition of Customs and Culture

Definitions of culture and customs, as previously described, can be used to identify and permit recognition of Siskiyou County customs and culture, as illustrated by the following examples. By design this is an evolving process.

It is recommended that interested individuals work together to identify customs and culture in a written manner as presented here. It is anticipated that timber, mining and recreation groups be formed to identify their specific activities and practices. Federally recognized Native American groups are considered separate entities by the government, and hence their specific customs and culture are best addressed through their organizations.

Overview and Defining of Customs and Culture

Traditionally, Siskiyou County citizens have survived and supported families and communities, around the primary economic activities of land and natural resource development, including, but not limited to, ranching, farming, timber harvesting, mineral recovery tourism and recreation. Naturally, the use of our water resources play a vital role in these activities, along with other domestic and commercial usages. Access to lands and resources within Siskiyou County through highways, roads, trails and other types of rights-of-ways are also extremely important to these economic activities and others, as well as the traditional was of conducting social customs and cultural activities within the county. Therefore, historical information on each of these very important traditional uses of ranching, farming, timber, mineral recovery, tourism and recreation, water and transportation within Siskiyou County is provided. The purpose is to show that these and other important usages do exist and have a long and established tradition within Siskiyou County, and are vitally important in the cultural and economic well-being and security of the citizens and communities which make up Siskiyou County.

In no way do these simple historical essays convey the complete history of these important usages in Siskiyou County, and they barely touch upon the important and well-established customs and cultures which have formed around these and other activities. Furthermore, it is important to make it very clear that this document is not intended to cover every custom, cultural, or economic activity and/or traditional usage of land and natural resources within Siskiyou County.

It is also very important to point out that future usages of these very same resources, and others, are just as important, or even more important to Siskiyou County, than

present and past usages as covered here. In order for our citizens to feel secure in our livelihoods, to promote cultural and economic well-being and community stability we MUST also be assured that continued access to, and sustainable development of, these important resources, and others, will be readily available to Siskiyou County citizens.

Projected future land and resource uses are not specifically covered in this document; they are recognized as evolving from historical uses and compliant with present and future residents. In fact, future access to the land and resources are of primary importance to the security, stability, economic and cultural well-being of our citizens. For example, miners must know that, as technologies improve and new mineral reserves are located, that we will have access to make reasonable development of these resources. Farmers and ranchers must feel secure that they will be allowed to farm and ranch. Timber and mill workers must feel secure that they will have reasonable access to timber resources which will provide a sustainable yield. Tourism and recreation enterprises must feel secure that access to the public lands will not be hindered without good reason. Siskiyou County citizens must feel comfortable that their water resources, and free access to the public lands and their traditional usage of natural resources within Siskiyou County will not be taken away without a thorough evaluation of the consequences, and without fair compensation paid to those who will sustain a loss of their property and/or their traditional means of creating a livelihood. Failure to consider and accommodate continuing inter-dependent relationships between Siskiyou County citizens and their land and natural resources would result in undermining the complete cultural well-being of its citizens.

Appendix 3 Customs and Culture --- Mining in Siskiyou County

The extraction of minerals from the earth's –crust for man's use has been a practice since the beginning of written history. Extraction of resources has played an important part in the development of the customs, culture, and usage in Siskiyou County. Gold is the mineral which has been mined Siskiyou County with the greatest economic impact on the County. Other minerals and extractive resources have been mined in the County, but not with the intensity that gold has been mined. Mining districts were formed and still exist throughout the county.

Lindsay Applegate in 1849 mined for a few days at the headwaters of the Scott River. That same year James Abrams discovered on the Klamath River, Shasta River, Yreka Creek, and Greenhorn Creek. The ground was so rich on McAdams and Cherry Creeks in the Deadwood District that it was mined over six times. Mining districts and claims were formed throughout the western half of the County.

Each of these mining districts had its own set of regulations for governing claims "There were no well-developed American mining codes before the gold rush, but in Europe, South America, and Mexico, a body of ordinances had evolved through centuries of experience in regulating mining practices. It was these ordinances brought primarily by English and Latin-American gold seekers that provided the basis for California mining law."

The fundamental principles were the same in the districts---that men who discovered a section of gold-bearing ground had the right to exploit it, and that this right lasted only as long as a man continued to work his claim. Each man could locate or "claim" only one section of ground, but he could purchase the claims of others.

The body of laws regulating gold mining has grown since the gold rush. The California Practice Act of 1851 stated that ...In actions respecting mining claims, proof should be admitted of customs, usages, or regulation established and in force at the bar of diggings embracing such claim and such customs, usages, or regulations, when not in conflict with the Constitution and Laws of the State, should govern the decisions of the action. Miners' claims were upheld by the courts as possessory rights, which were good among the miners themselves and against any other claimant but the government.

The Civil Rights Act of 1866 established that all the mineral lands of the public domain should be free and open for exploration and occupation; that rights which had been acquired in these lands under a system of local rules, with the apparent acquiescence and sanction of the government, should be recognized and affirmed; and that titles (patents) on lands containing certain classes of mineral deposits might be ultimately obtained.

The 1870 U.S. Mining Law amended July 9 provided that all patents granted, or preemption or homestead rights allowed, should be subject to any water rights or rights to ditches and reservoirs used in connection therewith, as may have been acquired under or recognized by the Act of 1866.

The General Mining Act of May 10,1872, confirmed the Acts of 1866 and 1870 (see attached)

California Civil Code 1410-1422, effective January 1, 1873, was essentially a codification of the principles and practices that had been developed in the mining districts and camps and the first legislative authorization by the State for the appropriation of water. It is evident that the appropriation doctrine was established in California only as a result of customs and usages developed in the mining districts and camps.

Mining and providing services and supplies to the miners have contributed greatly to the economic stability of the many mining communities which developed in Siskiyou County's mining districts. Scott Bar was a relatively large mining town. By October of 1851 the town contained about 50 houses and included stores, boarding houses and saloons. In 1881 the town consisted of a hotel, 2 stores, a butcher shop, a drug store, a blacksmith, saloons and residences. Other communities which developed and grew as a result of the mining activity nearby included Forks of Salmon, Sawyers Bar, Happy Camp, and Yreka (known then as Shasta Butte City), the population had grown from about 1,00 inhabitants to over 5,000 people.

Mining activity has been continuous in Siskiyou County since the first gold discoveries. There have been fluctuations in mining activity and output. These fluctuations have been caused by depletion of ore bodies, new discoveries, improvements in extraction techniques, regulatory impediments, price changes of gold and general economic conditions. The general prosperity that began in 1916 and continued until 1929, with accompanying high costs, caused a general decrease in gold output. The Gold Reserve Act of 1934 changed the price of gold from $20.67 per ounce to $35.00 per ounce. This rise in the price of gold ultimately resulted in a large increase in gold output and in much greater exploration. World War II caused a drop in gold output. War Production Board Limitation Order L-208, issued on October 8, 1942, caused the gold mines to be shut down. When the American dollar was devalued and then set completely afloat in 1973, the price of gold went as high as $800.00 per ounce. Between 1975 and 1980 suction dredge permits issued by the California Department of Fish and Game quadrupled in number.

Mining is a classic free enterprise activity – where any person can go out and prospect to find hidden deposits of gold or other valuable minerals and develop for one's own benefit and survival. Many citizens supported their families by small-scale mining for gold during the depression years when no other work was available.

While small-scale gold mining is mostly being done as a hobby today, bringing in thousands of recreationists and tourists each year (which provides substantial income to rural communities within the county), some still pursue the activity to provide for their livelihood. If the value of gold and/or other minerals increases during future years, it is more likely that mining will play an even larger economic role in the county. Also, improving technology in prospecting equipment and mineral extraction and recovery methods is likely to increase the value of the county's gold and/or other mineral reserves. Therefore, Siskiyou County, as a matter of policy has a strong interest in maintaining the availability of mineral resources for Americans to discover and develop.

Recreational mining is a modern day addition to mining activity in Siskiyou County. Many people, members of prospecting and mining associations, come to Siskiyou County to learn the history of mining, practice the techniques of various mining methods, and benefit from their mining labor. These visitors, purchasing supplies and services, contribute to the economic wellbeing of the communities of Siskiyou County.

Siskiyou County is proud of its mining heritage and is dedicated to protecting and promoting mining activity in the County.

(See water and forestry sections for additional information.)

APPENDIX 4 Custom and Culture --- Agriculture Summary

Farming, dairying and ranching have been established historic economic use the land in Siskiyou County for almost 150 years. Agriculture is one of the highest "value added" industries: creating new wealth from the naturally occurring elements of seed, animals, sunshine, minerals and water to produce high quality and quantity food and fiber. Specialization in this industry has enabled phenomenal levels of productivity, freeing the vast majority of Americans to pursue other enterprise and cultural development as hallmarks of our modern civilization.

The concept of "cultural resources" includes cultural properties and traditional lifeway values. Cultural properties associated with ranching, for instance, would be physical structures or characteristics of the landscape, including: livestock, developed springs, wells, ditches and watering tanks, fences, corrals, grazing allotments, open range, ranch houses, sheep herding camps, shearing pens, loading chutes, grange halls and community centers, one room school houses and livestock.

Traditional "lifeway values" are often abstract, nonmaterial, ascribed ideas that may not be closely associated with definite locations and are important to group's traditional cultural practice, social interaction or economic forms.

Agricultural operators require broad knowledge and experience in a variety of fields. Acquiring this complex knowledge and perfecting necessary skills most often requires a long apprenticeship, commonly established as a "lifeway" passed from one generation to another. For instance, according to Richard Boles in "What Color is Your Parachute?", ranching is an extremely complex career field. Working with animals alone requires the skills of: serving, sensing, communicating, persuading, performing, managing negotiating, leading, treating and training. The rancher, in addition to working with (and riding) animals, must work with the physics of handling irrigation water, the mechanics of working with (and riding) animals, must work with the physics of handling irrigation water, the mechanics of working with machines, the skills of operating heavy equipment, the agronomy of growing hay crops, the chemistry of pest management, the veterinary medicine aspects of animal health, the genetics of husbandry, the marketing and sale of a product, the planning and financial management of a small business, the athletics of a physical lifestyle, a sense of meteorological prediction, the skills of filling out forms, and a grasp of the biological and geological processes of his surrounding environment.

In Siskiyou County, the institution of the small family owned and operated farm, dairy or ranch, not only provides the opportunity for apprenticeship, but reinforces cultural and social values such as being self-reliant, cooperating in teamwork, being reliably responsible for living crops and animals, being valuing the family homestead and its historic traditions, and enjoyment of outdoor work.

Raymond Firth, in Human Types, An Introduction to Social Anthropology. The New American Library, c1963, gives and excellent overview of the elements that comprise "culture". According to Firth, and other experts, one key to defining culture is the identifiable manifestations or "lifeways" of a group in responding to or living with their environment.

A combination of climate, topography, soil productivity and the availability of water in mountainous Siskiyou County has created several different "micro-environments" to which agricultural practices have responded with specialized crops most suited to constraints and risks of high altitudes and a short growing season. Ranching, for instance, was faced with climatic realities that created a need for winter hay or summer grass in times of drought.

The Historic limitation of homestead parcels to 160 acres also resulted in the adaptation of early ranchers of driving cattle up into the surrounding high mountains of the west, north and south. This allowed them to harvest home pastures and access lush patches of meadow with more moisture available at higher elevations with a later melting snow pack. In turn, this fostered the cultural and social tradition of the cattle drive and roundup, and competitions for skill performance, such as the rodeo.

Although the season of use has been restricted to late summer and fall, and the allotments are generally restricted, many public land ranching families of the county today use the same rangeland areas for forage as did their ancestors. Although highway use permits and restrictions have begun to impact the practice in favor of large cattle trucks, many public land grazers still drive their herds to their allotments. With a warning car at the head and rear, family and friends on horseback with dogs nudge the slow-moving procession along back country roads to trails leading to their allotments. Most still monitor rangelands and move salt blocks on horseback. In the fall, they still round-up the herd, search for stray and drive them back to home pasture. Calves are usually born in late spring, weaned in the fall and sold before winter in rhythm with the grazing cycle. Like those of five generations ago, facing the same limiting factors of climate, topography and space, public grazers continue to employ the same adaptations.

Firth also discusses the cultural characteristics of social organization that creates a sense of kinship or "tribe", social position, status or function, and acts as the motivation for behaviors and other cultural manifestations.

Agriculturalists tend to go through their lives in “age sets,” bonded by repeated shared experiences in 4-H, sports, Future Farmers of America, rodeo and other competitions. As adults, they rotate through boards together such as Fair Boards, Rodeo Associations, Irrigation Districts, Resource and Conservation Districts. They belong to “clubs” comprised mostly of others of the “lifeway” such as Young Farmers and Ranchers, Farm Bureau, Cattlemen’s Association, Grange and Growers Associations.

The customs associated with agriculture include many of the early possessory rights that were recognized and respected as local practices, sometimes supported by formally Associations and sometimes acknowledged in law. Examples include the establishment of grazing allotments tied to a family base ranch, water use rights that developed into law and public rights of way over public land.

Agriculture has been a long term traditional land use and lifeway in Siskiyou County and has come to form a major component of local cultural celebrations and the economy. It is important that the many elements associated with agricultural land,

water use, rights of way and easements be recognized and preserved as necessary to support this valuable aspect of the heritage of Siskiyou County.

Appendix 5 Customers and Culture – Farming

HISTORICAL NOTES:
Sectional variations in physical characteristics naturally divide Siskiyou County into four identifiable areas where farming has played a significant historical role: Shasta Valley; Scott Valley; Butte Valley; and the Tule Lake or Upper Klamath Basin. The following spot sketches are meant only as an illustrative sample of the history of farming trends in Siskiyou County.

SHASTA VALLEY:
Pasture – Robert Martin has been credited with being the first rancher in Shasta Valley, establishing the Table Rock Ranch in 1849. The 3,500 acre Brady Ranch near Gazelle is also considered one of the earliest ranches. It was later purchased by Josiah Edson in 1852. It should be noted that most early ranches did not have enclosed pastures, leaving stock vulnerable to India raids. In 1851, Indians drove off 200 head of miner's horses being herded in open range. (Please see separate sections on Ranching and Water Use).

FIELD AND ROW CROPS – As early as 1851, land claims were taken up in the Shasta Valley. The first "crop" was grass hay cut for the Yreka market. In 1852, William and Jackson Brown are said to have raised a crop in at Butteville, (a.k.a. Edgewood or Cavanaugh's.) Alvy Boles also began a farming operation in 1852, raising wheat, barley, oats and vegetables.

By 1853, amounts of barley, oats and wheat were raised in Shasta Valley. In 1853, crops were raised by John B. Rohrer, the Davis Brothers and John Kegg in Little Shasta. Fire destroyed all but Rohrer's crops. In 1856, Henry Davis planted his first grain crop in Shasta Valley, but it did poorly because of grasshoppers. One morning the family awoke to find that their field had been set afire by Indians harvesting roasted grasshoppers from the fields.

By 1861, the William Miller ranch in little Shasta was reported to be producing as much as 40 bushels of wheat an acre and three tons of hay an acre. There were three cutting of hay per year, all consumed by his cattle. Around 1870, August Louie and Joe Rose purchased "squatters rights" from claimants at Big Springs and established homesteads. Both families raised tons of potatoes, watermelons, dry beans, fava beans, onions, cabbages, corn squash, garlic, saffron, cumin seed, and red and green peppers. When the railroad arrived at Gazelle, they sold Red Top, Timothy and tons of hay to the cattle dealers. In the 1890s, they grew alfalfa.

In 1912, Jim Burns, Bill Wilson and Edward Stallcup formed a corporation known as Edward Stallcup and Sons, Co., Inc., which, in addition to supplying feed for their own cattle at Big Springs and 150 head of boarded horses, sold as much as 1,000 tons of hay each year to the Weed Lumber co. In addition to the Stallcup sons, Joe, Joe and Tom, 15 men were hired during the summer for haying.

In 1853, Charles Schlicht began construction of a flour mill on the Shasta River. In 1861, the Yreka Stream Mills ran regularly and were said to be capable of grinding 16,000 pounds of flour daily, when necessary. Another flour mill was located at Tailholt in Little Shasta. (By 1878, there were seven grist mills in the entire county –

two steam and five water power driven. These produced 21,000 barrels of flour and ground 2,800 bushels of corn.) By 1885, there were also two breweries in Yreka.

ORCHARDS – Forest House or Forest Ranch was established on the Yreka side of Forest Mountain by Horace Knights in 1851. By 1852, three was a distillery. A large orchard had been planted by 1861, including pears, peaches, plums and more than 4,000 apple trees, (250 of which were already productive.) In 1869, the orchards at Forest House were expanded and cider mill with two large wooden wheels was added along with a vinegar room. The juice was concentrated by boiling for shipping. By 1873, Forest House yielded a yearly product of fruit totaling 6,000 bushels.

By 1861, Batterton had also established an orchard in Shasta Valley and the Edson Ranch included a large orchard planted in 1863. Nelson H. Eddy raised fruit on his ranch, established near the foot of Mt. Shasta in 1867.

SCOTT VALLY:

PASTURE – As early as 1850, Pool and Wicks had established a land claim in the Scott Valley with a corral to graze cattle for meat for the miners at Scott Bar. (See separate section on Ranching and Water Use.)

FIELD CROPS – The first oats grown in Siskiyou County were brought from Oregon in 1851 and sown by Robinson, Brown and Godfrey on the Star Ranch in Scott Valley. In 1852, Godfrey brought one bushel of planning wheat from the Suisun Valley by pack mule to Shasta Valley, and then through the snow to Scott Valley. It produced a crop of 50 bushels. In the following year, P.A. Heatstrand and Asa White brought 30 mule loads of what to Scott Valley for planting. In 1852, John Mckee homesteaded a large tract of land in Scott Valley. The land was later subdivided into several farms including those of Peter Smith, Rev. D.H. Lowry, O.V. Green and John and Stafford Wilson. Farming was also taken up in 1852 by Winegar, Glendenning, Kidder and Calhoun. By 1853, considerable amounts of barley, oats and wheat were raised in Scott Valley. By 1877, a harvest of at least 250,000 bushels of grain was anticipated in Scott Valley and four steam threshers were in operation. Of note, in 1917, during WW1, seed from the alfalfa grown on the dry land of Noyes Valley brought a premium price because of its characteristic of growth in arid regions.

The Lafayette/Shores/Phoenix flour mill was the first grist mill in Siskiyou County, erected in Scott Valley in 1853. In 1954, Charles McDermt, Jeremiah, William and D.M. Davidson build the “Old Aetna Mills” and distillery. In 1855, P.A. Heartstrand, Abisha Swain, Obediah Baer and James Stevens built the “Rough and Ready Flour Mill” near Etna. In 1850, the Festus Payne grist mill was built in French Creek. It was operated by a “hurdy gurdy” water wheel along with a saw mill. In 1865, Joseph Young and his brother, the Swain brothers and George Smith Purchased the machinery of the flour mill in Yreka for their mill in Rough and Ready, which they operated by steam. The “Union”, the principal flour mill at Rough and Ready/Etna, had a capacity of 30,000 bushels a day.

The “Farmers Flour Mill” in Fort Jones was built as a cooperative association of farmers and merchants to protect themselves against the four combined flour mills then in operation at Rough and Ready/Etna, which controlled the price of wheat.

Later, in 1919, the Parrott flour mill was built by Charles B. Parrott and John Johnson in Etna, producing “Flavo Flour” and grinding feed for farmers. It was closed in 1931.

In 1854, Jeremiah Davidson and William Miller built a distillery on Whiskey Creek operated by Ensign “Whiskey” Smith. In 1868, C. Kappler purchased a brewery from P.A. Heartstrand on the east side of Scott Valley about three miles from Rough and Ready. In 1872, he moved the brewery to Rough & Ready. A fire destroyed the original building in 1875 and a larger one was built. Kappler’s brewery had four beer wagons and it is said his business netted a quarter of a million dollars annually.

BUTTE VALLEY:

There are numerous accounts of immigrant trains that reached Yreka beginning in 1852 over the Yreka Trail, which passed through Butte Valley. This branched form the Applegate Trail just west of the divide between Willow Creek and Laird’s Landing on the Lower Klamath Lake, turning southward until it met the old Trapper’s trail coming down from Military Pass.

Settlement of Butte Valley itself, however, was hampered by fear of Indian raids and lack of water. It was called the “Desert” for many years. Early agricultural use was limited to ranching, although thousands of tons of natural grass hay were harvested at early ranches established in 1862 on the west side of Butte Valley. (See separate section on Ranching and Water Use.)

FIELD CROPS: In 1876, crops grown on the Julius Russell homestead on Butte Creek were reported as timothy, red top, oats for hay, wheat and barley, which were cut by a reaper and later stacked and threshed by machine. Some grain was hauled to the granary for home use and the rest to the grist mill in Little Shasta and sold. By 1903, there were 11,000 acres of dry-land farming producing alfalfa hay and grain.

In 1906, the extensive Butte Valley landholdings of Miller and Lux were sold to the (Southern) Pacific Improvement Co. Much of this was sold to William Macdoel and the Butte Valley Land Company. It was then cut up into small farms and sold largely to farmers who were members of the Church of the Brethren (or “Drunkards.”) Various plans for ground water and surface water irrigation systems failed and many left bankrupt. An attempt by the Bureau of Reclamation to channel waters of Antelope, Butte and Bear Creeks to Macdoel met with similar failure in 1920.

Butte Valley Irrigation District (BVID) was formed in 1921. Due to insufficient surface water available to landowners in the district, a bond was floated for $347,000 in 1923 to divert water from Shovel Creek to irrigate farm land within the BVID. After the project was completed, the creek went dry and most farmers lost their land and were forced to leave the area. In 1929, BVID drilled the first irrigation well. The BVID continued to drill wells as the surface water decreased each year.[26] In the 19502, with formation of successful Irrigation District utilizing deep wells, hundreds of acres had been cleared, levels and brought into productivity in alfalfa, grains and potatoes.

In 1937, the Bankhead-Jones Farm Tenant Act, Title III authorized purchase of sub marginal, erosion prone farmlands to retire from agricultural development.

[26] Oct. 9, 1992 letter from Theodore Risner, Water Master, BVID.

Approximately 18,425 acres to the east of Meiss Lane were acquired under this act. They were administered by the Soil Conservation Service until 1950, and formally designed as National Grasslands administered by the U.S. Forest Service in 1991.

ORCHARDS AND ROW CROPS: For a brief period in the 1880s, a group of settlers from Pennsylvania attempted to fence the open range and grow oranges. This enterprise failed and the settlements were abandoned. By 1903, Wheeler's Nursery employed 300 men in growing and marketing 15 million strawberry plants to southern California and Sacramento.

TULE LAKE/UPPER KLAMATH BASIN:

Many immigrants to California took the Applegate Trail, following the eastern shore of Tule Lake. In 1849, the first of many violent deaths by raiding tribes occurred between Goose Lake and Tule Lake, giving the area the name "Bloody Point." Early settlement was limited, first by tribal raids, then by lack of water, short growing season and inhospitable climate. (See separate section on Ranching.)

By 1867, the former Modoc tribal lands around Klamath Lakes and Lost River had been settled by many immigrants. Lingering Indians were removed to the Klamath Reservation in 1869, but a group under Captain jack returned to the area, eventually resulting in the Modoc War of 1872-3.

CROPS: In 1899, Milo and Alice Coppock homesteaded land on the Sand Strip or Peninsula at the southeast end of Tule Lake, where they grew vegetables and fruit. In 1907, J. Frank Adams, Charles L. Moore, P.P. McCornack, Alexander Martin Jr. and Rufus Moore formed the Lakeside Company, purchasing an initial 6,500 acres from the Tule Lake Land and Livestock Co. on the north end of Tule Lake. The company interested The Bohemian Colonization Club of Omaha, Nebraska, in establishing a Czechoslovakian community on the site (Malin, Oregon) in 1909-10. Despite wind, frost, thoughts of jack rabbits and flocks of birds, the colony was successful, growing potatoes, beets, wheat, oats, rye and hay, as well as garden vegetables.

Experiments on the new Klamath Project homesteads (see section below) in raising various crops concluded that potatoes, onions, horseradish and cereal crops were most able to survive the climate and find a profitable market. Tule Lake farmers sustained devastating crop loss when their barley and wheat fields proved attractive feeding grounds for thousands of ducks and geese. Various unsuccessful attempts were made to dissuade the birds: firing shotguns loaded with blanks; using planes to buzz fields; air dropping firecracker-type noisemakers; and using a mobile searchlight to roust night feeding birds.[27]

In 1940, Earl Ager moved his grocery and general store to Tulelake. It has been described as the "Wall Street of western barley, the crying wall of the potato

[27] Responding to a negative article published in the San Francisco Chronicle in 1951 concerning the impact of farming on the Tule Lake Refuge, local editor, John B. Edmonds of The Tulelake Reporter stated: "…our ranchers pay and pay again with thousands of bushels of grain consumed each year off private farm land…Not a 30,000 acre refuge, Mr. Thomas; no rather a 93,000 acre paradise of water and grain and clover on which these birds feed each spring and fall at our expense."

industry…" In 1993, 19,532 acres of leaselands in Siskiyou and Modoc counties generated $15,796,785 in crop sales. In the Klamath basin, onion production has been centered on the leaselands and the area is considered to be excellent for best production, introduced around 1991. Potatoes are a large crop in the basin, with 40% of California's fresh potatoes originating there. Nearly 45% of the nation's horseradish is also grown here. Grains are also grown with maintenance of special habitat buffers and residual grains left for bird feeding under government programs.

EARLY RECLAMATION EFFORTS:

In 1862 and 1866, John A. Fairchild had secured grazing privileges into the eastern part of Butte Valley through private treaty with the Modoc Indians. (See separate section on Ranching) When his partnership with Si Doten, dissolved, he retained 17,00 acres called J.F.Ranch, a considerable portion of which was covered by Lower Klamath Lake. He reclaimed a large area through drainage, turning it into rich pasture land. In 1868, the Langell family began to rechannel the Lost River, reclaiming nearly 4,000 acres of land for farming and ranching over the border in Oregon. In the 1870's, James Poe rechanneled the Lost River in Oregon, downstream from Langell's, to reclaim swampland for farming. (See separate section on Water Use)

KLAMATH RECLAMATION PROJECT:

In 1904, Reclamation Service Director Frederick Newell presented a proposal to reclaim marshlands in the upper Klamath Basin for agriculture. In February of 1905, California relinquished ownership of Clear Lake, Lower Klamath Lake and Tule Lake to the federal government. In addition, Congress passed legislation to permit the draining of the lakes and cessation of navigation. The Bureau of Reclamation (BoR) began construction in 1906, with the draining of Tule Lake beginning in 1907. Through diversion of Lost River water into the Klamath River, drainage through holes in the lave at Scorpion Point and evaporation, Tule Lake was reduced in size from 98,600 to 68,00 acres between 1907 and 1919, and parcels opened for homestead in phases.

Portions of the Klamath Basin National Wildlife Refuge system that are located in Siskiyou County include Lower Klamath and Tule Lake. In 1908, Executive Order #924 preserved islands and marshlands unsuitable for agriculture for bird habitat in the Lower Klamath Refuge. In 1912, the Northeastern Railroad was permitted to build a causeway across the northwestern end of Lower Klamath Lake, which cut off the lake from its main source of water. The Lower Klamath Lake was originally 81,619 acres in size. When drained, the northern end of the lake proved suitable for farming, but the southern end was heavy with alkali. By the 1920's, peal fires started in the lake bed, burning to a depth of six feet or more in some areas. In the aftermath, a large alkaline, ashy lake bed choked the region with dust clouds. Due to deterioration of the water quality of the lake and spread of avian botulism, some of the drained land was re-flooded.

In 1928, Executive Order #4975 set aside the 10,300 acre Tule Lake Bird Refuge. When Tule Lake was drained, 37,000 acres of Tule Lake had been set aside as an evaporation sump, but in the 1930's, most of the land was not under water and was leased for farmland. Irrigation on the homesteads threatened the leaselands with flooding and a pump and tunnel was constructed to the Lower Klamath. By

connecting the sump with Lower Klamath Lake by tunnel and a pumping facility in 1942, the Tule Sump was reduced to 17,000 acres with leaseland farming on the remaining lands. mm-165.

The new agricultural lands gradually created by the Klamath Project were homesteaded through a series of open allotments beginning in 1917. (Most of the homesteads awarded after 1921 were in California.) Applicants had to meet certain criteria to qualify, and preference was given to veterans of both WWI and WWII. In 1929, the tradition of drawing names from among eligible applicants was begun. The 1946 lottery drawing was aired live throughout the west coast through radio hook-up. The last homestead was awarded in 1949 to Ernest L.Tacker of Hemet. (Due to its high alkali content, it had been refused by 20 prior alternates.) As the Klamath Project extends into southern Oregon and Modoc County, Many farmers also have ties to those regions. In fact, it is not uncommon for a Siskiyou County Farm to have one or more operations situated in another of these locations.

After the last homestead period, 13,000 acres under BoR jurisdiction remained reserved from homestead and maintained under lease. In 1951, the US Fish and Wildlife Service announced intention to exclusively manage 15,253 acres of land in the Tule Lake Basin, including the areas known as 2,500 acre “League of Nations” and “Frog Pond” which had been under consideration for homestead.

Protests were raised based on the question of original intent of State transfer of title to the federal government in regard to purposes of homesteading. This let to clarifying legislation known as the 1964 Kuchel Act (Public Law 88-567), which states that leaselands are “dedicated to wildlife conservations, but with full consideration to optimum agricultural use that is consistent therewith.”

In 1977, an agreement between the BoR and the Tule Lake Refuge acknowledged that: 1) the US Fish and Wildlife Service (USF&WS) was in charge of administering the land and water within the boundaries of the refuge and that their decisions affecting this area were binding; and 2) the BoR would prepare and conduct leasing programs on the land designated for agricultural use within the refuge, under the approval of the USF & WS. In 1980, the refuge expanded to include land encompassing the “Peninsula” so that currently, the Tule Lake Refuge encompassed 38,908 acres; 15,270 of which are leased to farmers residing within a 50 mile radius of the refuge on a five year basis and 1,400 acres of which are planted in barley as a buffer to attract feeding winter fowl.

The Lower Klamath National Wildlife Refuge now stands at 47,600 acres, and is a mixture of shallow marshes, open water, grassy uplands and croplands. There are 6,900 acres of leaselands on the lower Klamath Refuge. According to the Tulelake Growers Association, potatoes account for only 13% of the crops grown on 22,000 acres of lease land in the refuges, yet generates nearly 60% of the $15.7 million in receipts for farmers leasing this land in Siskiyou and Modoc Counties.[28] (Please see Attachment D)

[28] Statistics taken from a February 14,1994 letter from the Tulelake Growers Association to Congressman Wally Herger.

HISTORICAL STATISTICS:

(Please see the following "attachments" on historical estimates on acreage and crop production excerpted from the Siskiyou County Annual Crop and Livestock Reports, 1957-1994.) It should be noted that more recent developments in farming in Siskiyou County have included the establishment of wineries (where micro-climates have permitted), nurseries for reforestation stock, medicinal herbs and the application of organic farming practices.

"RIGHT TO FARM ORDINANCE":

On Sept**e**mber 25, 1990, the County of Siskiyou passed Ordinance 90-28 adding Chapter 11 to Title 10 of the Siskiyou County Code or "Right to Farm Ordinance":

Section 10-11-02 states: "It is the purpose and intent of the section to reduce loss to the County of its agricultural resources by limiting the circumstances under which agricultural operations may be considered a nuisance."

Section 10-11-03 states: "No agricultural activity, operation or facility or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards and with all chapters of Siskiyou County code, as established and followed by similar agricultural operations, shall be or become a nuisance, public or private, pursuant to the Siskiyou County Code after the same has been in operations for more than three years, if it was not a nuisance when it began."

GENERAL CONSIDERATIONS:

The availability of suitable soils, climate and water of sufficient quantity and Quality are fundamental to farming. Where environmental, land use or government farm program regulation does not otherwise intrude, the decision by a modern farmer to bring or maintain a particular piece of land in production depends on a number of additional factors: (1) access to reliable resources in order to acquire necessary production "inputs"[29]; (2) the amount of capital investments required for necessary production "inputs", (3) reliability of crop yield or "output"[30]; (4) marketability of product, including market price.

A commercial farmer will not generally bring a particular piece of land into production where there is no foreseeable profit in doing so. The balance of profit, loss and the weighing of risk variables is further complicated when the crop is to be utilized as an input for another end-product, such as livestock, or when it is a long-lived perennial crop, such as alfalfa or pasture.

[29] This would include such "inputs" as skill, experience, parts, capital and financing, labor, costs of land, nutrients, pesticides, equipment, transportation, processing and storage facilities, structural improvements, water delivery systems, seed, packaging, etc.

[30] This would include risk factors such as climatic and natural events, disease, pestilence and loss by wildlife, reliability of water supply, etc.

SOIL CHARACTERISTICS:[31]

LITTLE SHASTA RIVER:

The source area of the Little Shasta River is marked by soil of a coarse texture described as sandy and stony in nature and from material derived from volcanic ash. The soil in this area ranges from well-drained to excessively drained and its slightly to strongly acid. The underlying geology is igneous rock from lava flows – basalt or andesite. Moving into the valley edge, the soil becomes neutral to mildly alkaline in nature.

Terraces on the north side of the river range from mildly alkaline to mildly acid in the top several inches and neutral underneath. The soil is stony, well drained and overlies a silica cemented hardpan.

On the south side of the river there are large sections of "Gazelle" type soil. The water table is quite high here and the soil depth no more than 25 inches, underlain with a silica and calcium carbonate cemented hardpan with some disseminated lime. It has a strong saline alkali nature with concentrations of salts in the surface layer. It erodes easily. There is frequent prolonged flooding of these areas from November to May.

SHASTA RIVER:

Soils at the source of Shasta River are similar to those found at the source of the Little Shasta River, and continue to have, for the most part, similar characteristics as described above in the first three paragraphs relating to the Little Shasta. There are, however, some pockets of "Gazelle" type soils on the southwestern side of the Shasta River.

Soils on the northeastern side of the river, at its confluence with the Little Shasta, are poorly drained with occasional brief periods of flooding from January – March. These soils erode easily and are mildly to moderately alkaline overlying, in some areas, a layer of peat.

SCOTT RIVER:

EASTERN DRAINAGE – Soils at the source of the Scott River in the eastern drainage of the Scott Valley are well drained, sandy and gravelly. They are underlain by metamorphic or fractured metasedimentary bedrock. The PH ranges from slightly to strongly acid. The area is marked by perennial stream and wet meadows. There are three minor areas in the southeast of rock outcroppings with shallow variable textured soil which is excessively drained.

The alluvial fan above the flood plain to the east and north of the Scott River varied from well drained gravelly loam to sandy clay. Acidity varies from slight to medium, although there are pockets of "Medford" clay loam which is moderately alkaline and calcareous. Soil in this area erodes easily and is "droughtry".

[31] SOIL SURVEY OF SISKIYOU COUNTY CALIFORNIA, CENTRAL PART – usda Soil Conservation Service, 1983

NORTH AND SOUTHWESTERN DRAINAGE – Source soil in this area includes well drained gravelly loam underlain by weathered schist or hard metamorphasized siltstone. It is medium acid and tends to be “droughty”.

OF SPECIAL NOTE – The French Creek drainage to the south has been the subject of a special study due to highly erodible granitic soils. The Scott Mountain Crest is known for its serpentine soil, a rare type of soil high in magnesium, nickel and chromium, but low in calcium. (From interview with USFS Klamath National Forest Botanist – Barbara Williams, 1991.)

FLOOD PLAIN – Soils along the flood plain of the Scott River are poorly to somewhat poorly drained. There is a high water table in the area – near the surface from December through June. It is subject to occasional flooding from snowmelt or rainfall from January through March. Soils tend to be mildly to moderately alkaline.

BUTTE VALLEY:[32]

Butte Valley was once covered by a Large Pleistocene Lake of approximately 130 square miles, which apparently drained to the north through Sam’s Neck. As the valley dropped and the adjacent fault block mountains uplifted, Butte Valley became a closed drainage basin. After to Pleistocene period, the historic Meiss Lake once covered approximately 66 square miles along the 4,240 foot elevation contour to what is now the town of Dorris. In historic times, the lake has covered about 16 square miles, which coincides with the 4,234 foot elevation contour.

One remarkable feature of Butte Valley is its relative flatness. Elevations in the enclosed broad valley basin range from 4,226 to 4,236 feet. The majority of land west of Meiss Lake have a slope of one foot of fall for every 2,000 feet. While on the north and east sides of Meiss Lake, the topography is slightly steeper with one food of fall for every 875 and 550 feet, respectively. Elevations of surrounding foothills range from 4,236 to 5,200 feet. Ikes and Butte mountains (elevation: 7,780 feet) to the southwest are prominent features of the Cascade Range adjacent to the Valley.

Within the valley, a cemented hardpan is found at a range of six inches to several feet beneath most soils. The hardpan is particularly close to the surface in the Meiss Lake basin. As soil permeability is naturally poor, salt and alkali accumulate. In adjacent cropland, fields are leached through deep canals to decrease salts and alkali and the hardpan is ripped periodically to improve rooting depth and drainage. In addition, much of Butte Valley is highly prone to wind erosion.

CLIMATIC CHARACTERISTICS:

The range of crops that can be successfully grown in Siskiyou County is constrained by limitations of climate. Barring small pockets where micro-climates may vary, the following are benchmark statistics applicable to the valley agricultural centers of Siskiyou County[33]

[32] California Department of Fish and Game Butte Valley Wildlife Area Management Plan, prepared by Kit Novick, Wildlife Habitat Supervisor II, 1992.

[33] Siskiyou County Annual Crop and Livestock Report, Siskiyou County Department of Agriculture, 1994

(1) SHASTA VALLEY – elevation 2,640 feet; 143 days 32 degree growing season and 175 days 28 degree growing season; annual precipitation 12.12 and annual snowfall 8.9 inches.

(2) SCOTT VALLEY – elevation 2,747 feet; 100 days in 32 degree growing season and 143 days 28 degree growing season; annual precipitation 21.78 and annual snowfall 30.4 inches.

(3) BUTTE VALLEY – elevation 4,250 feet; 27 days in 32 degree growing season and 81 days in 28 degree growing season; annual precipitation 10.89 and annual snowfall 27.6 inches.

(4) TULE LAKE/UPPER KLAMATH BASIN – elevation 4,036 feet; 82 days in 32 degree growing season and 113 days in 28 degree growing season; annual precipitation 10.21 inches and annual snowfall 23.5 inches.

WATER AVAILABILITY:

(See separate section on Water Use.)

ATTACHMENT A

ACRES PRIVATE LAND ALLOCATED TO HAY & FEED CROPS*

WHEAT YEAR FEED	ALFLAFA HAY	OTHER HAY	OATS	BARLEY FEED
1957	34,000	11,000	13,000	37,350	18,482
1959	34,000	25,000	11,067	33,611	13,488
1960	37,000	25,000	14,085	28,689	12,000
1961	41,000	18,000	14,000	32,100	12,100
1962	40,000	20,000	10,000	17,000	7,550
1965	47,000	21,800	2,750	18,400	7,200
1966	50,200	22,500	3,000	14,800	7,500
1967	43,000	23,500	2,400	11,000	10,000
1968	42,700	44,000	5,500	18,200	10,000
1970	53,000	38,000	5,000	19,600	10,000
1971	51,700	38,000	9,600	21,500	9,000
1972	53,900	23,000	8,000	21,800	13,000
1973	55,000	48,000	7,000	20,000	15,000
1974	56,900	43,000	7,500	22,800	18,000
1975	61,500	34,400	9,000	21,000	17,000
1976	68,700	36,000	8,000	20,600	18,000
1977	68,400	32,800	12,000	22,200	13,900
1978	70,000	36,000	11,200	22,600	12,000
1979	69,100	35,200	11,600	25,100	13,700
1980	75,400	35,500	12,200	27,458	14,900
1981	74,700	34,400	15,600	34,700	14,400
1983	74,000	30,000	14,000	44,500	14,900
1984	72,000	30,200	8,500	33,400	15,000
1985	71,192	21,100	8,210	41,872	14,500
1986	73,523	31,549	8,058	27,175	12,300
1987	73,820	30,271	7,075	29,340	10,410
1988	73,152	31,276	7,693	24,761	12,302
1989	74,339	30,350	9,372	22,770	12,391
1990	74,547	29,426	8,289	16,903	10,457
1991	77,418	29,577	9,325	15,419	8,726
1992**	49,614	23,100	5,761	16,915	6,458
1993	51,640	22,000	5,501	15,516	5,452
1994	49,574	20,500	3,540	12.090	4,652

* Source Siskiyou County Annual Crop and Livestock Report, data is as of year-end.

** reflects more accurate acreage accounting methods

NOTE: Alfalfa is a perennial crop of 5-8 years with a harvest of three to four times a year. Grain is commonly used as a rotation crop of 1-2 years between alfalfa crops.

ATTACHMENT B

ACRES OF PRIVATE LAND ALLOCATED TO PASTURE*

YEAR	RANGE PASTURE	IRRIGATED PASTURE	NON-IRRIGATED PASTURE	STUBBLE PASTURE	GRAIN PASTURE
1957	400,000		77,000	50,000	
1959	400,000		80,000	130,000	
1960	400,000		87,000	130,000	
1961	400,000			130,000	
1962	450,000	82,000	84,000	76,000	1,100
1965	450,000	72,500	87,000	82,000	1,800
1966	450,000	67,000	87,500	50,000	1,800
1967	450,000	70,000	85,000	30,000	2,500
1968	430,000	62,600	74,000	19,000	4,000
1970	455,000	80,000	116,000	20,000	3,000
1971	400,000	100,000	130,000	20,000	2,000
1972	400,000	103,800	130,000	20,000	2,500
1973	400,000	103,500	133,000	20,000	3,000
1974	450,000	101,000	125,000	20,000	3,000
1975	450,000	101,000	127,000	11,000	3,000
1976	450,000	101,000	127,000	12,000	3,000
1977	450,000	101,600	125,000	9,000	5,000
1978	450,000	103,000	126,000	11,000	3,000
1979	450,000	101,000	140,000	9,500	5,500
1980	450,000	104,300	140,000	9,500	5,500
1981	450,000	104,300	140,000	9,500	5,500
1983	450,000	104,000	140,000	6,000	1,000
1984	450,000	104,000	140,000	6,000	1,000
1985	450,000	104,000	140,000	6,000	1,000
1986	445,000	103,000	140,000	6,500	1,000
1987	445,000	103,000	140,000	6,500	1,000
1988	445,000	100,000	140,000	7,500	1,000
1989	445,000	100,000	140,000	7,000	1,000
1990	445,000	100,000	140,000	6,000	1,000
1991	445,000	95,000	145,000	7,000	1,000
1992**	445,000	90,000	150,000		
1993	445,000	90,000	150,000		
1994	445,000	90,000	150,000		

* Source Siskiyou County Annual Crop and Livestock Report, data is as of year-end

** Reflects more accurate accounting methods for acreage

NOTE: A mixed grass/clover pasture is a perennial crop of 20 years or longer.

ATTACHMENT C

VALUATION*

YEAR	FIELD CROPS	VEGETABLE CROPS	LIVESTOCK	MILK, WOOL & POULTRY	TOTAL AGRICULTURE
1957	10,904,268		6,601,151	799,000	19,635,303
1958	8,804,864	1,265,272	7,208,460	736,180	19,496,450
1959	9,827,861	2,260,393	6,656,627	812,000	21,168,196
1960	9,457,400	1,783,000	6,779,650	853,000	20,853,450
1961	10,510,560	2,178,200	7,008,500	747,800	22,487,660
1962	12,772,700	2,600,800	8,433,200	788,000	26,418,950
1963	14,800,000	3,101,100	8,469,250	1,234,500	29,825,700
1964	15,200,000	5,660,000	8,615,000	1,255,400	34,980,115
1965	13,766,100	3,877,300	10,840,050	1,330,800	32,551,530
1966	13,423,000	5,172,000	10,969,800	869,340	34,085,680
1967	13,771,900	5,805,000	10,972,600	926,100	34,359,100
1968	13,997,500	7,036,600	14,705,600	1,043,770	40,345,570
1969	15,649,000	7,576,000	12,869,800	977,200	40,294,200
1970	16,667,000	6,917,000	12,507,000	1,235,800	40,589,500
1971	17,359,000	6,099,300	14,495,800	1,320,900	42,064,500
1972	22,287,000	7,091,000	15,095,200	1,268,000	50,313,000
1973	41,332,000	13,358,700	20,200,500	1,199,500	83,383,000
1974	47,583,600	9,104,400	11,267,800	1,407,000	76,655,800
1975	46,031,600	10,882,000	10,107,000	1,549,463	76,252,563
1976	52,164,000	8,406,000	10,874,000	2,412,000	80,553,000
1977	45,421,000	9,731,000	16,227,000	2,578,000	80,638,000
1978	48,014,000	10,582,000	21,687,000	2,027,000	89,683,000
1979	62,354,000	11,177,000	31,038,000	3,624,000	114,813,000
1980	79,001,000	20,300,000	31,472,000	4,106,000	147,133,000
1981	70,885,000	20,011,000	30,238,000	4,471,000	136,075,000
1983	83,918,000	20,924,000	34,769,000	4,067,000	150,176,000
1984	70,273,000	30,878,000	35,584,000	4,316,000	150,366,000
1985	60,696,000	9,811,000	24,406,000	4,300,000	108,490,000
1986	54,576,000	12,662,000	35,338,000	4,317,000	112,780,000
1987	56,982,000	10,600,000	48,852,000	4,579,000	125,951,000
1988	68,103,000	14,620,000	50,870,000	4,482,000	143,630,000
1989	70,538,000	18,260,000	40,359,000	4,820,000	140,939,000
1990	67,852,000	18,060,000	54,770,000	4,428,000	152,149,000
1991	66,020,000	8,590,000	55,238,000	3,377,000	140,915,000
1992	47,360,000	12,748,000	34,923,000	2,457,000	106,458,000
1993	51,233,000	17,132,000	35,576,000	2,061,000	114,908,000
1994	50,326,000	14,859.000	35,861,000	1,946,000	112,982,000

* Source Siskiyou County Annual Crop and Livestock Report, data as of year-end, valuation comprised of year-end inventories times market value per unit.

** Excluding timber

NOTE: 1992 reflects more accurate accounting methods for acreage

NOTE ALSO: The years 1957-1962 are dairy only; 1963-1969 include poultry and dairy; 1970-1994 are dairy and wool.

ATTACHMENT D

REFUGE LEASELANDS*

LOWER KLAMATH LEASELANDS

CROP	TOTAL ACRES	TOTAL VALUE
Barley	3,184	$ 604,960
Oats	1361	244,980
Grass Hay	1940	378,300
Fallow	456	-
Total	6,941	$ 1,228,240

TULELAKE LEASELANDS

CROP	TOTAL ACRES	TOTAL VALUE
Barley	6,884	$ 2,158,134
Oats	2,250	675,000
Wheat	1,717	781,235
Alfalfa	511	242,725
Sugar Beets	620	545,600
Onions	369	788,737
Potatoes	2,919	9,359,044
Total	15,270	$ 14,550,475

1992 In Lieu of Tax

Siskiyou County	$ 155,678
Modoc County	29,615
Klamath County (Oregon)	17,210
Total	$ 202,503

*Compiled by Tulelake Growers Association in consultation with Siskiyou/Modoc County Dept. of Agriculture and U.S. Bureau of Reclamation for 1993.

Kuchel Bill

Public Law 88-567
88th Congress, S. 793
September 2, 1964

An Act

78 STAT. 850.

To promote the conservation of the Nation's wildlife resources on the Pacific flyway in the Tule Lake, Lower Klamath, Upper Klamath, and Clear Lake National Wildlife Refuges in Oregon and California and to aid in the administration of the Klamath reclamation project.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is hereby declared to be the policy of the Congress to stabilize the ownership of the land in the Klamath Federal reclamation project, Oregon and California, as well as the administration and management of the Klamath Federal reclamation project and the Tule Lake National Wildlife Refuge, Lower Klamath National Wildlife Refuge, Upper Klamath National Wildlife Refuge, and Clear Lake National Wildlife Refuge, to preserve intact the necessary existing habitat for migratory waterfowl in this vital area of the Pacific flyway, and to prevent depredations of migratory waterfowl on agricultural crops in the Pacific Coast States.

Wildlife resources on Pacific flyway. Conservation.

Sec. 2. Notwithstanding any other provisions of law, all lands owned by the United States lying within the Executive order boundaries of the Tule Lake National Wildlife Refuge, the Lower Klamath National Wildlife Refuge, the Upper Klamath National Wildlife Refuge, and the Clear Lake Wildlife Refuge are hereby dedicated to wildlife conservation. Such lands shall be administered by the Secretary of the Interior for the major purpose of waterfowl management, but with full consideration to optimum agricultural use that is consistent therewith. Such lands shall not be opened to homestead entry. The following public lands shall also be included within the boundaries of the area dedicated to wildlife conservation, shall be administered by the Secretary of the Interior for the major purpose of waterfowl management, but with full consideration to optimum agricultural use that is consistent therewith, and shall not be opened to homestead entry: Hanks Marsh, and first form withdrawal lands (approximately one thousand four hundred and forty acres) in Klamath County, Oregon, lying adjacent to Upper Klamath National Wildlife Refuge; White Lake in Klamath County, Oregon, and Siskiyou County, California; and thirteen tracts of land in Siskiyou County, California, lettered as tracts "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L", and "N" totaling approximately three thousand two hundred and ninety-two acres, and tract "P" in Modoc County, California, containing about ten acres, all as shown on plate 4 of the report entitled "Plan for Wildlife Use of Federal Lands in the Upper Klamath Basin, Oregon-California," dated April 1956, prepared by the United States Fish and Wildlife Service. All the above lands shall remain permanently the property of the United States.

10/1/64

Sec. 3. Subject to conditions hereafter prescribed, and pursuant to such regulations as may be issued by the Secretary, 25 per centum of the net revenues collected during each fiscal year from the leasing of Klamath project reserved Federal lands within the Executive order boundaries of the Lower Klamath National Wildlife Refuge and the Tule Lake National Wildlife Refuge shall be paid annually by the Secretary, without further authorization, for each full fiscal year after the date of this Act to the counties in which such refuges are located, such payments to be made on a pro rata basis to each county based upon the refuge acreage in each county: *Provided*,

Restriction.

That the total annual payment per acre to each county shall not exceed 50 per centum of the average per acre tax levied on similar lands in private ownership in each county, as determined by the Secretary: *Provided further*, That no such payments shall be made which will reduce the credits or the payments to be made pursuant to contractual obligations of the United States with the Tulelake Irrigation District or the payments to the Klamath Drainage District as full reimbursement for the construction of irrigation facilities within said district, and that the priority of use of the total net revenues collected from the leasing of the lands described in this section shall be (1) to credit or pay from such revenues to the Tulelake Irrigation District the amounts already committed to such payment or credit; (2) to pay from such revenues to the Klamath Drainage District the sum of $197,315; and (3) to pay from such revenues to the counties the amounts prescribed by this section.

78 STAT. 850.
78 STAT. 851.

Sec. 4. The Secretary shall, consistent with proper waterfowl management, continue the present pattern of leasing the reserved lands of the Klamath Straits unit, the Southwest Sump, the League of Nations unit, the Henzel lease, and the Frog Pond unit, all within the Executive order boundaries of the Lower Klamath and Tule Lake National Wildlife Refuges and shown in plate 4 of the report entitled "Plan for Wildlife Use of Federal Lands in the Upper Klamath Basin, Oregon-California," dated April 1956. Leases for these lands shall be at a price or prices designed to obtain the maximum lease revenues. The leases shall provide for the growing of grain, forage, and soil-building crops, except that not more than 25 per centum of the total leased lands may be planted to row crops. All other reserved public lands included in section 2 of this Act shall continue to be managed by the Secretary for waterfowl purposes, including the growing of agricultural crops by direct planting and sharecrop agreements with local cooperators where necessary.

Sec. 5. The areas of sumps 1(a) and 1(b) in the Klamath project lying within the Executive order boundaries of the Tule Lake National Wildlife Refuge shall not be reduced by diking or by any other construction to less than the existing thirteen thousand acres.

Sec. 6. In carrying out the obligations of the United States under any migratory bird treaty, the Migratory Bird Treaty Act (40 Stat. 755), as amended, or the Migratory Bird Conservation Act (45 Stat. 1222), as amended, waters under the control of the Secretary of the Interior shall be regulated, subject to valid existing rights, to maintain sump levels in the Tule Lake National Wildlife Refuge at levels established by regulations issued by the Secretary pursuant to the contract between the United States and the Tulelake Irrigation District, dated September 10, 1956, or any amendment thereof. Such regulations shall accommodate to the maximum extent practicable waterfowl management needs.

16 USC 710.
16 USC 715.

Research studies.

SEC. 7. The Secretary is hereby directed to complete studies that have been undertaken relating to the development of the water resources and waterfowl management potential of the Clear Lake National Wildlife Refuge. The results of such studies, when completed, and the recommendations of the Secretary shall be submitted to the Congress.

Report to Congress.

SEC. 8. The Secretary may prescribe such regulations as may be necessary to carry out the provisions of this Act.

Approved September 2, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 1072 (Comm. on Interior & Insular Affairs) and No. 1820 (Comm. of Conference).
SENATE REPORT No. 341 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD:
Vol. 109 (1963): July 15, considered and passed Senate.
Vol. 110 (1964): Apr. 20, considered and passed House, amended.
Aug. 18, House agreed to conference report.
Aug. 19, Senate agreed to conference report.

APPENDIX 6 Customs and Culture – Ranching and Dairy

Please refer to the narrative included later in this section entitled Ranching Traditions of Alta California for background on the historic Spanish and Mexican colonial traditions of ranching in California. It establishes (1) ranches or ranchos, (2) open range grazing; (3) branding; (4) roundups; (5) rodeos; and (6) vaqueros (cowboys) as fundamental to California's historic economic base, cultural roots and traditional lifeways.

SISKIYOU COUNTY – HISTORICAL NOTES:

Sectional variations in physical characteristics naturally divide Siskiyou County into five identifiable areas where ranching and dairying have played a significant historical role: Yreka-Shasta Valley; the area west of I-5, (including Scott Valley, Klamath and Salmon Rivers); Butte Valley; the Tule Lake or Upper Klamath Basin; and the Mt. Shasta area. The following spot sketches are meant only as an illustrative sample of the history of ranching and dairying in Siskiyou County:

GENERAL: In 1837, the first cattle passed through Siskiyou County which Ewing Young drove more than 700 head of cattle up Siskiyou Trail to Oregon. After the discovery of gold, ranching was rapidly established throughout the county, so that by 1878, there was already an inventory of 4,600 horses, 540 mules, 46,915 horned cattle, 33,500 sheep and 1,900 hogs.[34] Wool and butter were among the county's principal exports in 1877.

OF NOTE: A severe winter in 1889-90 killed native wildlife, such as mountain sheep, and large numbers of livestock. In Butte Valley, Charlie Boyes lost 1,500 horses from starvation. Willard Stone lost 28 horses on his Sacramento range with snow at 18 feet high. Presley Dorris in Butte Valley and Modoc County estimated his loss as 5,000 cattle. I.J. Straw, his foreman, estimated the loss nearer to 7,000 head. The Fairchilds at the J.F. Ranch lost hundreds of horses.

YREKA-SHASTA VALLEY:

Robert Martin has been credited as the first rancher in Shasta Valley, establishing the Table Rock Ranch in 18-19.

Many ranch operations diversified from beef cattle into dairying. For instance, the 3,500 acre Brady Ranch near Gazelle, purchased by Josiah Edson in 1852, diversified into dairying and cheese making around 1877. By 1906, the Edson Foulke Co. Ranch totaled 10,000 acres was mostly a beef cattle operation. Once again, in 1925, part of it was converted to a dairy operation with approximately 1,200 milk cows.

In 1855, Wiley J. Fox and J. Montgomery Peters claimed adjoining homesteads to raise stock north of Parks creek. Fox then became sole owner and in 1861, sold it to H. Stewart who added dairy cattle to the operation. On February 14, 1868, the Yreka Journal announced the forthcoming arrival of 140 Portuguese immigrants, who planned to work the Hawkinsville mines and establish cattle ranches or dairies. In

[34] February 6, 1878 Yreka Journal, pg.3, col.5

1886 Bill Orr's Grenada and Butte Creek Ranches were bought from Bill Orr by five partners, most of whom were Portuguese. The Butte Creek operation was primarily a seasonal dairy of about 100 head. Milk cows would be driven from Grenada to Butte Creek in May and back in October. Together with the Grenada beef cattle Ranch, the operation totaled about 1,200 head.

James B. Rohrer operated a large Holstein dairy in Little Shasta between 1914-47 and the Quadros and Machado families established a 100 head dairy in Big Springs, providing stock to establish herds throughout Shasta Valley. Local creameries in need of milk paid for the cows, taking the payments out of farmers cream checks.

According to Frank Herzog, the city of Yreka in 1857 consisted of 640 acres (1 mile square) encircled by cattle ranches and dairies. Each man had his "corporates" (corporate limits) marked out in native sandstone:

The Steele Ranch was located at southeast city limits and extended beyond where the Evergreen Cemetery is now. From the cemetery, John Garvey had 640 acres devoted to cattle. North of Cemetery Lane was the southwest corporate owned by Charles Payot and Amidy Tisso of 100 acres. From the north line of their property to North Street was the Sam Pellet place. Continuing north Sigmund Wetzel had the northwest corporate limits as his property, going east from there was the McNaulty Cattle Ranch. From there toward Yreka Creek through the Catholic Cemetery was the ranch owned by Charles Herzog. Then the Steele Ranch again. In 1916, Nick Weber had a dairy on the Steele property. East from Steele's was the Jim Wheeler Ranch. Beyond and across Oberlin Road from Steele's was the George Nurse home and property. Mrs. Frank LeMay had 320 acres in the Greenhorn area that was used for cattle and dairy. At the west end of Miner Street (across from Yreka City Park) a Mrs. Crowley had seven acres extending beyond the north end of miner from Gold Street to a creek on the west. She had 123 head of cattle.

In 1875, Nathaniel Dennis bought a farm of 160 acres in Big Springs and homesteaded another 160 acres. The Dennis brothers operated the Shasta Creamery on the place, with a ten foot water wheel that operated the butter churn and cream separator. (Later, they sent their milk to the Edgewood Creamery operated by H.E. Norris.) Martin's Dairy was originally owned by James B. Martin who operated the dairy in the summer. An undershot wheel was constructed in front of a log dairy house straddling the Little Shasta River. There was a cold spring where butter and cheese was stored before hauling it to the railroad and town. By 1917, a cheese factory was operating in Grenada.

Some ranchers diversified into sheep. In 1859 George Fiock purchased a place on the Shasta River from L.R. Nichols and raised both sheep and cattle. His father, John, was cattle ranching between Lost River and Lower Klamath Lake when there was trouble with the Modocs and he moved his cattle to his son's in 1863

Brice M. Martin acquired Martin's Dairy around 1900 and used it as a headquarters for grazing sheep, (tended by Basque shepherds.) and cattle during the summer months. There were two bands of about 1,500 sheep and a cattle herd of about 200 head. James B. Rohrer had a large sheep operation until 1920.

Beef cattle was always a mainstay. Patrick and Bridget Kierman settled south of Gazelle in 1854. Although the ranch eventually comprised some 16,000 acres, the original 80 acres was not patented until 1884. They raised beef cattle and had a butchering business with several retail outlets. Also in 1854, a group of young newlywed couples arrived by wagon train to establish ranches, including Nelson H. Eddy, Sidney Terwilliger, Solomon Gage and Norman Stone. Accompanying them were Andrew Soule, George Root, John Gage, McKenn Armsby, Timothy Cook and Jasper Palmer to drive their livestock.

In 1876, Benjamin Franklin Dunlap established a ranch at the present site of Dwinnell Dam. It was abandoned in 1898 as it was determined to be railroad land and they were unable to patent their homestead. In 1884, Louis Hessig bred Devonshire and Hereford cattle at the Double Hart Ranch on the Klamath River east of Copco for the Pokegama Lumber camp and the railroad. Many of the cows weighed as much as 2100-2200 lbs. There were roundups to clear the range of as many as 300 wild horses at a time.

Many ranchers developed “customary range” on the public domain. In 1857, Charles Henry Stone purchased half interest in a Durham cattle ranch north of Weed with Dave Soyer/Solyer. Stone used summer range at Medicine Lake, driving his cattle east of Weed and into Squaw Valley. In 1884, Stone switched to a range at the middle and south fork of the Sacramento River. It was necessary to realign and brush the cattle trail. As the herd grew, range was expanded into Mumbo Basin, Crow Creek, the Seven Lakes basin of the Middle Fork of Big Castle Creek and the East fork of the Trinity River known as Sunny Slopes. Two cabins were built with corrals for working saddle horses on the Sacramento River and at Mumbo Basin. (See Attachment – Constitution of the Siskiyou County Stock Protective Association for notations on “customary range” in part of eastern Siskiyou County.)

Prior to the arrival of the railroad in 1887, cattle were the only meat animals exported out of the county. Sometimes, ranchers had to drive their herd as far south as Sacramento to find a market. Ranches such as John and George Miller’s (Will Hart) ranch (1854) in Little Shasta near Sheep Rock, were used as a “stopping place” for eastern Oregon drovers stopping to brand and feed cattle before passing on to market.

With rail transport, law dictated that after 36 hours cattle had to be unloaded, fed watered, rested and allowed to move for eight hours. Both the Montague and Gazelle stops had ample corral space and twenty-five percent of all grain raised in the county was used for transit cattle. Cattle normally moved northward by rain in the spring and southward in the fall. In 1896, 51 box car loads of cattle departed Gazelle between Jan 22-26. 500 carloads departed in the fall and winter shipments, with several thousand head more to go..

SCOTT VALLEY / SALMON AND KLAMATH RIVERS:

According to some records, Erwin and Sarah Elmore settled as early as 1845 on 320 acres of land near the (later) Asa White and P.A. Heartstand holdings. Elmore sold part of the land to James Biernbaum (Enos Young ranch in 1893) and the balance to Edmund and Elizabeth Bagby who sold it to Frank J. Horn Sr. As early as 1850, Pool

and Wicks had established a land claim in Scott Valley with a corral to graze cattle for meat for the miners at Scott Bar.

In 1851, various land claims were established in Scott Valley for grazing of beef for the Yreka and Scott Bar market. In 1851, Mathias B. Callahan Ranch was located near the junction of the east and south forks of the Scott River on land purchased from a Frenchman. In 1852, James Hayden joined his brother Charles, who had already established a ranch in Noyes Valley near Callahan. They were joined by brother Richard in 1864 and Frank in 1865. In 1853, James Bryan, a soldier at Fort Jones, established a 600 acre ranch north of Etna. In 1854, Lieutenant George Crook and Brevet 2nd Lieutenant John Hood also engaged in ranching.

The Jim and Frank Abrams trading post built in 1852 at the mining community of Sisselville (Cecilville) included a slaughter house and butcher shop. A small herd of cattle was kept for meat and dairy products. According to the writings of John Daggett, in 1854, Salmon River miners could get beef at reasonable prices from Scott Valley, although it had to be corned in the fall for winter use. In 1873 George Sightman ranged his cattle wild along Shadow Creek and Grasshopper Point. He sold beef on the hoof. The buyer had to find and shoot an animal and pay 4 cents per pound for the dressed meat. Petersburg was settled in the 1850's and 60's. Originally cattle and hogs were brought to Petersburg from Shasta Valley. Later, L.P. Jordan had ranches at Rush Creek and Garden Gulch, with cattle ranging in the Salmon Mountains.

Nathan L. Morgan settled a ranch on Horse Creek between 1850-60. In 1885, Robert and James Rainey homesteaded cattle ranches of 160 acres each in Seiad Valley and purchased the Horse Creek Ranch in 1893.

Many early cattlemen in the area established "customary range" on the public domain. In 1854, Alexander Parker lived and raised his cattle on the H.C. Cory Ranch. His white faced Herefords did not do well on the swampy valley land and in 1856 he bought a corral and cabin from Mr. Plowman. By 1858, the ranch supported 3,000 head of cattle. The cattle were ranged for summer pasture in Deadfall Lake, Bear Creek in Little Trinity and the North Fork of the Sacramento. In the early days, the range was free. Later, it had to be leased from Southern Pacific or the Forest Service. Riders remained with the cattle during summer and began to bring the cattle home from the range on October 15. Depending upon snows, the cattle were driven down Trinity River and over Scott Mountain, down the north fork of the Sacramento to Sisson; then to the Scott Ranch (Hammonds) near Edgewood and over Gazell Mountain. Several Scott Valley stockmen would use the Parker Ranch as a stop-over when driving cattle to the railroad at Gazelle.

Around 1860, Charles Hammond settled on a ranch along the Scott River. In partnership with David Horn, the circle bar brand ran a large herd of cattle in the Siskiyou Mountains on the Oregon-California border. Son, C.S.(Charles Stuart) Hammond, was born on the ranch in 1866 and was one of the first cattlemen to run cattle in the Marble Mountain Wilderness. C.S had five sons, all who established separate Angus cattle ranches.

Around 1915, Nerva Hayden and Gladys Jenner each homesteaded at the mouth of Noyes Valley near Callahan. They later married, and in partnership with Frank Jenner, built the ranch into an operation of several thousand acres. Hayden worked cattle from Castle Craggs to the Marble Mountains.

Some ranchers went into sheep. For instance, in 1877, James B. Hayden had a large band of sheep near Callahan. Some diversified into dairying. In 1857, A.H. Denny fenced in a gulch above the Sullivan Ranch on Wildcat Creek, bought a few milk cows and sold the milk to miners during winter. During summer, the cows were driven to Denny Farm on Coffee Creek and milk was sold there. In 1894, a creamery was built at Hays Corner (Greenview). In 1896, there were two creameries in Scott Valley.

BUTTE VALLEY:

Indian raids on cattle delayed the settlement of Butte Valley. In 1858, Hyde and Rohrer grazed cattle in Butte Valley at Butte Creek, but did not stay the winter. In 1859 and 1860, J. Hargrove and J. Hampton brought cattle from Oregon to graze in Butte Valley, but did not winter there. In 1861, J.A. Fairchild, G.W. Hard and I.S. Mathews grazed 1,200 cattle and 300 horses in Butte Valley. The herd was in the charge of 8-10 men. Rohrer also had stock in Butte Valley in the area where Charles Boyes later lived.

In 1862, Ball Brothers and Presley a. Dorris settled with stock in Butte Valley. The Ball Brothers and John Bull families joined to range cattle for many thousands of acres. In 1862 John A. Fairchild made a treaty with the Modocs whereby, in exchange for about $300 of cattle and horses, he received title to Butte Creek and nearby lands, with the privilege of ranging cattle further to the east. In 1864, three Van Brimmer brothers homesteaded a ranch on Willow Creek, located along the Yreka branch of the Applegate Trail. About 1870, the brothers built a wood fort over Willow Creek in case of Indian attack. The ranch was sold to William Davis and John Bull in 1883.

In 1865, J.A. Fairchild made another treaty with the Modocs extending his cattle range further eastward. In 1865, Fairchild and Si Doten look up the old “6” Ranch (later Hank Meiss Ranch). In 1873, the partnership broke up and Doten settled on the “Meiss Ranch”, while Fairchild took 17,000 acres as the J.F. Ranch on Cottonwood Creek.

An 1866 treaty gave J.A. Fairchild and Pres Dorris title to Hot Creek, Cottonwood Creek and the Lost River country except for a six mile square area at the mouth of Lost River, reserved by Captain Jack. Dorris established the “D” Ranch in Siskiyou County and another ranch along the Pit River. The “Miller Tract”[35] was located on the east side of Butte Valley. It was considered locally as open range and used exclusively for cattle.

[35] Henry Miller laid the foundations for the meat packing industry in South San Francisco. He plowed his profits back into buying extensive ranches and land holdings in California, Nevada and Oregon. His business became the family firm of Miller and Lux. A large tract of land in Butte Valley was commonly known as the “Miller Tract”, Thought to be owned by Miller and Lux and later sold to the Pacific Improvement Co. –Southern Pacific.

In 1880, Andrew Y. Truax was said to have “pre-empted” the land at the foot of Ball Mountain, homesteading at a site five moles west of Macdoel. About that time, William Davis kept a 2,000 acre “stopping place” at the former Van Brimmer Ranch for drovers from southern Oregon to Montague and 4-6 freight teams going north. It later became the E.M. Hammond Hereford Ranch. Around 1890, “Forest Meadows” was purchased from Edgar Ball by the three Prather brothers. Hundreds of wild horses were broken for the army. There were about 30 cowboys in the summer and the ranch also served as a “stopping place” for drovers.

A cattle buyer named Moore and Heibron, a wholesale Sacramento butcher, bought the Doten Ranch, then Louis Meiss bought an interest from the Moore estate. The ranch leased 35,000 acres from Southern Pacific in 1886. The operation fattened up cattle raised elsewhere, then shipped south for butchering.

Around 1896, the J.F. and the “D” Ranches ran about 10,000 head of cattle combined, and 2,000 horses and mules. At the time, Alfred “Ab” Evans was a fulltime working “buckaroo” or “vaquero”. He stated that horses were broken in the spring; followed by a “horse rodeo” or gathering of mares and colts; then a cattle rodeo for calves; haying; and beef roundup in the fall. According to Ed Cross, in 1895 the “D” Ranch ran 8-9,000 head of cattle and had about 27 buckaroos.

In 1889-90, almost all the level land in Butte Valley was fenced for Miller and Lux (or Southern Pacific) by Joe Eaton and Merrill Evans. The company leased the land to the Edson brothers and the Meiss Ranch. Dorris pulled down the fences and continued to graze there. He was also said to have fenced and gated unsurveyed land at Sheepy Creek in the 1890’s or the to keep settlers out. Fairchild was said to have harassed “nesters” at “Fairchild Field” of Oklahoma Valley in order to prevent them from settling there.

The Grass Lake area had several dairies. In 1859, Eli Barnum settled in Shasta Valley, eventually locating at Little Shasta. In 1874, he bought 240 acres at Grass Lake for summer pasture from John Rohrer. The Barnum’s ran a dairy at the Grass Lake place where there were ice cold springs and ice caves to store butter. In 1876, they sold the Grass Lake Dairy to at John Walbridge. In 1896, there was Pyle’s Grass Valley Creamery. In Butte Valley, Julius V. Russell homesteading on Butte Creek where he ran a dairy and creamery sometime after 1876.

TULE LAKE / UPPER KLAMATH BASIN:

In 1861, there were attacks at Goose Lake and Bloody Point on wagon trains by Modocs and other tribes. Herds of cattle and horses became the choice target. In 1872, Jesse D. Carr and Jesse Applegate were in partnership running cattle between Clear Lake (Modoc County) and Tule Lake. Carr purchased land along the shores of Tule Lake from the estates of Henry Miller and William Brotherton. By 1878, he had 500 breed horses, 500 Durham/Angus/Hereford cross cattle, and 6,000 sheep. Extreme weather is reported to have taken the 6,000 sheep in 1878 and 1,500-2,000 cattle in 1890. By the 1900’s, the Carr Land and Livestock Co. owned a total of 40,000 acres in the Clear Lake and Tule Lake areas. His daughter formed the Tule lake Land and Livestock Co., selling 1/3 to William Dalton, who later bought-out the rest. Dalton’s daughter married Robert A. Byrne.

In 1890, Charles and Elva laird purchased the “Old Doc Skeen Place” on Lower Klamath Lake. They raised cattle and horses and ran a “stopping place” for drovers and freighters. In 1905, the “Klamath” steamboat ran to a point near the Laird’s house.

In 1911, a large dairy cow operation visited southern Oregon. Although they did not choose the site, the local Czech community capitalized on the idea, establishing their own cheese and produce facility in 1921.

MOUNT SHASTA AREA:

The Mount Shasta/McCloud Area was used primarily for range. Sam Jackson had extensive herds of cattle and a dairy in Squaw Valley in 1873. S.S. “Doc” Williams is also said to have summered his stock on range in Squaw Valley.

Charles Beaudroit purchased a ranch in Little Shasta in 1874. The cattle were ranged in the summer on Trout Creek, east of McCloud. Timber growth eventually took the best pasture and the range was turned over to sheep men. In 1906, Henry Fiock took over his father, George’s, place on the Shasta River. He also obtained a grazing right around McCloud and Trout Creek for running sheep and cattle. It would take a week to move the sheep and then the cattle to the rangeland. Herders were kept with the stock until fall when the trek home would start. When the price of livestock plummeted, operations were reduced and centered around home.

HISTORICAL STATISTICS:

(See ATTACHMENTS A, B AND C. It should be noted that in recent times, livestock production in Siskiyou County has included the addition of llamas, fallow deer, buffalo and ostriches. Also of note is the development of specialty breeds of cattle, sheep and horses, including Percheron and Belgian draft horses, Arabian, Warm Bloods and Quarter Horses.)

GRAZING ON LANDS NOW MANAGED BY THE GOVERNMENT:

About 63% of the land within Siskiyou County is managed by either the federal or state government. An estimated 30% of Siskiyou County’s total herd is dependent upon seasonal land grazing on the Shasta Trinity National Forest (STNF), Klamath National Forest (KNF) and lands managed by the Bureau of Land Management (BLM).

Twenty nine “permitees” utilize 26 grazing allotments on the STNF, however, only a small portion of these lands are within Siskiyou County. The STNF allotments provide forage for 2,350 head of cattle, 2,120 sheep and 45 horses. Some of the allotments are used by residents of Shasta County. Five allotments currently are not being utilized, in part, due to damage from the Fountain Fire. A portion of allotments utilized by four permitees for 195 additional cattle lie within both the STNF and the KNF, but are administered by the KNF.

Within the KNF proper[36], there are ten term grazing allotments on the Oak Knoll Ranger District that amount to about 590 head of cattle, or 3,287 Animal Unit Months (AUM's). There is one grazing allotment on the Ukonom Ranger District, amounting to about 50 head of cattle, of 198 AUM's. There are 16 term grazing allotments on the Goosenest Ranger District, amounting to about 2,783 head of cattle, or 14,154 AUM's. There are 25 term grazing allotments on the Scott and Salmon River Ranger Districts, amounting to about 1,746 head of cattle, or 7,168 AUM's. In addition, there are three temporary permits on the Oak Knoll totaling 172 head or 436 AUM's and seven temporary on the Goosenest totaling 352 head or 1,169 AUM's.

In total, 70 permitees utilize 60 range allotments comprised of a combination of both Klamath National Forest and "waived" private lands within the forest that account for about 23% of the total seasonal grazing in Siskiyou County.

[36] (Chapter 3, pg.19 of the KNF Land and Resource Management Plan)

ATTACHMENT A
CATTLE INVENTORIES / PRODUCTION*

Year	BULLS	COWS	CALVES	HEIFERS STEERS	TOTAL
1957	1,225	9,615	10,060	20,900	41,800
1959	950	10,250	8,200	18,500	37,900
1960	1,125	6,000	12,700	19,200	39,025
1961	1,150	6,700	13,100	20,100	41,050
1962	1,280	8,160	6,460	30,510	46,410
1965	1,209	8,300	5,620	45,500	60,629
1966	1,446	6,480	3,490	42,600	54,016
1967	1,434	7,600	4,000	43,500	56,534
1968	1,493	9,100	4,310	58,200	73,103
1970	1,779	8,600	2,250	42,500	55,129
1971	1,800	8,400	3,700	47,700	61,600
1972	1,484	11,062	3,987	41,725	58,258
1973	1,630	9,852	3,780	38,280	53,542
1974	1,717	9,391	4,755	29,191	45,054
1975	1,426	8,957	3,331	30,880	44,594
1976	1,100	6,900	3,000	28,195	39,195
1977	1,650	18,300	9,700	34,700	64,350
1978	1,258	11,997	8,002	41,380	62,637
1979	1,779	11,517	8,162	42,698	64,156
1980	2,126	11,717	8,000	46,900	68,743
1981	2,220	11,981	4,000	49,091	67,292
1983	1,750	12,350	3,300	65,490	82,890
1984	1,880	11,590	2,900	68,183	84,553
1985	2,225	10,244	4,512	44,217	61,198
1986	3,377	21,568	2,891	58,022	85,858
1987	2,754	19,052	4,551	63,577	89,934
1988	2,722	18,840	4,510	60,999	87,071
1989	2,523	9,698	4,401	49,865	66,487
1990	3,038	18,718	11,249	62,473	95,478
1991	2,816	19,045	5,863	67,925	95,649
1992	1,990	10,638	17,747	38,666	69,041
1993	1,751	14,019	12,639	41,488	69,897
1994	1,935	17,586	17,371	44,525	81,417

* Source Siskiyou County Annual Crop and Liv3estock Report, data as of year-end

ATTACHMENT B

DIVISION OF LAND OWNERSHIP IN SISKIYOU COUNTY

The 1993 Siskiyou County Annual Crop Report gives the following division of land allocation and statistics in Siskiyou County – Distributed as follows:

Area of county (square miles)	6,313
Acres in county	4,038,843
Land in farms (acres)	1,153,246
Cropland acres	210,000
Irrigated acres	138,000
Rangeland (woodland and forest acres)	2,525,216
Urban areas (acres)	12,381
County road miles	1,398
State Highway miles	325
Population (January 1,1992)	44,791

Chapter 1, pg. 4 of the Klamath National Forest Draft EIS states that the KNF consists of 1,680,000 acres of land, located primarily in Siskiyou County. According to Chapter 2, Table 2-14 and 2-15, 276,000 acres of land (including water) are not forested. 1,404,000 acres are considered forested land and after various considerations, 1,051,000 forested acres are currently considered capable of timber production. 66,200 acres are currently considered usable grazing acres.

A portion of the Shasta-Trinity National Forest lies within Siskiyou County. Total acreage of that Forest considered suitable for grazing is 245,834 acres, however only 51,521 of this is considered primary rangeland, and 16,730 acres as secondary rangeland. The remainder is considered temporary. Only a small portion of this rangeland is located within Siskiyou County.

KLAMATH

Usable grazing acres	66,200 (Chapter 4-161 KNF proposed Land & Resource Management Plan)
Number of cattle term	2,386 on term allotments + 2,783 Goosenest on term allotments = 5,169
Number of cattle temp.	172 on temp. allotments + 352 Goosenest on temp. = 524
AUM's (cattle) term	10,653 term AUM's + 14,154 Goosenest AUM's = 24,807
AUM's (cattle) temp	436 temp AUM's + 1,169 Goosenest AUM's = 1,605

ATTACHMENT C

COMPARISON FEDERAL LANDS ALLOCATED TO GRAZING

The following information was taken from the 1957 Siskiyou County Annual Livestock and Crop Report:

Summary - National Forest Grazing
Siskiyou

Total

National Forest		Acres	Head of Cattle	AUM's	Head of Sheep
AUM's *	AUM's				
KLAMATH					
usable grazing acres**		470,000	5,030	17,639	2,000
9,116	19,462				
NFS admin. Private land		1,400			
SHASTA-TRINITY					
usable grazing acres		311,800	997	3,635	5,145
20,760	7,787				
NFS admin. Private land		62,200			
MODOC					
usable grazing acres		58,000	200	850	7,558
18,487	4,547				
NFS admin. Private land		5,120			
private not NFS admin.		2,160			
BLM		78,000	1,500	9,360	5,000
31,200	15,600				
TOTALS					
79,563	47,396	988,680	7,727	31,484	19,703

* 5 sheep equal 1 Animal Unit Month
** Also note that this does not include 18,100 acres of the Butte Valley National Grasslands

CONSTITUTION OF THE SISKIYOU COUNTY STOCK PROTECTIVE ASSOCIATION

Brand Book of Siskiyou County Stock Protective Association, 1898

ARTICLE I

Section 1. The name of this Association shall be the Siskiyou County Stock Protective Association.

Section 2. The objects of the Association are to secure to members thereof mutual protection in their range stock interests, and to further, as far as practicable, the stock interest of this part of California…

ARTICLE III

Section I. It is the duty of each member of the Association to notify his fellow members at once, in all cases, of stock wandering from their proper range, or needing any attention or care; and to heartily co-operate with any like Association that may be found bordering the range.

Section 2. It is also the duty of each member to report to the president of the Association any cases of unlawful altering of brands or marks, or any attempt of anyone to take possession of stock not belonging to him.

(Note: This Association only appears to cover ranchers in the eastern half of Siskiyou County and does not include the Scott Valley and Salmon River areas. Brands were listed by name, post office, customary range, marks and if horses also branded and how. This list includes only names, P.O., range and if had horses – (H).

Beaudroit Bros: Little Shasta; range – Little Shasta and Butte Creek. (H)
John Bloomingcamp: Bogus; range – Bogus (H)
Joe G. Borba: Little Shasta; range – head of Willow Creek
William Bray: Yreka; range – Butte Creek

NAME	POST OFFICE	HORSES	RANGE
Beaudroit Bros	Little Shasta	H	Little Shasta and Butte Creek (H)
John Bloomingcamp	Bogus	H	Bogus (H)
Joe G. Borba	Little Shasta		head of Willow Creek
William Bray	Yreka		Butte Creek
Cassidy Bros	Little Shasta		Little Shasta
Rufus Cole	Coles	H	Cottonwood District (H)
Sam Clary	Hornbrook		Klamath River and Siskiyou Mountain
Geo. Cleveland	Ruby		Butte Creek Valley
J.E. Cooley	Ager		Siskiyou mountains north of Klamath River
Geo. B. Combs	Little Shasta	H	Head of Willow Creek (H)
John Daggett	Bogus	H	Klamath River (H)
H.L. Davis	Little Shasta	H	Little Shasta (H)
W.R. Davis	Brownell	H	Butte Creek (H)
George Deter	Ruby		Butte Creek Valley
Elliot Earhart	Little Shasta	H	Little Shasta (H)

NAME	POST OFFICE	HORSES	RANGE
Life Edson	Gazelle	H	not listed (H)
Fred Evans	Little Shasta	H	Little Shasta and Elk Creek (H)
J.C. Evans	Ruby	H	Butte Creek Valley (H)
Merrill Evans	Ruby		Butte Creek Valley
Jerome Fay	Beswick		Klamath River
Henry Fiock	Yreka		Shasta River
G.W. Ford	Ager	H	head of Little Bogus (H)
Manuel Franklin	Bogus		Bogus
Freshour Bros	Gottville	H	Klamath River (H)
J.J. Garvey	Yreka	H	Greenhorn (H)
Glendenning Bros	Fort Jones	H	no range listed (H)
Chas Haight	Little Shasta	H	Little Shasta and Butte Creek (H)
William Hart	Little Shasta		Little Shasta
A. Heilborn & Bro	Balls Ranch (G.H. Meiss, manager)	H	Butte Creek Valley (H)
F.H. Herr	Ager	H	Black Mountain (H)
William G. Herzog	Bogus	H	Bogus (H)
L. Hessig	Beswick	H	Klamath Rver (H)
Hugh Heyworth	Ruby		Butte Creek Valley
Henry Hogerdone	Montague	H	Willow Creek (H)
David Horn	Hornbrook		Klamath River between Jenny Creek and Hornbrook
J.A. Julien	Yreka		Shasta Valley
George King	Montague	H	Shasta Valley (H)
Dick Kuck	Montague	H	Willow Creek (H)
C.J. Laird	Brownell	H	Butte Creek Valley (H)
John Lennox	Beswick		Klamath River
Walter Lennox	Beswick		Klamath River
William Lennox	Beswick		Klamath River
Andrew McKee	Ruby		Butte Creek Valley
John Maxwell	Ruby	H	Butte Creek Valley (H)
J. Miller & Ed Hart	Little Shasta	H	Shasta Valley and Butte Creek (H)
G.H. Meiss	Ball's Ranch		Butte Creek Valley
D. Mulloy	Bogus		head of Big Bogus
John Neville	Bogus		Bogus
Edw. O'Connor	Little Shasta	H	Little Shasta and Butte Creek (H)
Thos. Orr	Yreka	H	Shasta Valley and Butte Creek (H)
Geo. Otto	Beswick		Klamath River
Chas. Payot	Yreka	H	Butte Creek (H)
Joseph Piper	Humbug	H	Humbug (H)
C.H. Pyle	Gazelle	H	Grass Valley (H)
John Rose	Mayten		(Hand written entry - no range)
J.B. Rohrer	Little Shasta	H	Antelope (H)
T.S. Rowe	Montague	H	Scott Tract land (H)
G.J. Silva	Little Shasta		head of Willow Creek
Joseph Silva	Bogus		Klamath River (Later Ernest Lemos)
R.C. Skeen	Ruby	H	Butte Creek Valley (H)
John Solus, Jr.	Hawkinsville	H	Hawkinsville (H)
Andrew Soule	Little Shasta	H	Bogus (H)
E. Soule	Little Shasta	H	head of Little Shasta And Butte Creek (H)
Ernest Soule	Little Shasta		Little Shasta
H.A. Spannaus	Beswick	H	north side Klamath River (H)
Fred Strofelt	Bogus		Bogus
E.S. Terwilliger	Little Shasta	H	Little Shasta (H)
F.S. Terwilliger	Little Shasta	H	Little Shasta (H)
Eugene Terwilliger	Little Shasta	H	Little Shasta (H)

NAME	POST OFFICE	HORSES	RANGE
Mrs. P.S. Terwilliger	Little Shasta	H	Little Shasta (H)
Henry Truitt	Beswick		Klamath River
William Turner	Ball's	H	Butte Creek Valley (H)
John Varnum	Ruby	H	Butte Creek Valley (H)
R.L. Varnum	Ruby	H	Butte Creek Valley (H)
Tom Wadsworth	Ruby	H	Butte Creek Valley (H)

RANCHING TRADITIONS OF ALTA CALIFORNIA

Source: Robert Glass Cleland; from Wilderness to Empire, A History of California, 1542-1900; Alfred A Knopf, c1944, pgs. 132-137.

"Down to the time of the Gold Rush, the economic life of California centered almost exclusively in the cattle industry. The few hundred head of stock brought from Mexico by the early colonists, multiplied into thousands by the turn of the century. Within another twenty-fife years, hundreds of square miles of grazing lands were required to support the herds of even a single mission. After secularization…the province became a succession of great ranchos whose 'black cattle and beasts of burden' numbered into the tens of thousands."

"Life on one of the great ranchos, followed, in the main, the ancient customs, laws and practices brought to Mexico by the early Spanish conquerors, there adapted to the conditions of the country and thence transferred to California. Stock was grass-fed the year round and ran almost wild on the open ranges…"

"Cattlemen were required to have three registered brands – to fierro, or iron; the senal, or ear mark; and the venta, or sale brand. At least once a year every ranchero held a general roundup, or rodeo, presided over by one or more Jueces del Campo, or Judges of the Plain, for the purposes of segregating the cattle belonging to different owners and of branding the calves…"

"…To keep the thousands of frightened, bewildered and maddened creatures from stampeding, cowboys or vaqueros rode continually about the herd, seeking to hold it together. Whenever an animal broke from the mass, a rider immediately roped him; or, seizing him by the tail, with a peculiar twist requiring both strength and dexterity, threw him heavily to the ground."

"Meanwhile, each owner and his vaqueros rode in and out among the cattle, separating such animals as he found marked with his own brand from the main herd. The question of ownership was seldom a difficult matter because of the brands, and even the unbranded calves followed the cows to which they belonged. As an owner's cattle were cut out from the general herd, they were driven a little distance away, to a place previously chosen, and kept by themselves until the rodeo was ended. Here the rancher branded his calves and determined the number he could profitable slaughter during the coming season."

William Heath Davis in Seventy-five Years in California; (1929), p.40.wrote:

"Money was little known and seldom used in California and almost all business transactions were carried on by barter. Hides, or 'California bank notes', as they were called along the coast, had a fluctuating value of from one to three dollars…Long term credit was extended by the foreign merchant or his agent to the rancheros; and losses on bad debts, except perhaps in those cases where merchants or traders were dealing with one another, were very rare."

Davis described the system (Ibid., p.83.) as follows: "The merchants sold to the rancheros and other Californians whatever goods they wanted, to any reasonable

amount and gave them credit from one killing season to another. I have never known of a single instance in which note or other written obligation was required of them. At the time of purchasing they were furnished with bills of the goods, which were charged in the account books, and in all my intercourse and experience in trade with them, extending over many years, I never knew of a case of dishonesty on their part…"

Source Andrew F. Rolle; California – A History (Second Edition); Thomas Y. Crowell Co., New York; c1969. (pgs. 114-120)

Many of the holdings were at first stocked with horses borrowed from the missions which the settlers returned whenever the increase permitted. In 1840, William Heath Davis, Jr. estimated a total of 1,045 holdings of all sizes. About 800 of these were stocked with an average of some 1,500 head per rancho; about 1,220,000 head of cattle total. The term "California bank note" came to be used widely for a dried steer hide, which had a value of approximately $1.

Cowboys or vaqueros, (many Christianized Indians) were required in large numbers, because of the absence of fences in the territory over which the cattle ranged. "Free-Roaming stock became so wild and fierce that it was unsafe to go among such herds on foot or unarmed; any man who rode the range was as likely to defend himself against savage bulls as against ferocious grizzlies, then often encountered near the mountains."

"The cattle continued to increase so that even bountiful California could not furnish enough pasture in years of drought. It sometimes became necessary for ranch hands to 'cut out' and kill the older animals. The horses too multiplied at such a rate that they often ran wild, so that similar measures were necessary to control them; some met their death by being driven over precipes into the sea and into rivers to drown."

At the cattle slaughtering's, the hides and tallow were taken and a relatively small amount of meat cut into strips for drying. Most of the carcasses were left to be disposed of by Indians, wild animals, or to rot.

HISTORY OF THE "PUBLIC LANDS" GRAZING SYSTEM

(An Industry Perspective compiled by M. Armstrong, Siskiyou County Farm Bureau)

With the 1848 signing of the Treaty of Guadalupe Hidalgo between the United States and the Republic of Mexico, the U.S. claimed the lands within the County of Siskiyou as Territory of the United States. In implementing the provisions established under the U.S. – Mexico Treaty, U.S. land patents would first be awarded in validation of claims of those who could prove ownership under prior Mexican land grants.[1,2] The California Land/Boundary Commission established under the Federal Land Act adjudicated these claims. (No claims were made for lands located within Siskiyou County.)

The 1823 Supreme Court case of Johnson v. McIntosh had also established that continued Indian "right of occupancy" and use of land could only be extinguished by the federal government through conquest, purchase or appropriation.[3]

In addition, federal policy of the time was not to offer for private sale lands chiefly valuable for mineral development.[4,5]

Lands remained within the "public domain" until surveyed and offered for disposal as "public land" under land patent through the agency of the General Land Office (later Bureau of Land Management).

The patenting process is essentially a judgment of the Land Office tribunal serving as documentary evidence that: (1) legitimate national obligations (compliance with international treaties and extinguishment of Indian occupancy) have been discharged so that national interest in the property can be quitclaimed,[6] (2) that all disputes concerning possessory rights have been adjudicated in court[7]; and (3) that statutory requirements of "proving up" and paying claim fees have been met.[8] Once requirements are met by the claimant, issuance of a patent is not discretionary[9], and once a land patent is issued, it stands as the highest evidence of title.[10,11]

As populations poured into western regions in advance of land sales, from one half to two thirds of settlers "squatted", unauthorized on public domain not officially opened as public lands for settlement. At the frontier steadily advanced, there was pressure to reduce the unit size and cost of public lands. Various factions devised land disposal approaches to promote their own interests.

Some favored "distribution" – pricing the public lands at higher levels with returns from sales to be distributed among the States in proportion to their population. Some proposed "graduation and donation" – implementing a gradual reduction of the price of unsold lands at $1.25/acre, then $1, $.75 and $.50, with remaining unsold lands being given away to settlers. Some proposed "preemption" – allowing squatters who settled on the public domain first priority in purchasing the land when it was offered for disposal, or allowing them to "relate back" to their original date of entry in "proving up" under homestead laws.[12] Some favored "cession" – the turning over of unsold lands to the State as a source of income.

Under implementation of pre-emption laws after 1841, speculators hired armies of squatters to pre-empt land, while loan sharks extorted heavy interest to purchase pre-empted farms from the speculators. "Homestead" was perceived as the answer; distributing land to actual settlers in small lots to discourage development of plantation systems. The first Homestead Bill was introduced in 1846 by Felix Grundy McConnell of Alabama. Others followed, largely introduced by Andrew Johnson. One of Johnson's Homestead bills passed the House in 1852, but was never considered by the Senate.

Final passage of the Homestead Act in 1862 permitted any adult citizen or permanent immigrant intending citizenship to claim 160 acres of public land for a $10 filing fee. Patenting of the land was conditional upon 5-10 years living on the land, building a house and cultivating the land; or purchasing outright at the going price ($1.25-$2.50 an acre). The Act did not provide for patenting of tracts larger than 160 acres and was not reauthorized in 1890. Only about one tenth of new farms in the west were actually obtained by homestead.[13,14]

As discussed in Cattle in the Cold Desert, by James A. Young and B. Abbott Sparks, published by Utah State University Press in 1985, the limitation on homesteads of 160 acres was inadequate for a Western ranching operation of the day:

"For example, a hypothetical ranch providing 1,250 pounds per acre of annual herbage shows why 160 acres is inadequate. This herbage is produced from April through August with 80% usable by grazing animals. Each cow needs twelve acres per year (1,250 lb. herbage production X,8 forage utilization = 1 Animal Unit Month or "AUM" per acre x 12 months = 12 acres). This gives the stocking capacity of thirteen cows per homestead, but a ranch could not run just thirteen cows. The herd must have a bull, and two replacement heifers; and, steers are not marketable until three years of age. With a 100% calf crop, the herd would consist of 4 cows (AUM's), 1 bull (1.5 AUM's), 2 replacement heifers (2 AUM's), and 2 three-year-old steers (2 AUM's), for a total of 13 animals. The two marketable steers have a value of $20.00 each after three years. So for the first three years of the five-year (homestead) requirement, there would be a return of $13.33 per year. This hypothetical homestead collapses, because the sagebrush/grasslands communities were not available for yearlong grazing. The 160 acre homestead was an economic and biological impossibility."

It was not until 1877 that the Desert Land Acts (Stat, 377 43 U.S.C.321 et seq.) allowed settlers of arid western lands, such as California, to claim 640 acres of land. In other areas, the Enlarged Homestead Act of 1909 doubled the size of homesteads to 320 acres and in 1916, the Stockraising Homestead Act, (Statutes at Large, vol.39, p.864), increased the size of homesteads in other areas to 640 acres.

California, like almost all other States, accepted the common law of England, so far as not inconsistent with the Constitution or the laws of the State.[15] Until the various enclosure acts in England privatized pasturage, the "common law of grazing" had applied. This recognized that every subject had common grazing rights (pasturage and pannage) upon the "waste" lands of the manor, including woodlands, meadows and all lands not under cultivation. There were two kinds of grazing rights: appendant and appurtenant. Appendant rights pertained only to owners of arable

land, permitting the owner to graze “commonable beasts upon the lord’s waste and upon the lands of other persons within the same manor”. (Commonable beasts were those that manure the ground – horses, oxen and cattle.) Appurtenant rights were general rights permitting owners of hogs, goats and other noncommonable beasts to graze stock on the manor’s lands.[16,17] The common law of grazing was recognized as applicable to the public domain in the United States as late as the 1890 Supreme Court decision of Buford v. Houtz, 133 U.S.618.18.

Free access to open-range was reinforced when the California legislature reaffirmed ranching customs and usages or “laws Concerning Rodeos and Defining Duties of Judges of the Plains,” (Calif. Stats., April 29, 1851, pg.149). The so-called “no fence or trespass law,” required farmers and small private landowners to fence out cattle. (This law is still in effect in many areas of Siskiyou County.)

In addition, State common law provided that an individual could establish a right of possession under color of title good against rival individual claimants through first discovery, location or occupancy and continued use.[19] The right of possession was given recognition by the State Courts as a property right.[20] Possessory rights operated as State law in regard to individual use rights in the land and resources of the public domain. Under English common law, open and notorious possession and use could create “prescriptive” property rights adverse to the ownership claims of another individual, but were ineffectual against superior ownership asserted by the sovereign or king.[21]

Throughout U.S. history of frontier settlement, the question as to whether the federal government, in the manner of the English monarchs, is entitled to immunity from prescription as sovereign has remained a gray area of the law.[22,23,24] The priority of individual possession and use as a basis for the disposal of public land and resources has been recognized in many Acts of Congress, such as pre-emption, homestead and mining/water acts.

According to Elwood Mead in Irrigation Institutions, pp.280-29 (1903):

“There was no law by which men could legally secure control of the land they occupied. All the land laws dealt with farming land. There was no provision for leasing or settling the grazing land in tracts large enough to be of any service. Hence the range stockmen simply took possession of the country. Each man chose a location which suited him, fixed in a rough way the boundaries of his domain, and helped create a public settlement which made it unpleasant, if not dangerous, for a late comer to attempt to share with him the territory he had so marked out. In this way range rights came to have the force of law.”

A land use pattern that developed in Siskiyou County was to settle on the 160 acres allowed through the disposal acts and use unappropriated public domain to graze cattle (“base” and “rangeland”). To anchor control of the land, cattlemen claimed appropriative rights to the use of water sources, maintained by beneficial use through stockwatering, thus controlling all land within stock walking distance.[25,26] (See separate section on Water Use.) This developed into the ranch’s “customary range”, recognized through mutual stockmen’s associations.[27,28] (Please see excerpt from

the Brand Book of the Siskiyou County Stock Protective Association, dated 1898, which follows this section.)

In 1891, the “Creative Act”, “Forest Reserve Act” or General Land Law Revision Act (26 Stat. 1103) was passed.[29,30] The original Act contained no provision whatsoever for forest reserves. It repealed several Acts, including the Timber Culture Act of 1873 and all pre-emption laws.[31] Section 24 that authorized the President to set aside forest reserves was added as a last minute rider to “An act to repeal timber culture laws, and for other purposes” by a House-Senate conference committee.[32] The authorizing clause gave the President the power to proclaim, but lacked any provision for appropriating funds or for the management of any forest reserves. In practice, this meant the reserves were absolutely closed to use.[33] Before expiration of his term, President Benjamin Harrison had reserved almost 13.5 million acres.

“The Organic Act” of 1897 (30 Stat. 34-36; codified U.S.C. vol. 16, sec. 551), amendment to the Sundry Civil Appropriations Act, stated that the purpose of the forest reserves was for watershed protection and timber production. Lands primarily valuable for mineral ores and agriculture were to be excluded from forest reserves.[34] Settlers were allowed to cut firewood, fencing and building material, and mining and prospecting were specifically authorized within their boundaries, but grazing was not mentioned.[35] Less than one month after passage, the General Land Office promulgated regulations that allowed grazing in reserves.[36]

In 1905, Forest Service Officials and representatives from the American National Cattlemans Association (formed of the stockmen who owned pre-existing rights in the forest reserves) met in Colorado. According t Albert Potter, (appointed grazing expert of the Bureau of Forestry in 1901), in “Cooperation in Range Management” American National Cattleman’s Association Proceedings, (c1913) p.55:

“The main points of agreement, worked out by the department and stock organizations, emphasized that those already grazing in the forest ranges would be protected in their priority of use; that reductions in the number of grazed stock would be imposed only after fair notice; that small owners would have preference over large; that only in rare circumstances would the department seek total exclusion of stock from the forest; and that the policy of use would be maintained whenever it was consistent with intelligent forest management. Finally, some attempt would be made to give stockmen a voice in making the rules and regulations for the management of stock on local ranges through the establishment of forest advisory boards.”[37]

The September 15, 1903, Yreka Journal reports: “A.F. Potter of Washington, DC, agent of the Bureau of Forestry arrived Monday. He was accompanied by three field assistants, Mr. Kock, Mr. Wilson and Mr. Patterson. Mr. Potter will remain in the county about a week and his assistants will pass a month here. The objective is to make a complete examination of the county as to suitablility of creating a forest reserve. Mr. Potter passed a good deal of his time with Mr. C.H. Edward of the Forest Reserve Committee and District Attorney Given. The matter was fully discussed and all data prepared by the committee was placed at Mr. Potter’s disposal. He stated that in the creation of a forest reserve the Government would

take in consideration the wishes of the people in the part affected, he further stated worthless land would not be incorporated therein. The commission will make its report to the Secretary of the Interior about February 1, 1904, and the matter will soon thereafter be determined."

On April 26, 1905, the Trinity National Forest was created. On May 6, the Klamath National Forest; on June 2, Lassen National; and on Oct 3, the Shasta National Forest was created.[38]

When the grazing fee was first instituted on the forest reserves, it was often referred to as a property tax. Permits based on a certain number of AUM's (animal-unit-months or the amount of feed required for one cow for one month) had quantified the value of a grazer's pre-existing rights, which was reflected in the grazing tax. The term "tax" was used almost universally in newspaper reports in the west from 1905 for a decade or more. (The notion of grazing taxes is discussed at length in McCarthy Hour of Trial: The Conservation Conflict in Colorado and the West, 1891-1907 pp.161-164).[39,40]

In 1916, to counter assertion of ranchers that they owned their grazing permits, the Forest Service began to refer to grazing permits as only a "privilege" obtained from the Secretary of Agriculture. (See Annual Grazing Report, 1916, Rio Grande National Forest, Sec.63, Region 2, Dr.35, RG95, National Archives.) As a further attempt to discourage recognition of rancher's claims of pre-existing rights, the Forest Service established a permit waiver system, whereby the permit reverted back to the Forest Service upon sale or transfer of the ranch. Although this divested any acquired property rights represented in the former permit, it did not remove transferable pre-existing property rights and priority rights of tenure.[41] The Forest Service then reissued the permit to the new owner as a privilege granted by the federal government, asserting the power to renegotiate the current value of the underlying right by reduction of AUM's or other terms.

In 1934, Congress passed the Taylor Grazing Act (48 Stat 1269, "Act of June 28, 1934" codified at 43 U.S.C.,315 et seq) "to stop injury to public grazing lands by preventing over-grazing and soil deterioration, to provide for orderly use, improvement and development, to stabilize the livestock industry dependent upon the public range." The Act applied to remaining unreserved public domain lands, managed by the BLM, which had not yet been offered for disposal.[42]

The original bill, H.R.6462, that was reported out of the Public Lands Committee, reproduced verbatim in the March 10, 1934 Report No.903 to the Committee of the Whole House, and subsequently approved by the House, included the following amendment: "And provided further, That in such orders, and in administering this Act, rights to the use of water for mining, agricultural, manufacturing, or other purposes, vested and accrued and which are recognized and acknowledged by the local customs, laws, and decisions of the courts, shall be maintained and protected in the possessors and owners thereof, and, so far as it is consistent with the purposes of the Act, grazing right similarly recognized and acknowledged shall be adequately safeguarded."[43]

Despite strenuous objections voiced at Senate hearings by Forest Service Chief F.A. Silcox and Assistant Solicitor Rufus G. Poole for the Interior, the Senate Committee on the Public Lands and Surveys reported out H.R.6462 with the Scrugham amendment and a "do pass" recommendation.[44] (Report No.1182; Calendar No.1258; published May 26,1934.) However, sometime before June 12, the Administration intervened with rejection of the language by Secretary Ickes and a threatened veto by President Franklin D. Roosevelt.[45] Senator Patrick McCarran of Nevada offered replacement language with intentional ambiguity to replace Section 3:

"No permittee complying with the rules and regulations laid down by the Secretary of the Interior shall be denied the renewal of such permit, if such denial will impair the value of the grazing unit of the permittee, when such unit is security for any bona fide loan:"

The new wording effectively meant that grazing preferences and authorized use levels would exist in perpetuity as long as the ranch unit as a whole was pledged security on a loan.[46]

Section III also reads: "That nothing in the sub-chapter shall be construed or administered in any way to diminish or impair any right to the possession and use of water for mining, agriculture, manufacturing, or other purposes which has heretofore vested or accrued under existing law or acquired and maintained in accordance with such law." It establishes that: "Preference shall be given in the issuance of grazing permits to those within or near a district who are landowners engaged in the livestock business, bona fide occupants or settlers, or owners of water or water rights, as may be necessary to permit the proper use of the lands, water or water rights, owned, occupied or leased by them."

Section IV reads: "No permit shall be issued which shall entitle the permittee to the use of such improvements constructed and owned by a prior occupant until the applicant has paid to such prior occupant the reasonable value of such improvements."

1942 U.S. Statues at Large, (Ch.500, 77th Cong. Sess. 2, pp.654-655) amendment to the Taylor Grazing Act states: "Whenever use for war or national defense purposes of the public domain or other property owned or under the control of the United States prevents its use for grazing, persons holding grazing permits or licenses and persons whose grazing permits have been or will be cancelled because of such use , shall be paid out of the funds appropriated or allocated for such project amounts as the head of the department or agency so using the lands shall determine to be fair and reasonable for the losses suffered be such persons as a result of the use of such lands for war or national defense purposes. Such payments shall be deemed payment in full for such losses. Nothing contained in the section shall be construed to create any liability not now existing against the United States."

In McDonald v. McDonald, 302 P. 2d 726, Supreme Court of New Mexico (1956), the 1942 amendment to the Taylor Grazing which required payment for grazing rights taken by the Department of Defense, was tested and upheld.

In 1976, Congress passed FLPMA (Federal Land Policy and Management Act-BLM Organic Act, P.L. 94-579)(90 Stat. 2743, codified at 43 U.S.C.170) “The Congress declares that it is the policy of the United States that the public lands be retained in federal ownership.”

APPENDIX 7 Customs and Culture – Water Use

HISTORY

Early mining often used great amounts of water in various mining practices to recover gold. (See paper on **Water Use in Gold Mining**.) Water also served as a source of power for mining, milling, domestic and agricultural needs. For example, according to the February 6 Yreka Journal, there were 10 water powered sawmills and 5 water powered grist mills in the county in 1878.

In addition, agricultural irrigation throughout the County has relied heavily on the diversion of surface water; often transported through ditches originally built in the nineteenth century; as well as ground water. According to the same Yreka Journal article, by 1878, there were 98 mining ditches of 600 miles in total length; and 20 irrigation ditches supplying 10,000 acres[47] By 1881, there were 250 miles of ditches "of some magnitude" for mining and irrigation in the county. By 1912, 57,000 acres of land were reported as under irrigation in Siskiyou County.

The following are a few illustrative examples of the historic development of water use in Siskiyou County:

Municipal Water Use:

Almost all of the cities in Siskiyou County rely on ground water sources for water; including Yreka, Mt. Shasta, Weed, Etna, Fort Jones, Dunsmuir, Tulelake and Dorris. Some of these cities, such as Yreka, rely on wells that draw from aquifers interrelated with surface water springs or streams, such as Fall Creek. The city of Montague utilizes both the surface waters of Lake Shastina and the Shasta River for its water supply.

POWER DEVELOPMENT:

In the late 1800's, the Dennis's had a ten foot water wheel located beneath a flume. The flume carried water from the Shasta River across the river to their alfalfa fields. Flood gates regulated power for the water wheel which operated grinders for the mowing machine sickles, the butter churn, the cream separator and their saw. The saw had a large "walking beam" connected to a drive wheel from the water wheel. The carriage moved 16 foot logs to the straight up-and-down saw that cut the lumber. Mostly they used it to cut fire wood. In later years a hydraulic ram pumped water to the house.

The first local hydroelectric power plant was built on Shasta River in 1892. In 1902, Edward T. Osborn and Edgar T. Wallace purchased to Quinn Electric Light and Power Co. on Shasta River. Extensive improvements were done and the power capacity increased. Eleven months later, Yreka city gave the company a contract for ten added area lights.

In 1902, Jesse Churchill and Hubert Steele planned to construct an electric power plant at Fall Creek, on the Klamath River. With a drop of 700 feet, they expected to develop 2,000-2,500 horsepower. Land and water rights were secured in May on

Spring and Fall Creeks and the Klamath River. The power plant was situated beside Pokegama's railroad line. In September, E.H. Steele contracted with W.N. Dale of Sisson (later Mt. Shasta) for 1,500 poles for transmission lines from Fall Creek's power plant. The electrical power was intended for use in Siskiyou's mining industries and to electrically illuminate Hornbrook, Montague and Yreka.

Spring and Fall Creeks have their source on a high plateau above the Klamath River, Spring Creek was turned into Fall Creek by a 3,000 foot ditch. A diverting dam across Fall Creek conveyed the collected waters of both streams to the plateau's brink, through a ditch 4,650 feet in length. Much of the distance was cut through solid rock, and 2,800 feet of riveted, 30 inch diameter steel pipe line was laid. Just outside the power house was a cut-off faucet weighing 12,000 pounds. In the steel and iron powerhouse and transformer station was placed the first unit of 4 Pelton water wheels and 550 kilowatt electric generators.

Work crews strung power lines from Indian Creek, Scott Valley, to the Fall Creek base, passing through Yreka in July 1903. On September 12, the company began delivering power over the 50 miles of line completed.

J.P. Churchill (treasurer) and A.J. Roseborough (secretary) of the new Siskiyou Electric Power Co. were in Medford in March 1903 to secure contracts for light and power. In May; the company purchased Ashland's Electric Light and Power Co., to take possession in September. The Siskiyou Electric Light and Power Co. estimated their Fall Creek plant would develop 2,000 horsepower. It also owned 2 miles along Klamath River where 20,000 horsepower might be developed. This was made possible by the Klamath River falling in a short distance of 150 feet.

In 1917, Copco No.1 dam completed, creating a reservoir with 1,000 acre surface and catchment of 77,000 acre-feet. The first generator unit put on-line in 1918 and second in 1922. Their generating capacity was 20,000 KW. In 1925, Copco No.2 hydroelectric plant was put into commercial operation, consisting of a power house and small reservoir, (5 surface acres and containing 55 acre feet).

MINING OPERATIONS:

SALMON RIVER – Placer gold was discovered in 1850 on the Salmon River near Sawyer's Bar Mining. Most of the other important Placer "diggings" were developed soon after. As in other streams in this province, the river bars were first worked by hand methods and later by wing dams and flumes. The bench gravels were eventually hydraulicked or worked by drift mining.

In 1857, about $100,000 was expended for 15 miles of flume on South Fork of the Salmon River. The year was exceptionally profitable due to the low river, affording easy access to its bet with small flumes.

Finley's Flat was a high bar worked by the Salmon River Mining Co. in 1895. The company had a sawmill on upper South Fork of Salmon River and a 7 mile flume and ditch that sliced away several gravel bars on both sides of the river during their 10 years of operation.

Vegetables and orchards at Petersburg were irrigated by the long Frink and Crumbeaugh ditch from South Fork used for mining purposes and to power the Ritner (and Sightman) sawmill in town.

Around 1915, the Farnsworths leased the old Summerville Placer mine (about 4 miles upstream from Cecilville), from Fred Smith and Alex Parker. They dug a new ditch of large proportions by laying a hydraulic pipeline from the upper flume, (leftover from the Salmon River Mining Co. operation), setting up a hydraulic giant and blasting out the ditch with hydraulic water pressure. Hard rock was encountered in constructing the ditch and had to be drilled and blasted. This was done by compressing air by introducing water under pressure into the lower end of a large section of hydraulic pipe, compressing the air therein, and using the same to operate a pneumatic rock drill.

Hardly any rocks, large or small, remain on the surface as they were blasted into and through the traces. The flumes, to recover the gold, then dumped the conglomerate into the river where a tailings giant was set up to blast the tailings away from the discharge end of the flume. Roscoe Farnsworth invented a robot actuated by water power to control the giant.

SCOTT BAR – George Gibbs, in his journal of the Redick McKee expedition, wrote that by October of 1851, almost the entire river from Scott Bar to the mouth was "turned from its bed" with "solid stone or log embankments, several feet in height and thickness," constructed by companies of 10-20 persons. The Shores ditch was built on Scott River to serve water to hand and drift miners. This ditch was later used for a hydraulic giant on the Quartz Hill mine.

By 1855, river bars in Scott River were being heavily worked. The river from Scott Bar to the Klamath, almost a mile, was conveyed through flumes and channels, in which there were many water wheels pumping and creaking away to give access to the river bed. Between Scott and French Bars a coffer dam was built permitting winter work. The Whiting Hill Mine was later worked by the Chinese who built a ditch starting at Thompkins Creek. A water powered sawmill was built (with a saw similar to a cross cut worked vertically on the log) as overland transportation was impossible due to the rough terrain. They built the ditch to the first flume site, floated the lumber down the ditch, and repeated the process throughout its construction.

Mining at Scott Bar in 1861-62 was done with pick and shovel, with pans, rockers and ground sluices. Chinese used derricks to remove and dump the gravel into flumes, then separated it with quicksilver. A large amount of the mining on Scott River was confined to the present river channel, with some later drifting and hydraulic mining by George Nesbit, George Miline and Martin Andrews.

In 1910, Scott Bar (Klamath National Forest) Assistant Ranger, J.B.Johnston reported that the Quartz Hill Mining Co. wanted $5 payment for water used from its ditch to irrigate the Scott Bar Ranger Station during the prior summer of 1909. Supervisor Fromme raised the question that since the ditch crossed National Forest land and since the company was selling water, it should have paid for a special use for commercial conduit. However, the District law officer ruled that since the ditch was constructed before 1891 and had been in use continually each year since, the

company had a legal right of way and no permit was required. The Klamath National Forest paid the $5.

SCOTT RIVER – Wright and Fletcher operated the Jackman Claim in Oro Fino. After nine years of using drain tunnels and drifting, they converted to hydraulic mining The claim had a flume 3,000 feet long of a width of 5 feet and a depth of 34'.

By 1867, Miners' Ditch Co. of Oro Fino was engaged in bringing water from Kidder Creek, 15 miles away. The project would employ 400 additional men upon delivery. Mr. Young was spending $7,000 on a ditch to wash tailings that had been imperfectly washed.

In 1877 Denny & Peterson & Co. installed a flume six feet at the bottom and four feet high at Callahan Ranch. By August, 205 flume boxes were in place. Starting on the South Fork below Callahans and th mouth of Wild Cat to Dredgerville, a number of small rims on the west were mined by the Littlefields, Crawfords and Roche to somewhere above Gasburg/Camp Eden. Prior to that, miners had dug the Fore ditch. A stone dam up Fox Creek, furnished water to the ditch which went around the steep serpentine hillsides below the dam in a four foot board flume and ditch the came out near the top of the hill across the creek from Callahans to operate a hydraulic elevator in 1897, (later the Montezuma Mine).

One of the most significant mining operations to affect the Scott River was dredging at Callahan. Ernest Hayden, in Along Our History's Trail; (P.O. Box 1595, Callahan, CA 96014; c1984), has described the Callahan dredging operations as follows:

> "First the structure and the machinery necessary to dig the gravel, wash it through a trammel screen, and stack the course rock behind it were built upon a floating boat.
>
> "The boat was anchored at the rear by what is called a spud which was raised by a winch and dropped where desired to form a pivot upon which the boat swung from side to side as the dredge performed its digging functions.
>
> The spud was of a weight, length and diameter in accordance with the size of the dredge.
>
> "Its nose was pointed for penetration into whatever it was dropped. When the spud was raised the dredge was pulled ahead by the stern lines to obtain the amount of bite or step desired for each digging arc of the bucket line.
>
> A step was the amount of forward movement and usually was from five to seven feet.
>
> "In the process of "stepping" the digging ladder upon which the bucket line ran was raised to the top of the bank and the bucket line started digging into the ground the desired distance from the step.
>
> "Then the spud was dropped forming the anchor and pivot for the dredge to be pulled to and from the digging arc.

“Then the bucket line was started, and the dredge pulled by the port and starboard bow lines began swinging back and forth. At the end of each swing the digging ladder was dropped sufficiently to fill the buckets on the return swing.

“The dug material traveled up the digging ladder in the buckets to where they were dumped into the washing screen when they traversed the upper tumbler.

“The upper tumbler consisted of a massive shaft on which sprocket projections were a part, which in turn fir into recesses in the bottom of each bucket, thereby imparting the motive power to the bucket chain.

“The gravel then dumped into a revolving trammel screen that was set on about a 12% grade. The screen consisted of perforated plates with holes ranging from 3/8 inch to 5/8 by 7/8 inch oblong holes.

“As the screen rotated, the tumbling gravel and boulders were subjected to a large volume of high pressure streams of water, which resulted in all the finer materials, including the gold, being screened out and deposited in the banks of sluice boxes which recovered the gold, passing the sand and gravel into the pond at the stern of the dredge.

“The courser material from the screen was deposited on the stacker belt that built the rock piles now seen.

This describes one dredging arch or swing. Generally three such arcs were combined to form a wide pond and named from left to right as the port cut, the center cut and the starboard cut.

“The depth was dug to bedrock or below water for which the dredge was designed. Normally some bedrock was dug and can be seen on top of the rock piles wherever bucket line dredges have operated.

“There were three bucket line gold dredges on Scott River in the Callahan region.

“The first one, built before the turn of the century, was a wooden hulled boat. The rest of the construction was of wood also, with the exception of the steel components necessary for operation.

“This dredge was powered by steam engines which gave t sufficient power, but was a failure due to the difficult digging conditions coupled with the lack of alloyed steel which was not available at the time.

“The second dredge was of the same construction as the first one with the exception of the motive of power, which was electricity generated by water power. The water was conveyed around the hillside in a large ditch from the South Fork of the Scott River and brought down the hill to the power plant by a pipeline which developed 350 horsepower.

> "The second dredge encountered the same difficulties as the first one; hard bedrock, cemented or semi-cemented gravel, large boulders and lack of special steel which was not available then.

When the costs outweighed the benefits, the company leased the boat to employees. They broke the intermediate shaft and had to weld it. Some innovations tried were pumping out the pond, dry docking the dredge and then running powder drifts close to the bedrock. They were then loaded with dynamite, the dredge refloated and the holes blasted. Pumping was accomplished by means of a hydraulic syphon. Water for this purpose was taken from the Four (Fore) Ditch. The ditch head was taken out of the South Fork of the Scott River at a location known as Stone Dam and terminated at a point on the brow of Roche Hill. This gave a vertical drop of about 400 feet, when conducted in a pipeline down the steep hill, produced a tremendous lot of power.

Another scheme involved setting up a hydraulic giant and piping into the bucket line of the dredge and washing the material through the trammel screen. The coarse rocks were elevated with the stackers where they were dumped in a large ore car which ran on an inclined track and was pulled by an electric powered winch. Then the dredge powerhouse burned down in 1910. The dredge was dismantled and hauled to Trinity Center.

After a period of prospecting by the Yuba Consolidated Gold Fields, Inc., a dredge was built at Dredge Camp. It was determined that the ground and the bedrock were exceptionally hard in some places so that extra size and strength would have to be built in. For example, while buckets of 9 cubic feet were to be used, they would be backed up with the same structure that was used with 18 cubic feet buckets.

The first operation was to take a sweep upriver ranging from 250-300 feet in width along the westerly side. Then the dredge crossed over to the easterly side and proceeded upstream to the narrows (half a mile downstream from Callahan). Then it turned around and headed back down the valley. The normal operating crew of the Yuba Dredge consisted of three men: a winch man who operated the boat and two oilers, one for the bow and the other for the stem. It operated 24 hours a day, with three eight-hour shifts of three men each.

Designed to dig to a depth of 32 feet below water level, it was able to mine the gravel and some of the bedrock. Usually an amount of bank was maintained above water level. This averaged about 15 feet, so that the total capacity of the dredge averaged about 47 feet. In the later part of 1942, the hull and digging ladder were extended to the bottom the deeper ground that was encountered further down the valley.

Hayden notes: "It was interesting to observe the geologic formation of the river channels in the floor of the valley that had been caused by tremendous flows of water that were present when they were cut in the bedrock of the valley."

"These floods had to be so great and violent that they swept prior gravel deposits out, cutting down to the bare bedrock in order to leave a history of their being there."

"As the ground was dredged, this ancient history unfolded like a map. For example, channels were disclosed in the bedrock that were 300 feet wide across the bottom, while others were as narrow as 10 to 15 feet."

KLAMATH RIVER – The Brass Wire Mine near Cottonwood Creek was opened on a flat by William H. Smith in late 1851 or early 1852. Brass wire was used in guying the huge flume that fed water to the higher portion of the mine. Work followed along the bars and river bed from Camp Lowe to Ash Creek using wing dams and current wheels and by tunneling out under the river.

Some of the later century wing dam operators at Hamburg were Bill Kettlewood, Tom Miner, Bill Offield, Ben Maplesden, Martin Andrews and Green Hicks. There was also some drifting and hydraulicking at Hamburg by Maplesden and sons.

An 1878 survey of mining operations on the Klamath River suggests the extent of mining and mining water use in Siskiyou County:

About 3 miles downriver from Hamburg, the Cap Lowden hydraulic mine and the Johnnie Oneil placer used water from the Johnnie Oneil Creek. Across the river was the Maplesden Mine, securing its water from "Nigger Creek". The next mine was the Johnnie Everill hydraulic mine, opposite the Ladd Chrome Mine (6 miles above Seiad). East of Seiad at Walker Bar, 2 companies of Chinese mined with derricks. On the south bank, J.S. Lowden operated a hydraulic mine with water from Walker Creek. Across the river, the Lee Yet hydraulic had a crew of 25 Chinese, operating 2 hydraulics day and night 7 days a week for several years. They used water from Seiad Creek.

About 2 miles downriver on the south bank was the W.T. Grider and Sons Placer Mine near the banks of Grider Creek from where the mine and farm derived its water. Two hydraulic giants were operated. Also, the Masonic Bar Mine used Grider Creek water. This was operated by Chinese with derricks. About a mile further down was the Portuguese hydraulic mine owned by James Camp and Charles Bailey. Across the river was the Hoskins Bar Mine operated by the Chinese. This was a pick and shovel operation using water from the Klamath by means of a dip wheel 20 feet in diameter.

The hydraulic mines from Seiad to Happy Camp and on down the Klamath mined ancient river channels located on mountain slopes above the present river. Up to three channels were existing, each cutting to the one below. Most of the mines had 2 of these channels.

The Ft. Goff mine owned by James Camp, William Wood and Charles Bailey used water from Ft. Goff Creek to operate hydraulic giants. Thompson Creek fed the Minetta B Placer Mine and the Seattle Placer Mine. Water for hydraulics at the Minetta B was carried over a suspension bridge by means of a 20 inch pipe across the bridge and into the mine. About 7 miles below the Seattle, the Joe Reeve placer mine used water from China Creek for its hydraulics. Below this mine, the river passes through a gorge and the gravel deposit is not visible until the river widens again.

About 2 miles downriver was the Silva and Lee, using water from China Creek. The Williams Point or Jones Hydraulic carried water from China creek over a bridge across the river by means of pipeline to the mine. Another 2 miles downriver was the Gordon hydraulic using water from “Nigger Creek”. The Muck-a-Muck or Minnie Reeve hydraulic mine used water from Cade Creek near Happy Camp. The Richardson Mine across the river was the largest hydraulic in the district. The water was derived from a 12 mile long ditch from Elk Creek.

Other mines in the Happy Camp area were the Classic Hill hydraulic up Indian Creek. The Van Bruant, Smart, Lee Grider and the George Temple. Below Happy Camp old hydraulics included the Siskiyou, Wingate, China Ock, Heal Bros., Ferguson and Frazier.

By 1915, extensive hydraulic mining was still being conducted at Happy Camp and Forks of Salmon. From the turn of the century, dredging companies became active throughout Salmon and Scott Rivers and their Tributaries. One Yuba type dredge running 24 hrs./day near Callahan on the Scott River (until 1949) dug to a depth of 50-60 feet below the water line; processed 210,000 cubic yds. Of soil and gravel per mo.; and use 10,000 gal./min. pumped from a pond to wash gravel through screens.

SHASTA RIVER – Water was scarce at the main mining area on Yreka Flats and was necessary to wash the gold from the dirt. The only local streams that could be diverted at the necessary elevation were of intermittent flow. Seasonal water became scarce to work the mines and carts were used to transport pay-dirt to the creek to wash out gold. District meetings were held in 1852, and the “Big Ditch” project was born. The ditch was to run from Shasta River and Parks Creek descending from an elevation sufficient for a running grade to Yreka and Hawkinsville. When completed, although the source of inflow was thirty miles from Yreka, it was to run 96-100 miles in length.

During the course of construction, the Yreka Ditch Co. ran out of finances. After one failed attempt at reorganization, the workers took over the Yreka Water Co. “Father” of the ditch, Louis Wortman, organized the workers on the basis that they would be paid from “first water” upon completion and would lose what was owed them if the project was never completed. Wortman received ¼ interest in the ditch for his efforts upon completion and was later in charge of its operation and maintenance as Ditch Supervisor.

The “Big Ditch” was completed in the Spring of 1856, at an average grade of 2 inches to the hundred foot, and cost of $2,500 a mile. Many miners were paid for their work with script to be reimbursed with water for their claims, when available. Supplies were furnished by Yreka merchants, including food and clothing for the workers. The value of these was to be reimbursed at a rate of $2.50-$3.00 a day from the sale of water when the project was completed.

At completion, the company sold the water to the miners on Greenhorn, Yreka Flats and Hawkinsville. The rate charged was 50 cents per miner’s inch per day and water recovered after first usage was resold at the same rate at lower levels. Ditch tenders were paid half in cash and half in water.

Physically, construction of the ditch was begun in 1854 and completed in 1856. Blasting powder was available, but very expensive, and had to be brought in by mule-back. A great deal of the “blasting” was done by building fires on the rocks and dashing cold water on them. It took from March to August of 1856 to get water to Yreka Flats, due to squirrel holes, leakage, etc.

Flumes were originally used to by-pass many rocky points. Lumber theses was cut by Maxwell Sawmill near the head of the Shasta River. All but two of the wooden flumes at parks Creek and Harding Gulch were eventually replaced by cuts. Later, in 1949, the remaining wooden flumes were replaced by half round metal ones.

In addition to the Shasta River and Parks Creek, water was taken from Willow Creek, Mac’s Gulch, Scarface, Cram Gulch, Guy’s Gulch, Yreka Creek, Greenhorn Creek and Hamburg Gulch. The carrying capacity of the “Big Ditch” was approximately 1,400 miner’s inches from Shasta River and Parks Creek, and about 1,900 inches for the rest of the ditch.

Only two developed water rights preceded those of the “Big Ditch” and had priority: Long Gulch by John Neilon and “Doc” Williams (later the Caledonia) ranch. The “Big Ditch” had priority water rights to every other stream from its head to its end. Other very early irrigators were N.H. Eddy, (the property later owned by Dwight Hammond); Bob Mills on Carrick Creek on the Mills Ranch; a man named Decker and Sam Jackson on Carrick Creek; Huseman, east of the modern town of Grenada; and property owners on Big Springs (later owned by Ellis Louie). There were numerous early irrigation ditches in the Little Shasta are including Terwilligers, Harts, Martins, Davis, Long and others.

The height of the ditch above the rest of the valley made it possible for four other ditches to receive water from the main feeder ditch. As the ditch came around the hill west of Grenada to the farms on the west side of Yreka Valley, it was divided into laterals: the Greenhorn Ditch, Egbert Ditch, Portuguese Ditch, and Cranson Ditch. Farmers adjacent to the water planted apples, peach, pear and plum orchards, also vineyards and alfalfa in order to get the benefit of the five ditches.

According to Frank Herzog, the Greenhorn Ditch was primarily used for mining, taking water out of Greenhorn Creek about one and a half miles up Greenhorn. To preserve water along Greenhorn Creek, a series of reservoirs and dams were built to use and re-use the water. Settling ponds were built the full length of the creek, otherwise when the water got down to the last mine; it was so full of sediment it would hardly flow.

Middle Greenhorn Ditch Company, (M.G.D. – also known as Sproll or China Ditch Co.), formed to bring Greenhorn water through a gulch on the left to Yreka Flats to work claims. Gold was subsequently found in quantities below the ditch. During the summer, the M.G.D. Co. appropriated most of the water and little was left to serve the new claims. The new miners claimed the water should be allowed to run in its natural channel and cut the ditch in 1855. The ditch owners repaired it and petitioned Judge R.L. Westbrook for an injunction restraining diversions away from the ditch. The ditch was cut again by Robert Wilson who was arrested. The miner’s raided the

jail and freed the prisoner. Citizens confronted the mob. Shots were fired and there were some deaths. The incident was called the “Greenhorn War”.

Litigation continued for a number of years until it was finally resolved. The decision was that the ditch company was entitled to as much water as the original capacity of the ditch and the balanced belonged in the stream. Many court decisions regarding early water disputes in Siskiyou County are said to have helped to for the California “Doctrine of Appropriative Rights”.

The Egbert ditch headed at the bridge at the foot of Miner Street and traversed down along Yreka Creek to the rear of the Yreka Motel between the main motel building and Mr. Young’s home on Main Street, down Main on the east side in front of Major White’s home and across Lennox Street about opposite the State Highway Patrol office and thence to Hawkinsville.

The Portuguese ditch came out of the main Greenhorn Creek on the Ned Schwatka place a short distance above the sawmill of Sharps at the west turn up Greenhorn Road and meandered around through the west side of the valley on to Hawkinsville. It was used for irrigating and mining its full length. The last owners of the ditch were Henry LeMay and Mr. N. Lawrence.

The fifth and last of this system of ditches was the ditch that runs in the hills on the east side of Yreka valley to Hawkinsville and was used to mine in Yreka Creek bed near Hawkinsville. The Yreka Creek Drainage Co. had nearly completed their 1,600 foot tunnel along Yreka Creek Channel to their claims in 1863 and were supplying water to the Hawkinsville ditch. More than 1,000 claims had been recorded.

In 1857, S.S. Brooks, William Shores, J.B. Rosborough and I.H. Russell incorporated the “Shasta River Canal Co.” to take over the “Yreka Water Ditch Co.”. In 1859, George Greathouse purchased controlling interest in the “Shasta River Canal Co.”. Greathouse was a Yreka banker and a Southern sympathizer who outfitted a couple of frigates for the Confederate Navy. By that time, the Edson brothers and their sister, (active supporters of the North), had acquired considerable property under the ditch in Gazelle. This caused considerable friction.

Heavy storms in 1862-63 destroyed flumes and miles of ditch. After borrowing from N.D. Julian to repair, Greathouse went broke. The new owners instructed Wortman to turn the water out at Willow Creek when there was a break north of that point. This benefitted the Edson Bros., Neilon and Farraher in Gazelle, creating good will.

The Big Ditch still continued to supply water for mining on flats an gulches between Yreka and Shasta River in 1879. A reservoir was built on the Ream property about 4 miles south of Yreka and a lateral built to the east of Yreka. (A flume across the road and railroad on Butcher Hill were still in evidence in the 1920’s). The reservoir, (which now obtains its water locally), was known as Brazie’s pond.

In 1884,m the “Big Ditch” (including L. Wortman’s ¼ interest) was resold to Life Edson, Lewis Foulke and Lewis Webb. All had extensive farm holdings a few miles north of Gazelle. After acquisition, a weir was installed south of Gazelle, measuring their respective shares of water. Excess was dropped off the hill into what was later

known as the Webb or Company Ditch. After the ditch was purchased, all of it north of Gazelle was abandoned. This made a great deal of difference to the ground water table in that area and more water was available for irrigation.

The remaining portion of the ditch ran along a 15 mile stretch from the Shasta River to the weir, with about a four mile stretch used to convey Willow Creek water to farms west of Gazelle: Farraher-Wortman Ranch and part of the original Edson Bros. property, later Dan Shelley ranch). The Webb property was eventually sold in 3 parcels and water divided on a rotation basis. The Edson Bros. subsequently became Edson & Foulke Co.

According to an article entitled "The Big Ditch" in the 1960 The Siskiyou Pioneer, pages 47-50, written by Lewis M. Foulke, James Farraher and Edson L. Foulke, Jr.; in 1942, Edson & Foulke Company was dissolved and its properties at Gazelle were sold to various interests. Eight different parties held interests in varying amounts in the waters conveyed by the ditch. By 1949, it was obvious that major repairs to the ditch would have to be made. In order that these repairs should be equitably borne, an agreement was drawn up by the various interests, holders forming the Edson Foulke Yreka Ditch Company, the title being taken from that given in the adjudication. Clarence Dougherty was elected President; Edson Foulke, Jr., Secretary; and Glenn Maxwell, Ditch Master.

Soon after the formation of this ditch company, an extensive series of improvements were started. The two remaining wooden flumes were replaced with metal, diversions were built and measuring weirs were established at various points. In 1950-1951, Dan McCaw was employed to widen the ditch from Parks Creek to the weir, where it leaves the mountain. This portion of the ditch was located on steep mountainside and the lower bank, after nearly a century of usage, had become quite weak. McCaw rebuilt this portion with a power shovel, greatly increasing the safety factor.

NOTE: In the early 1900's, prominent local attorney James Farraher, step son of Louis Wortman (Ditch supervisor and "father" of the Big Ditch/Yreka Ditch/Shasta River Canal/Edson-Foulke Yreka Ditch), was largely instrumental in obtaining passage of the California Water Act providing for adjudication of all water rights upon a stream system and provisions for water master service. Water disputes over the ditch had been marked by gunplay. Prior to this time there was at least one authenticated instance of a water dispute involving the ditch being temporarily settled with a shotgun. An attempt to dynamite, by rushing in and disconnecting the burning fuse. Innumerable lawsuits drove many farmers to discouragement and some in to bankruptcy, but only settle matters between the litigants involved and settled nothing in so far as other water users on the same stream were involved.

AGRICULTURE:

SHASTA VALLEY- *(Big Springs)* Around 1870, August Louie and Joe Rose were told by an Indian worker of good farming land with plenty of water, Big Springs. Even though it had an abundance of water, it had to be pumped on the higher ground surrounding the springs. At the most promising spot on Big Springs Creek, down from the springs themselves, they found two men who had made a dam and some

ditches and were trying to farm – (one of these was Robert Young). They paid the men $100 a piece for their squatters' rights. Rose and Louie started to homestead 80 acres each, but were allowed to double that acreage to 160 each before they "proved up".

Rose and Louie settled below a tule swamp with springs flowing through lava faults. This swamp drained into the Shasta River through what was later named Big Springs creek. Rose and Louie built a dam above the original squatter's dam and this was how Big Springs Lake was formed. They divided the water from the Big Springs Lake by one using it for three days and then the other for three days.

John Rose worked some land next to his brother, Joe Rose. In the early 1870's he built a water wheel to irrigate his garden and a little pasture. The water wheel operated by the force and weight of the stream and served as an irrigation "pump". The wheel was used until about 1920 and had been rebuilt at least twice.

More than 1,500 gallons per minute gush from Big Springs to fill the lake. Speculations about the source of the water are that they are fed from Mt. Shasta show fields or Grass Lake.

In 1884, Edward M. Stevenson also settled in Big Springs. Bill Burns had been squatting on 160 acres of land, planning to homestead. Burns had dug 11 wells and had hit only rock. Stevenson bought Burns cabin and rights for $15 and a silver watch. He dug a well and hit water at 27 feet, going to 40 to ensure a good supply. The farm was sold in 1913 to the Mt. Shasta Land and Irrigation Co. (Grenada District).

In 1912, Jim Burns, Bill Wilson and Edward Stallcup formed a corporation known as Edward Stallcup and Sons, Co., Inc. The Stallcup's had cleared many acres of land, some of which was sold to the Big Springs Land Co. (later the Ted Kucera, Houdeshell and George Leal places). All of these places were irrigated from the Big Springs Lake through the Stallcup pumping plant and ditch at 6.2 cubic feet per second. When land was sold to the Big Springs Land Co., the water that was formerly used on these places was diverted to the Stallcup place.

In 1915, a promoter named Harlow and Dr. Dwinnell of Montague developed water from a dozen wells near Big Springs to irrigate 10,000 acres. This was known as the Big Springs Irrigation District. (According to the 1991 Klamath River Basin Fisheries Task Force or KRBFTF Long Range Plan For The Klamath River Basin Conservation Area Fishery Restoration Program. In 1915, the Montague Land and Irrigation Co. pumped water into its ditches through two centrifugal pumps lifting 16,840 gallons per minute to ditch heads 86 and 107 feet above, to be released onto 5,000 acres of adjacent lands. Water from a dozen wells near Big Springs irrigated another 10,000 acres.

Dr. Dwinnell sold his interests to partner Harlow and associates and took over the Montague Land and Irrigation Co. plus the Cricket flat area. Harlow took over the Big Springs or "Juniper" operation and promoted another pumping irrigation system under the name of Mt. Shasta Land & Irrigation Co. to irrigate the land south of Grenada. Later this was called the Grenada District.

Harlow and Dwinnel had originally bought out old pioneer settlers in Big Springs who had partially cleared juniper trees and brush by hand by digging and burning stumps for grain farms. They brought in 2 Holt Caterpillar 60's and began to clear sage and brush. Leo Brown was awarded the contract to pull out the trees there and cleared about 3,000 acres. Only 2,000 of these had been irrigated by 1960.

In 1917, the Big Springs Land and Irrigation Co. drilled 4-5 pipe-lined wells at the edge of Big Springs Lake in an effort to develop more water. Prior to this, the water flowed evenly into the lake from the cracks in the lave rock. The "new" water bubbled up over the tops of the pipes giving an artesian effect, however the actual flow of water did not increase. (In years later when the level of the lake was dropped so that the Louie brothers could repair the head gate in the dam, the water quit bubbling. When the lake went back to its normal level, the bubbling recommenced. This proved that the effect was caused only the pressure of the water in the lake.)

(MONTAGUE) In 1913, promoters Harlow and Dr. Dwinnell developed a pumping irrigation system to irrigate 3,000 acres of land lying south and west of Montague and named it the Shasta River Water Association.

In 1923, the Montague Water Conservation District Obtained a permit for 55,000 acre feet per season from Shasta River (reservoir and canal); and 15,000 acre feet per season from Parks Creek (canal).

In 1925, The Montague Water Conservation District was formed by the voters. The district embraced approximately 23,000 acres of land, mostly north and east of Montague – (although only approximately 15,800 acres are being served with water, including the city of Montague). The district hired John Beemer as engineer and presented a plan that included creating a 60,000 acre reservoir on the Shasta River and the diversion into the river of Parks Creek upstream from the dam. The plan also included a 21 mile main canal and about 55 miles of laterals and a smaller reservoir on a hill about 5,000 feet east of Montague to provide the city with water.

Examination of the reservoir site disclosed no faults or fractures that might cause leakage. A Professor Anderson footnoted the report with the statement: "I have never seen, nor can I see, any reason for doubting the adaptability of the reservoir site you have selected, or the adaptability of the formations underlying or surrounding it, to retain water as well as any other…"

The cost of the dam was estimated at $1,395,000. Sutherlin, Barry and Co. bought the bonds at .90 cents on the $1.00. Nevada Contracting Co. was selected as the builder. Mid-way through completion, the buyer of the bonds ran out of money and a New Orleans bank furnished funds for completion. Construction was completed in 1927.

With the dam, ditches, city reservoir etc., completed, it was then discovered that the lava formation behind the dam would not hold water. The water sank, and either appeared on the John Soule ranch or went underground in the aquifer. The Montague Conservation District went bankrupt. The Montague Banking Co. became involved and had to close its doors in 1933. Many businesses and stores closed and

were sold for little or nothing. Although the bond holders were restrained under a government moratorium from foreclosing, landowners and homeowners became encumbered with heavy debt.

In 1940, the district directors grappled with a debt of the original bond of $1,395,000 plus interest and penalties – amounting to a total of $3 million. An effort was made to work out a settlement with New Orleans and St. Louis bond holders (represented by Buell and associates). Montague voters and City Council members made an unsuccessful attempt to halt the deal in favor of a more costly federal payoff plan. A settlement was finally made with the bond holders in 1943 to take $.10 on the Dollar, plus an additional $25,000. The debt was assumed by individual property owners, some of whom paid off their indebtedness while others allowed their property to revert to Buell and associates. A final agreement was made in 1955 that allowed the district to apply for discharge from bankruptcy.

Over the years, natural processes “sealed” the permeability of the structure. As flood waters poured into the reservoir, soil and debris were deposited increasing its storage capacity. The reservoir has a surface area of 2.85 sq. miles, a mean depth of 22 feet and a maximum storage of 41,300 acre-feet. Water is conveyed from Lake Shastina through the district’s canal to its service area, about 15 miles north. The Montague Water Conservation District provides water to about 11,000 acres of the 48,000 acres of irrigated farmland in Shasta Valley from its reservoir, Lake Shastina.

OF SPECIAL NOTE: An unusual irrigation system, in place by 1873 at Forest House, was created from a major pipe line constructed of logs laid underground for ¾ of a mile. A 4 ½ inch bore was made through the logs by machinery run by horsepower. The logs were driven together and banded with iron rings. At the end of the pipe line, a fifty mile ditch system conducted water to all parts of the farm and to a reservoir used for cutting ice in the winter.

In 1874, on F.J. King’s ranch, (5 miles south of Yreka on the Shasta River), salt was manufactured at King’s Salt works. An artesian well was bored to a depth of 675 feet. Flow from the well yielded 334,626 gallons of water every 24 hours. Greater depth was sought to obtain water carrying a higher percentage of salt. The water was passed through a succession of settler and evaporation vats, over a long willow and brush basin and into cauldrons where it was boiled into salt.

In 1938, Lewis M. Foulke had a valuable crop of sugar beet seed growing in a dry year. Three pit or trench wells were put in to augment the water. Subsequent to this, numerous pit wells were established including: Edson Foulke, Whitsett and Owsley of Gazelle; Timmons and Bruinsma south of Grenada; Ralston’s and Giger’s east of Grenada. The pit wells, combined with trenches, served both as irrigation and drainage.

According to the KRBFTF (citing C. Ferchaud personal communication), in 1970 , the California Department of Water Resources estimated 130,300 acre feet of water was applied by agriculture in the Shasta Valley to irrigate 48,800 acres; 1980 – 146,100 acre feet of water to irrigate 45,800 acres; 1985 – 144,000 acre feet of water to irrigate 46,500 acres; and 1988 – 150,500 acre feet of water to irrigate 50,000 acres.

THE SHASTA RIVER WATER USE RIGHTS ADJUDICATION –
On February 15, 1928, an adjudication of water rights on the Shasta River and tributaries was decreed, entitled "Oder Determining and Establishing the Several Rights by Appropriation to the Use of the Waters of Shasta River and its Tributaries", (Book 1 of Orders of Determination, page 117). A water master service was set up. Prior historic agreements between individual landowners were incorporated into the adjudication.

According to the decree, beneficial uses were established as domestic, municipal, mining, power, stockwatering, irrigation of described lands and winter impoundment in reservoirs to be utilized for these same beneficial uses.

The stream during irrigation season (March 1 – November 1) was been divided into 10 systems, considered unrelated to other systems: 1.) Shasta River above its confluence with Big Springs Creek; 2.) Boles Creek and tributaries; 3.) Beaughan Creek and tributaries; 4.) Carrick Creek and tributaries; 5.) Parks Creek and tributaries; 6.) Shasta River below confluence with Big Springs Creek and Big Springs Creek and its tributaries; 7.) Little Shasta and tributaries; 8.) Willow Creek and tributaries; 9.) Yreka Creek and tributaries; and 10.) Miscellaneous Independent Springs, Gulches and Sloughs (includes Ellison, Fiock and Garden springs; Inconstance Creek; White, Kiernan, McCloud and Orr sloughs; Schulmeyer, Guys and Hanly Gulch.

The decree states: "Each of the units can be administered more of less independently of the others during the low flow or critical period of each season, therefore the rights in each unit have been grouped together as shown in said tables." Each of the 10 systems has been adjudicated as a separate unit as to relative priorities of water rights users on that system during irrigation season. The earliest right dates to 1850, although there are a great number dating back to the 1850's, 1860's and 1870's.

Rights to the Shasta River and Parks Creek for what remained of the "Big Ditch" at the time, (titled the "Edson-Foulke Yreka Ditch"), were set at 28.2 cubic feet per second and 9.9 cubic feet per second respectively. Provision was also made for transporting water in minor quantities form the source to a couple of other ranches were traversed by the ditch.

A separate section ranks the priority of appropriators to the use of the Shasta River and its tributaries during non-irrigation season. This includes, domestic, municipal, stock watering, mining, power (such as used for flour and lumber mills and by the California Oregon Power Co.), alternate supplies of water and winter reservoirs.[48]

Some water use rights were licensed subsequent to the adjudication. The Shasta Valley Wildlife Area (SVWA) managed by the California Department of Fish and Game has nine state licensed water rights, (#5066 A/B dating back to the mid 1940's-1950's) obtained with the land purchase of the former Whiskey Lakes Ranch. Water rights originate from the Little Shasta River. Their stated beneficial uses are irrigation, stock watering and recreation. Cereal crops are grown on the refuge for the benefit of migratory birds and wildlife. Pasture is leased for grazing. Although recreational uses are occurring on Bass and Steamboat Lakes, Trout Lake is

maintained as a permanent wildlife sanctuary with no public access. The DFG has stated its intent to apply for a change in use to establish ponds and recycle irrigation tail water.

Approximately 5,840 acre feet of water may be stored in the three off-stream man-made reservoirs (Bass, Trout and Steamboat Lakes), during the winter from November 1 to April 1 (Ma1 for Steamboat Lake). Up to 9.6 cubic feet per second (cfs.) of water may be diverted year-round to irrigate the pastures north of Bass Lake, however, this is subject to release of 2 cfs. of water for superior downstream water rights during irrigation season. An additional 6 cfs. may be diverted from March 1 to June 1 to irrigate the pastures west of Trout Lake.

According to the Shasta Valley Wildlife Area Management Plan, a Chinook fishery does not occur in the Little Shasta River and it would not be possible to establish steelhead runs. Warm water angling opportunities are maintained in Bass Lake on the refuge for public recreation. Other recreational opportunities identified are fall waterfowl and dove hunting, dog training, photography, wildlife viewing, nature study and educational activities.

SCOTT VALLEY – Many of the extensive irrigation ditches is Scott Valley had also been developed for mining purposes. For instance, in 1868, the Miners' Ditch Co. of Oro Fino brought water from Kidder Creek, 15 miles away. In addition to mining, the Kidder Creek ditch irrigated five ranches east of Greenview and five more at Oro Fino.

Another ditch built in Scott Valley was the Wolford ditch, built around 1867, which served a number of farmers on the east side of Scott Valley between Etna and Callahan. Known as the "company" or "farmers" ditch it was jointly owned by nine ranchers.

In 1920, the Scott Valley Irrigation District was formed. This irrigated approximately 5,000 acres. There were numerous other ditches on the west side of Scott Valley, Quartz Valley and Ploughman's Valley.

As a 1971 Memorandum from George R. Baumli of the Department of Water Resources, Scott Valley has been historically subject to periodic flooding. "The principal flood areas of the valley are along the Scott River, over the debris cone of Kidder Creek, and along Moffet Creek on the Valley floor. Minor flooding occurs on the average of once every three years and the most recent major floods occurred in 1955 and 1964…"[49]

An August 10, 1938 Western Sentinel reported; "The Bureau of Rivers and harbors, with the U.S. Army Engineers is clearing the rivers throughout Scott Valley of debris from floods and started this week on the Scott River." The work was supervised by Roscoe C. Hilderbrand of Richmond. The article states Hilderbrand "has been doing nine miles of work on the Shasta and Humbolt Rivers and at Hornbrook. This is flood control work and is sponsored by the government." The work was being done with a 40 "A.C." and a 60 Caterpillar tractor, each equipped with a blade.

According to O. Lewis of Scott Valley, they removed vegetation along Scott River between Horn Lane and Meamber Bridge, straightened the channel and constructed dikes. This sped up the speed of the water and the erosion. Many methods were employed over the years to control the Scott River. Pilings were driven by hand to make jetties and revetments. Trees by the hundreds and rocks were piled to prevent soil loss. The pilings rotted, they trees floated out of place and the rocks rolled into the river bottom.

After a destructive flood in 1964, the U.S. Corps of Engineers did post-flood debris cleanup and levee restoration work. In this, and prior post-flood reports, the Corps determined that none of their flood control projects were found to be economically justified.

The KRBFTF Long Rage Plan, citing a CDWR 1963 report, states that in 1958, CDWR estimated 118,200 acre feet of water was applied by agriculture in Scott Valley to 31,300 acres through 240 miles of ditch and pipelines by about 200 diversions. Considerable acreage was sub-irrigated or dry farmed. The Plan, citing C. Ferchaud – personal communication, states that in 1970, CDWR estimated 92,400 acre feet of water was applied by agriculture to irrigate 31,500 acres; 1980 – 98,700 acre feet of water to irrigate 33,500 acres; 1985 – 97,600 acre feet of water to irrigate 33,600 acres; and 1988 – 96,400 acre feet of water to irrigate 34,100 acres.

Based on periodic land use surveys, (CDWR 1965; CDWR 1993), the amount of irrigated farmland in the valley has not changed significantly since 1958.[50] A U.C. Extension Services study of CDWR photographic records of both the Shasta and Scott Valleys in 1958, 1968, 1978 and 1991 show no appreciable gain or loss in lands under cultivation or in pasture over time. Cropland in alfalfa increased slightly and grains decreased. Lands under cultivation seemed to have reached their peak in 1968 and decreased slightly since then.

DWR Bulletin No. 83, “Klamath River Basin Investigation”, July 1964, evaluated five potential surface water storage projects (including East Fork Scott, French Creek, Kidder Creek and Moffet Creek) and ground water development, concluding that ground water development would be cheaper. The study estimated that development of the ground water would yield approximately 50,000 acre-feet per year.

A 1971 Memorandum from George R. Baumli of the Department of Water Resources analyzed and reported on the results of 1970 field studies in Scott Valley. The report projects an increase in population from 3,000 in 1970 to approximately 5,000 in 2020; with domestic water use projected to increase to about 2,000 acre-feet per year in 2020.

Agricultural use in 1970 was about 112,000 acre-feet per year of surface water and 5,000 of ground water, for a total of 117,000 acre-feet annually for irrigation of 32,000 acres. The report projected that agricultural use in 2020 would be approximately 147,000 acre-feet per year, with the additional water being used to irrigate lands already under partial irrigation and to develop lands not yet under irrigation.

Following a petition to the State Water Resources Control Board requesting a statutory adjudication of the water rights in the Scott River Basin by the Scott Valley Irrigation District, the DWR concluded that an increase in the number of pumps in the river and pumping from shallow wells near the river (that draw directly from the Scott River) had caused the demand for late summer water to exceed supply.

Comments made by the California Department of Fish and Game in connection with the filing of the 1974 adjudication "Notice of Intent" included the following:

"Many of the methods and extent of diversion and irrigation currently in practice in the Scott River Basin have a large degree of incompatibility between agriculture and fisheries. The flows required to maintain fishery values and support heavy agricultural diversions clearly are not in the system during the latter part of July, August and often in September. Many of the streams would have critical level flows (less than minimum) during this time even if no water was diverted."

Problem sections of the stream noted for going dry or intermittent flows during the summer months: (1) Scott River at river mile 50 for 1-3 miles below the diversion ditch; (2) East Fork Scott River below diversion dams; (3) Etna, Kidder and Patterson Creeks over several miles of lower reaches; (4) Sniktaw and Shackleford Creeks near mouths; (5) Patterson Creek (near Member Bridge) and Indian Creek; (6) Moffet Creek.

The 1971 Memorandum stated that diversions existing at that time "use all of the summer flows of the Scott River. Many ranchers must stop irrigating their pasture during the late summer due to lack of water in the river and its tributaries. If additional lands are to be irrigated or if more water is to be used on presently irrigated lands, new water supplies must be developed….The least expensive and most easily developed source of additional water supply is the ground water basin. Relatively little ground water development has occurred in Scott Valley, but as water demands increase this source of supply should receive additional use." The 1971 report concluded that "Scott Valley has more than enough ground water to supply both the irrigation and domestic needs through 2020".

The 1971 Memorandum described the Scott Valley ground water basin as underlying "approximately 40,000 acres of relatively flat valley land stretching from the lower end of the dredger tailings near Callahan to the mouth of the valley. The average depth to the water table is ten feet and the average saturated thickness of the water-bearing formations is approximately 90 feet. The total volume of water stored in this formation is estimated to be about 400,000 acre-feet. Usable storage capacity would be influenced by the economics of pumping from various depths and by the volume of ground water which could be annually recharged by precipitation and stream flow. Also, a significant lowering of the existing ground water table would necessitate surface diversion or pumped irrigation to lands now receiving subirrigation from ground water. Existing wells in the area average 25 feet in depth and would become inoperable if future ground water development drew the water levels below this depth…No estimate of total safe annual yield from the Scott Valley ground water basin has been made."

Until the late 1960's, agricultural water was mainly derived from surface water diversions and flood irrigation was the primary application method (McCreary-Koretsky, 1967). Most wells were shallow and used only for domestic and stockwatering supplies (Mack, 1958). The main source later changed to wells and the method changed to sprinkler irrigation for alfalfa and grain fields. State data on well drilling in Scott Valley indicate an increase in the number of new wells each year during the 1970's, a peak after the 1976-77 drought, and drop to lower annual levels in the 1980's. By 1983, the California Dept. of Water Resources noted the significant increase in ground water pumping, but added that available valley lands and the water supply to irrigate them were essentially in equilibrium. (Enough water to irrigate the land without groundwater draw-down effect.) A small increase occurred in 1992, in another drought period (CDWR, 1993b). (Information taken from the "Scott River Fall Flows Action Plan," Scott River Watershed Coordinated Resource Management Planning Committee.)

THE SCOTT RIVER WATER USE RIGHTS ADJUDICATION – The Scott River Adjudication decree No. 30662 of the Superior Court of Siskiyou County was entered on January 30, 1980 in Civil Judgments Volume 45, Page 468 and recorded in Book 881, Page 280 of Official Records; as amended by order dated September 11, 1980 in Civil Judgments Volume 46, Page 393 and recorded in Book 899, Page 218 of Official Records. (The original "Notice of Intent" was published in 1974.)

Many of Scott Valley agricultural use rights date back to the mid-1800's, utilizing the original ditches of the time. Separate adjudications of the several tributaries of the Scott River occurred at various times, such as: 1950 – Shackleford Creek; 1958 – French Creek; 1978 – Sniktaw Creek adjudication (15 users at 10.68 cfs.); 1980 – Oro Fino Creek (10 users at 21.74 cfs.); 1980 – Wildcat Creek (7 users at 7.49 cfs.); and were folded into the Scott River Adjudication. Remaining adjudicated water use rights in the adjudication include 648 users at 874.29 cfs.

The adjudication further incorporated existing agreements between parties including: Newton-Gregg; South Fork Callahan Ditch; Farmers Ditch; Wolford Ditch; Etna Mill Ditch; Barker Ditch; Wright and Fletcher Ditch; Friden Ditch; Pereira Ditch; Rock Fence and Kangaroo Lakes; East Fork of the Scott River; Sugar Creek; Oro Fino; North Patterson and Moffet Creek.

Watermaster Service is being provided by the Department of Water Resources for Shackleford, Sniktaw, Oro Fino, French and Wildcat Tributaries. As watermaster service is dependent upon Superior Court Order or request by representatives of at least 15% of the ditches along effected reaches (and the service must be paid by effected users), it is unlikely that service would be introduced in the near future.

The water rights set forth in the decree include use to all surface waters that contribute to the flow of the Scott River stream system, including rights to tailwater, waste and return flow, supporting underflow and interconnected ground water, (a maximum of 500 feet adjacent to the river as delineated on the State Water Resources Control Board map from the confluence of Clarks Creek and the Scott River to Meamber Bridge), and excluding Shackleford and French Creeks and their tributaries (Previously adjudicated in 1950 and 1958 respectively). Ground water outside the delineated area is not adjudicated.

The adjudication identifies 40 tributaries or stream groups that are independent in respect to non-surplus rights on other streams or stream groups. Rights to divert the natural flow of the main stem Scott River are separated into 5 separate sections. Non-surplus rights within each section may be exercised independently from those in another section but relative to the priority established for the section in which they lie. Post-1914 appropriative rights are held to be inferior to all other rights except surplus rights. (This included 34 permits, 41 licenses and 7 stock pond certificates.)

Relativity of rights within a section are established by priority classes. Should available water be insufficient to satisfy all water use rights of any particular class, the available water shall be prorated as a correlative right with others of that class in that section.

Irrigation season is established “from about April 1 to about October 15 of each year”. Diversion structures must be constructed to allow an water in excess of the specific diversion allotment to pass to the stream channel to allow passage of fish during irrigation season, but prior to about June 1. Those with gravel diversion dams must breach the dam at the end of the irrigation season to allow adult fish to ascent to spawning grounds. (There is no general limitation for consideration of fisheries during the period between June 1 and October 15.) Domestic and stock watering users are entitled to .01 cfs.at place of use, during the non-irrigation season.

The California Department of Fish and Game was denied a claim to minimum instream flows for fisheries at the time of the adjudication based on the principle that an appropriative water use right entailed the exercise of some type of physical control over the resource. However, in the adjudication, the US Forest Service was allotted quantified instream flows for the fisheries and wildlife resources, recreational, scenic and aesthetic purposes by nature of its riparian rights to lands within that section. These rights are of a first priority basis, correlative (equally) to other first priority rights included in the section beginning at the USGS gaging station at Fort Jones and in specified amounts on specified tributaries. (If there is insufficient water to meet all primary user needs, available water must be shared with others on its reach on a proportional basis.) Although all rights to “surplus waters” in all section are junior to the USFS rights, the USFS instream rights have no relation to non-surplus rights in other sections and non-specified independently adjudicated tributaries.

In addition, the USFS has rights to maintain the natural unregulated lake levels at specified lakes within the Klamath National Forest.

High flushing flows of 10,000-15,000 cfs measured at the USGS gaging station are reserved at five year intervals from other impoundment or storage. This is based on historic data that indicate such a level is attainable after allowances for all other rights during this period established under the decree, including post-1914 impoundments. (Note: During recent drought years, this level has not been attainable.)

According to the Klamath River Basin Fisheries Task Force, during the period 1980-1984, instream flow levels were not met 40% of the time. From October 1985 – September 1989, minimum flow levels were “most often not being met in fall months”. Summer flow levels were close to being met in 1986, but not in 1987, 1988 and 1989.

Beneficial use categories in the adjudication are domestic; “recreational domestic” (drinking, culinary, and washing use outside by campers); stockwatering; irrigation (surface or sub-irrigation); irrigation with incidental domestic and stockwatering; municipal; industrial (lumber mill operations, timber harvest, road building and maintenance, dust control on logging roads); mining (including gravel operations); power (generation from falling water only); storage; firefighting; wildlife/fisheries; aesthetic and scenic. Not all beneficial uses are present in each of the independent sub-sections of the adjudication.

Riparian land owners are entitled to year-round diversion for non-consumptive uses to include timber harvesting, road building, power, mining gravel plants and fish propagation so long as it does not impair numbered priority rights and is in compliance with water quality standards.

Any claimant may divert on a correlative first priority basis an amount reasonably necessary for stockwatering, recreational domestic, wildlife or firefighting purposes. Any riparian owner not specified in the adjudication may divert a maximum of 500 gpd.per family residence or 120 gpd.per camp unit for domestic use.

Under a 1989 State Water Resources Control Board Order #89-25, most of the adjudicated streams in Scott Valley were declared to be “fully appropriated” during the period 4/1-11/30.

Regarding reasonable diversion and use, the decree states: “Nothing herein contained shall be construed to allot to any claimant a right to waste water or to divert from the Scott River stream system at any time a quantity of water reasonably necessary for his beneficial use under a reasonable method of use and reasonable method of diversion, not to permit him to exercise his right in such manner as to unreasonable impair the quality of the natural flow.”

The adjudication decrees state that the Superior Court of Siskiyou County retains continuing jurisdiction of parties to these proceedings, and of the subject matter hereof, and upon application of any party hereto, or successor in interests thereto, or upon its own motion or the motion of the State Water Resources Control Board to review its decree and to change or modify the same as the interests of justice may require.

BUTE VALLEY – (Please see separate sections on **Farming and Ranching** for early history of water use.)

BUTTE VALLEY / MEISSE LAKE – Charles Boyes settled on Butte Creek about six miles southeast of the Ball Ranch in 1870. (Now owned by Butte Valley Irrigation Co.) Butte Creek is the largest stream in the Valley. It rises to the northeast of Mt. Shasta and flows in a northwestern direction, entering the valley near the town of Bray. From the time of first settlement, the Creek was used for irrigation. Surplus after irrigation was diverted into a lava crack. According to F. Merrill; “[D]isputes in the division of water caused much litigation, out of which were established some of the most important rules of our California Water Law’.

Around 1940, Ernie Bubb, Art Macken, Fat & Muriel Long acquired the Meiss Ranch in Butte Valley. The partnership built a dike to reclaim land from the west side of Meiss Lake and excavated drain ditches to develop additional grain land. The Longs sold their interest to Bubb and Macken in 1943.

In 1944, James Stevenson bought the Meiss Ranch in Butte Valley. In the same year, the old lake bed flooded, so only a few acres of grain were planted. As a result of the flooding, Stevenson made major improvements to the dike. The first irrigation well, an artesian well, was dug in 1944. The pumps for drainage purposes were operated either by gas or diesel engines before electricity finally reached the area. The arrival of electricity allowed for rapid development of the Meiss Ranch as well as other ranches in Macdoel.

A dike was constructed across Meiss Lake allowing the westerly portion of the area to be reclaimed for farming and cereal grains, Farming of this portion was accomplished by diverting Muskgrave, Harris and Ikes creeks out onto the fields in the winter months to build soil moisture. Water was then evacuated into Meiss Lake through the use of lift pumps. As soon as the soils were dry enough to work, the ground was planted. Late spring and summer rains were depended upon to make the crop. The technique is called partial irrigation and is used throughout the Klamath Basin. After harvest, cattle were turned into the area to remove remaining stubble. (Kit Novic, Wildlife Habitat Supervisor II, Under the Supervision of Don Koch, Wildlife Management Supervisor Region I; Butte Valley Wildlife Area Management Plan; California Department of Fish and Game; July, 1992 at 19 and 21.)

In 1945, Butte Valley Irrigation District (BVID) was forced to sell 18,00 acres of land to pay off the bond of 1923. This was due to depletion of funds required for the drilling of additional wells needed to furnish water to land owners. (Letter of Oct. 9, 1992, Theodore Risner, Water Master, BVID)

In 1947, The Butte Valley Irrigation District entered into a joint tenancy agreement with the current owner of the Meiss Ranch, James Stevenson. The agreement allowed the District and Stevenson to deposit water into Meiss Lake and later withdraw it. The District has never activated its right due to the high cost of electrical power and the low quality of the water. (Butte Valley Wildlife Area and its predecessors have diverted lake water onto its croplands and has pumped water into the Klamath under the agreement.)

In 1947, James Stevenson purchased 1,100 acres of lake bed from Liskey, plus 80 acres from the State bringing the acreage of the Meiss Ranch to 13,200 acres. Stevenson constructed the first dams to impound Juanita Lake, (named after his wife) and located now on U.S. Forest Service Land. The water was used to Irrigate the meadows on the west side of the ranch. (Novick notes that a subsequent owner, Shasta Cattle Co., “failed to maintain the dikes on the lake properly and this gave the USFS the opportunity to acquire water rights to the lake”.) (BVWA Plan at 13 and 19)

In 1964, a major flooding event occurred and Meiss Lake “reflooded” more than 10,500 acres of its former lake bed and adjacent farms. Butte Valley was declared a disaster area.

In 1965, the U.S. Army Corps of Engineers constructed a drainage canal through Sam's Neck to Rock Creek and ultimately the Klamath River. The canal was designed to deliver 200 cfs.and was constructed in 2 sections. The first section originates in the northwestern corner of Meiss Lake and gravity flows in the same direction for 3.85 miles to a pumping station. Three low-lift pumps (250 hp each), lift the water 21 feet into an elevated canal to then gravity flow onto Rock Creek and the Klamath River. The section of elevated canal is about four miles long. The regulation of waters in Meiss Lake via the pumping station has precluded inundation and damage to adjacent crop lands since its construction. Excess waters are pumped from January to April.

From 1968-1988, 97,265 acre feet of water were pumped at a cost of $320,046. No waters were pumped in 1981, 1987, 1988, 1989, 1990, 1991 and 1992. In a normal year, an average of 4,632 acre feet of water is pumped into the Klamath. The greatest amount was 14,582 acre feet in 1972.

The Macdoel Ditch is a drainage canal leaving Meiss Lake on its east side. The .8 mile canal can provide Meiss Lake water to the adjacent US Forest Service Butte Valley National Grasslands by gravity flow or low-lift pumping. (BVWA Plan at 7, 12, 13 and 21)

During the 1976-77 drought, the Butte Valley Irrigation District (BVID) had to deepen wells a second time due to the rapid lowering of the water table. (Letter of Oct. 9, 1992, BVID)

By 1976, the irrigated acreage in Butte Valley had increased from 12,000 acres as of 1954 to 27,500 acres in 1976. This was due to the availability of electricity for pumps and the development of ground water for irrigation. (BVWA Plan at 22)

In 1980-81, the water table in Butte Valley dropped again causing water shortage. The Butte Valley Irrigation District (BVID) installed underground pipes to save water from evaporation and subbage. (Letter of Oct. 9, 1992, BVID)

Butte Valley Irrigation District (BVID) wells are at a depth of 80-1,500 feet. Approximately half of the 28 wells go dry or surge with very little water in dry years. From 1983-1992, the water table has dropped 16 feet. The drop has been apparent at all levels of the three tables involved. (Letter of Oct. 9, 1992, BVID)

In 1991, the Butte Valley Wildlife Area was acquired in two phases by the Wildlife Conservation Board with funds from Department of Wildlife Restoration Funds and Federal Land and Water Conservation Funds. Phase I – 7,920 acres was recorded in January; and Phase II – 5,280 acres was recorded in July. Federal funds from the Pittman-Robertson program (Federal Aid in Wildlife Restoration Act) and California Department of Fish and Game's (DFG) funds are used on a 75%-25% basis to run the refuge.

In addition, the DFG cooperatively manages 80 acres of Bureau of Land Management lands in the northwest corner and 150 acres of U.S. Forest Service Land adjacent to Meiss Lake Road.

Meiss Lake typically goes dry every 15-20 years and was dry in 1955, 1965, 1981, 1987, 1988, 1990, 1991, 1992. (BVWA Plan at 1 and 12)

Along the eastern boundary of the Butte Valley Wildlife Area is the 18,425 acre Butte Valley National Grasslands, managed by the U.S. Forest Service. These lands are the lands that were originally acquired by the federal government under the Bankhead-Jones Farm Tenant Act. They were formally designated as National Grasslands in 1991. (BVWA PLAN AT 23)

The Negative Declaration (ND) and Butte Valley Wildlife Area Plan, page 18, states that the wetlands areas of BVWA are extensive: BVWA occupies approximately 14 percent of Butte Valley (lands below the 4,280-foot elevation contour). Approximately 3,000 acre-feet of ground water is pumped from wells 1, 2, 3 and 7A. Less water is pumped in wet years and more (4,000-5,000 acre feet) in drought years. This water is used to irrigate food and nesting cover crops and to maintain 500-600 acres of wetlands, increased to 1,000-1,200 acres of wetlands for fall migrating birds.

According to page 62 of the ND and Plan, under the next phase of the proposed Plan: "Total wetland acreage would be more than 9,325 acres (includes 1,200 acres of Butte Valley National Grasslands…"

Page 5-6 of the ND and Plan indicates that the wetlands area of the BVWA is very shallow: "Meiss Lake, a managed reservoir, has a maximum depth of six feet. Elevations range from 4,228 to 4,234 feet. Most of the lake bottom is at an elevation of 4,230 feet. The maximum level for Meiss Lake is managed at 4,234 feet…"

According to the NG and Plan, page 9, "A Cemented hardpan exists beneath most soils especially in the lake basin. This hardpan is near the surface in fields 5A, 5B and 5C, pond 7A and in Meiss Lake. This hardpan ranges from six inches to several feet beneath the soil surface…Since these soils formed in a closed basin where drainage and permeability are poor, salt and alkali accumulation can become as problem."

The hardpan and soil type at BVWA / Meiss Lake create a large shallow impermeable basin subject to high evaporation rates. (The NG and Plan, page 11 states that: "No pan evaporation data for Butte Valley is available, but is estimated to be 48 inches per year…"

The Butte Valley Wildlife Are (BVWA) Management Plan describes three basalt aquifers in this volcanic valley. The area is riddled with fissures and faults. At least two hydrologic studies have been done that provide differing information about these aquifers (Dysert, personal communication). The BVWA plan states:

> The Lake Deposits Aquifer (LD) ranges in depth from 0-125 feet below the surface. It is comparatively higher in sodium bicarbonate, alkalinity and hydrogen sulfide than the other aquifers. The LD aquifer can occur both above and below the Butte Valley Basalt Aquifer (BVB), but is thought to occur above the deep High Cascades Volcanics (HCV) aquifer.

The BVB aquifer is higher in dissolved solids and electrical conductivity than the HCV aquifer. The depth of the BVB aquifer is from 0-110 feet and is the most productive aquifer, although it is found only to the south and east side of Meiss Lake. (BVID wells and at least two BVWA irrigation wells pump primarily from the BVB aquifer.) Historically, Butte Creek has been diverted to flow underground through porous lava rocks to recharge the BVB aquifer. (Flood flows are diverted into Dry and Cedar Lakes.)

The HCV aquifer is generally deeper than the other aquifers (from 47-1,317 feet). Springs from the HCV provide perennial flows for Prather, Muskgrave, Harris and Ikes Creek. Water quality from the HCV aquifer has been termed "excellent", although high in calcium-magnesium bicarbonate. Several irrigation wells and the controversial deep well at 7A are thought to draw from the HCV aquifer.

GRASS LAKE – In the early 1900's, Abner Weed established the old Grass Lake Hotel. The lake was full of water and celebrities often visited. Then a man named James Murphy experimentally inserted dynamite into the lake bottom and blew a hole in the false bedrock to the aquifer. The lake dried up and became grass. The hotel was abandoned.

Grass Lake is a 200 acre grass and sedge covered flat. James Sullivan, a longtime employee of the Weed Lumber Co. (later International Paper Co.), engineered a semi-circular dike where the two ends butt up against wooded land that juts into the shoreline. When the dike is cut, water rushes in and disappears down the drainage hole. It is not known to where the water travels.

TULE LAKE / UPPER KLAMATH BASIN –

THE KLAMATH PROJECT – The Klamath Project serves Klamath County, Oregon; and Siskiyou and Modoc Counties in California. It was one of the first reclamation projects, draining and reclaiming lakebed lands of Lower Klamath and Tule lakes and developing water supplies from the Klamath and Lost Rivers to irrigate lands. The Project was authorized in 1905, construction began in 1906, and water was first made available in 1907. The principal project storage facilities are Upper Klamath Lake in Oregon (735,000 acre-feet) and Clear Lake Reservoir on the Lost River in California (526,000 acre-feet). The project area includes 233,625 acres of irrigable lands, of which 204,492 acres were irrigated by the project in 1979. Approximately 100,000 of this acreage lies in California. There are five major pumping plants with power input ranging from 450-3,650 hp. And capacities from 60 to 300 cfs.,.and 40 pumping plants of less than 1,000 hp. There are 18 canals with a total length of 185 miles and diversion capacities ranging from 35 to 1,150 cfs. Laterals total 516 miles and drains 728 miles. (U.S. Government printing Office map of the Klamath Project, 1995-784-380.)

The Klamath Basin Compact addresses interstate water-sharing matters in the Upper Klamath River and Lost River basins. Negotiated by the states of Oregon and California, approved by their respective Legislatures, and consented to by the U.S. Congress in 1957, the compact is to (1) facilitate orderly development and use of water, and (2) further cooperation between the states in the equitable sharing of water resources. The Compact that identifies domestic, irrigation and recreational

uses as the only beneficial uses of water in the Upper Klamath Basin and establishes a priority of use in that order. (Fisheries and wildlife uses are included under "recreational use".) These uses and priorities were incorporated into the Federal Power Commission's license for both Big Bend and Iron Gate dams. In the Iron Gate license (expires March 1, 2006), it further states: "water use at Iron Gate and the river below are subject to irrigation needs of Shasta Valley…" The Klamath Basin Compact is administered by the Klamath River Compact Commission. (See also the California Water Plan Update Bulletin 160-93.)

According to a July, 1995 Memorandum from the Office of the Regional Solicitor of the U.S. Department of Interior, Pacific Southwest Region, "rights" of the Klamath Project Water Users were explained as follows:

"The Klamath Project water users obtain their supply of water for irrigation purposes from the project facilities pursuant to various contracts with Reclamation entered into pursuant to the Reclamation Act of 1902, 32 Stat. 390, 43 U.S.C. Sections 372 et seq., as amended and supplemented. The contracts are between Reclamation and a water district or Reclamation and an individual water user. These contracts provide, in general, that the water user is to receive enough water to satisfy the beneficial use for the irrigation of a specified acreage. Certain of the contracts specify the beneficial use amounts on a per acre basis.

"The underlying water rights for the project, upon which the supply stated in each of the contracts discussed above depends, were obtained by Reclamation in accordance with state law, in 1905, when Reclamation filed a notice of intent to appropriate all of the Available water in the Klamath River and Lost River and their tributaries in Oregon. Similar filings were made for the waters originating in California, within the Lost River and Clear Lake drainages. Subsequent to these filings, Reclamation constructed project facilities through which water is delivered to the project water users. The project's 1905 water rights are junior to the reserved water rights of the tribes, but senior to the reserved water rights of the refuges…"

According to the Klamath Project Operation Plan Draft Technical Memorandum on Agriculture and Refuge Water use Dated Nov. 1, 1995, Reclamation has three types of contracts:

"CLASS A" or 9(d) repayment contracts – These contracts were used for the "A" Canal and Tulelake areas of the project, which were, for the most part, homesteaded under Reclamation. In 1994, there were 166,097 acres (135,564 acres harvested) under "Class A" contracts; 1993 – 1666,097 acres (134,706 acres harvested); and 1992, a drought year, 166,222 acres (121,070 harvested).

"CLASS B" or Warren Act Contracts – The Warren Act grants secondary rights of use to users above the gravity system / or users not covered under 9(d) repayment contracts. In 1994, there were 65,689 acres (59,729 acres harvested) under "Class B" contracts; 1993 – 65,750 acres (60,166 acres harvested); and 1992, a drought year, 65,750 acres (58,408 harvested).

"CLASS C" – These are rental contracts that allow water to be sold to individual farmers on an "if and when available" status. Klamath Irrigation District, Tulelake

Irrigation District, and Reclamation have the ability to enter into temporary water rental contracts. In 1994, there were 2,043 acres (1,648 acres harvested) under "Class B" contracts; 1993 – 1,887 acres (1,773 acres harvested); and 1992, a drought year, 947 acres (756 harvested).

(For summary of Water Users and Contract Water Duty, see **Table 1.**)

Obligations of the Klamath Project to water users were explained in the July, 1995 Memorandum from the Office of the Regional Solicitor of the U.S. Department of Interior, Pacific Southwest Region, were explained as follows:

"Reclamation has an obligation to deliver water to the project water users in accordance with the project water rights and the contracts between Reclamation and the water user (which may be through a water district) subject to the availability of water. Reclamation must protect the rights of the users of project water, see Filing of Claims for Water Rights in General Stream Adjudications, M-36966, 97 I.D. 21 (July 6, 1989), and cannot 'ignore…the obligations that necessarily devolve upon it from having mere title to water rights for the [project], when the beneficial ownership of these water rights resides elsewhere.' Nevada v. United States, 463 U.S. at 127. Water would not be available, for example, due to drought, a need to forego diversions to satisfy prior exiting rights, or compliance with other federal laws such as the Endangered Species Act. Water lawfully stored in the project's reservoirs can be used for domestic and irrigation purposes to the extent the water is applied to beneficial use within the project. Reclamation cannot store or divert water for project purposes that is needed to satisfy prior existing rights."

A letter date Nov.22, 1995, from De Cuir & Somach, Attorney at Law, to Mike Ryan, Area Manager of the Bureau of Reclamation, clarifies:

"Under the agreements between PP&L [Pacificorp] and Reclamation, PP&L operates ink River Dam, except that it may not interfere with water needed for irrigation. The FERC [Federal Energy Regulatory Commission] license has absolutely no effect on the operational control reserved to protect irrigation supplies…PP&L's obligations are PP&L's obligations. PP&L is not obligated to use someone else's water to meet any particular flow regime at any point in the system."

"Further, as you know, PP&L's contract with the United States, make it clear that PP&L is not entitled to use water if water is needed for irrigation. The licenses from FERC and SWRCB [State Water Resources Control Board] expressly state, moreover, that PP&L is not required to release more water than it has rights to for power generation."

KEY FACILITIES of the Klamath Project include:

UPPER KLAMATH LAKE (regulated from Link River Dam has an active capacity of 465,000 acre-feet.

GERBER DAM AND RESERVOIR: on Miller Creek in Oregon, provides storage for irrigation and reduces flow into the reclaimed portions of Tule Lake and the

Restricted sump areas in the Tule Lake National Wildlife Refuge. The reservoir has an active storage capacity of 94,000 acre-feet.

CLEAR LAKE DAM AND RESERVOIR: on Lost River in California, provides storage for irrigation and reduces flow into the reclaimed portions of Tule Lake and the restricted sump areas in the Tule Lake National Wildlife Refuge. The reservoir has an active storage capacity of 513,000 acre-feet and a firm minimum annual yield of 12,000 acre-feet.

MALONE DIVERSION DAM: on Lost River, diverts water to serve lands in the Langell Valley in Oregon and has a diversion capacity of 220 cfs.

LOST RIVER DIVERSION DAM: on Lost River, diverts excess water to the Klamath River through the Lost River Diversion Channel and thereby controls downstream flow in Lost River to control or restrict flooding on the reclaimed portions of Tule Lake and to regulate sumps in the Tule Lake National Wildlife Refuge. It has a diversion capacity of 3,000 cfs.

LOST RIVER DIVERSION CHANNEL: extends from Lost River Dam and carries excess water to the Klamath River. It also supplies additional irrigation water from the Klamath River by reverse flow to serve the reclaimed lands of Tule Lake.

ANDERSON-ROSE DAM: on the Lost River, diverts water to serve the reclaimed lands of Tule Lake and has a diversion capacity of 800 cfs. to lands within the Tule Lake Irrigation District.

MILLER DIVERSION DAM: on Miller Creek below Gerber Dam, diverts water to serve the lands in Langell Valley and has a diversion capacity of 190 cfs.

STATION 48+00 TURNOUT: diverts Lost River and /or Klamath River water into Miller Hill and has a capacity of 105 cfs. Water ordered by Tule Lake Irrigation District is delivered by Reclamation at this point.

MILLER HILL PUMPING PLANT: diverts Lost River and/or Klamath River water into Miller Hill and has a capacity of 105 cfs.

PUMPING PLANT D: has a capacity of 388 cfs. and TULE LAKE TUNNEL is a concrete lined tunnel, 6,600 ft., in length and with a capacity of 250 cfs.. These divert water from Tule Lake into P Canal, which conveys drainage water from Tule Lake's restricted sumps to Lower Klamath Lake.

KLAMATH STRAITS DRAIN PUMPING PLANTS E & E-E and F & F-F: were constructed to pump drainage water collected in the straits drain from Lower Klamath National Wildlife Refuge and other irrigated land back into the Klamath River. Both E & E-E and F & F-F have a pumping capacity of 600 cfs each.

KEY CANALS OF THE Klamath Project include:

EAST CANAL at MALONE DIVERSION – conveys water from Malone, east of the diversion dam. The canal is 2 miles long, with a capacity of 30 cfs.

WEST CANAL at MALONE DIVERSION – conveys water from Malone Diversion Dam to Dry Lake. The canal is 12.1 miles long, with a capacity of 190 cfs.

NORTH CANAL at MILLER DIVERSION – conveys water from Miller Diversion Dam to Dry Lake. The canal is 14.4 miles long, with a capacity of 190 cfs.

LOST RIVER DIVERSION CHANNEL – runs from the Lost River Diversion Dam to the Klamath River and carries water to the Klamath or additional Klamath River water for irrigation. It is about 8 miles long, with a channel capacity of 3,000 cfs.

NORTH CANAL from KLAMATH RIVER – runs from the Klamath River to the Northeast corner of Lower Klamath Lake. It is 12 miles long and has a capacity of 200 cfs.

ADY CANAL – conveys water from the Klamath River to the Klamath Drainage District and Lower Klamath Lake. It is 5 miles long and has a capacity of 400 cfs. Ady canal is a measuring point for refuge use. Agriculture provides all water needs for the refuges.

KLAMATH STRAITS DRAIN CANAL – capacity 600 cfs.

“A” CANAL from UPPER KLAMATH LAKE – conveys water from Upper Klamath Lake into the Project. It is 8.7 miles long and has a capacity of 1,150 cfs. (The “A” Canal splits into the “B” and “C” Canal.)

“B” CANAL – conveys water from “A” Canal to Olene, Oregon; is 4.1 miles long with 290 cfs. capacity.

“C” CANAL – conveys water from “A” Canal to Merrill, Oregon; is 13.5 miles long with 330 cfs. capacity. There is also a “C” to “G” Canal pf .9 miles wit 400 cfs capacity.

“D” CANAL – conveys irrigation water from “C” and “G” Canals to “J” Canal. It is 28.6 miles long with a 300 cfs. capacity.

“E” CANAL – runs east along the Lost River; is 10.5 miles long, with a capacity of 35 cfs.

“F” CANAL – runs east and west on the south side of Lost River; is 11.2 miles long, with a 90 cfs capacity.

“G” CANAL – located near Lost River Diversion at “C-G” Canal to Merrill; is 8.5 miles long, with a capacity of 400 cfs.

“J” CANAL – runs from Anderson Rose Diversion Dam to vicinity of Newell; is 23.4 miles long, with capacity of 800 cfs.

“M” CANAL – located near Newell, east of Tule Lake sump; is 6.5 miles long, with capacity of 100 cfs.

“N” CANAL – located east of Tulelake sump; is 26.5 miles long, with capacity of 300 cfs.

“P” CANAL – conveys water from Pumping Plant “D” to lower south and east portions of Lower Klamath Lake; is 1.8 miles long, with capacity of 200 cfs.

“P-1” CANAL – conveys water from Pumping Plant “D” to east and northern parts of Lower Klamath Lake; is 9 miles long, with 250 cfs. capacity.

“R” and “Q” CANALS – located in south portion of Tule Lake Sump, 3.9 and 3.2 miles long, respectively; capacity 130 and 76 cfs.

PACIFICORP HYDROELECTRIC SYSTEM in the Upper Klamath Basin includes “flowline conveyance capacities” to the Project and the Klamath River. The Link River components are actually connected to the Klamath Project. The hydroelectric system includes*:

LINK RIVER-EAST SIDE HYDROELECTRIC DEVELOPMENT (HD) – fee 975 cfs., reservoir capacity 873,000 acre feet, with active storage capacity (amount available for release to downstream users) of 465,000

INK RIVER-WEST SIDE HD – fee 250 cfs.

KENO DAM was built to regulate the flow of the Klamath River and Maintain Lake

J.C. BOYLE HD – was built to store and divert water for its powerhouse. It has diversion or fee of 2,500 cfs., reservoir capacity of 3,377 acre-feet, with active storage capacity of 1,507 acre-feet.

COPCO NO. 1 HD – was built to store and divert water for its powerhouse. It has diversion or fee of 3,000 cfs., reservoir capacity of 17,774 acre-feet, with active storage capacity of 4,802 acre-feet.

COPCO NO. 2 HD – was build to store and divert water for its powerhouse. It has diversion or fee of 3,000 cfs.

FALL CREEK HD – was built to store and divert water for its powerhouse. It has diversion or fee of 50 cfs.

IRON GATE HD – was built to regulate the low of the Klamath River and divert water for its powerhouse. It has a diversion or fcc of 1,735 cfs., reservoir capacity of 58,000 acre-feet, with active storage capacity of 7,364 acre-feet.

* An additional 7.4 miles of conveyance associated with HD has fee’s ranging from 50 cfs. to 3,000 cfs.

AGRICULTURAL WATER USE:

According to the Klamath Project Operation Plan Draft Technical Memorandum on Agriculture and Refuge Water use dated Nov. 1, 1995.

During the past 10 years, the estimated water irrigation demand for agriculture and refuges, based on crop consumption needs through evapotranspiration, evaporation, minus available precipitation* and the estimated "net use" or difference between total inflow and outflow** was:

		AGRICULTURE*	REFUGE*	TOTAL*	NET USE**
1994		415,899	87,192	503,091	569,472
1993	***	365,078	83,330	448,408	89,745
1992		418,484	80,260	498,744	496,482
1991		404,740	80,260	485,000	524,061
1990		407,201	79,492	486,693	483,486
1989	***	417,163	81,389	498,552	345,065
1988		393,590	73,610	467,200	509,483
1987		394,413	78,420	472,833	505,959
1986	***	393,081	78,420	471,501	268,873
1985	***	359,908	78,420	438,320	246,842
Avg.		396,956	80,079	477,034	514,824
Max.		418,484	87,192	503,091	571,525
Min.		359,908	73,610	438,320	279,467
Avg.		396,956	80,079	477,034	514,824
Max.		418,484	87,192	503,091	571,525
Min.		359,908	73,610	438,320	279,467

*** Years removed from calculation of average due to greater than average rainfall or lack of complete records.

NOTE: On the average, estimated net water use differs from the estimated water demand by less than six percent. The average overall system efficiency based on the six years of record is 90 percent. This indicates a very efficient use of water. This high level of efficiency may be due to the interconnected nature of the various

delivery and drainage systems. When the water is reused, the overall efficiency increases. The report anticipates that the 1994 figures on demand should meet the irrigation requirement for approximately 194,071 acres of crops, assuming a crop mix similar to that of 1994 and the water requirements for approximately 10,009 and 17,542 acres of permanent and seasonal marshes respectively.

The report also noted that the "downside" of the system's apparent excellent efficiency is that there is a corresponding reduction in return flows, which make up a portion of the water supply for downstream water users. It is assumed that downstream users must, then, increase diversions from their primary sources in order to meet needs. A additional concern is the potential impact on water quality, particularly in the salt balance of return flows. [It should be noted that, prior to the project while enormous areas of land were still in marshland, the amount of water "consumed" by marsh vegetation transpiration and evaporation from exposure of a wide (shallow) water surface area was also substantial, if not greater, than that "consumed" by current agricultural use.]

TULELAKE – By 1931, there was still no reliable local source of good drinking water. The Kalina store in Malin made water available to anyone who came to town. In addition, Southern Pacific railroad parked tank cars on the sidings in Tulelake where people filled buckets and 55 gallon steel drums to bring water to their homes.

In 1938, Tulelake began its quest for good water. The water in the area had a high iron content, sulfurous odor and was loaded with methane gas. The water was so volatile, it could be ignited and visitors were warned not to smoke in bathrooms. (One such explosion had blown off a bathroom door and singed the occupant.) Help was denied from the Bureau of Reclamation.

Fund raisers were held and a test well was sunk in 1938 to a level of 1,900 feet without hitting bedrock. A bond issue was passed after the city recorded its map with the State of California, and by 1941, the well had been deepened to 2,200 feet. The quality soon deteriorated.

By 1950, the city's population was 1,500. A fire nearly depleted the deep well's water supply. In 1951 the well was sunk to 2,254, but quality again deteriorated. In 1953 a new well was sunk to a level of 3,000 feet. The well was good and its delivery system delivers potable water to the city and much of the northern and central basin.

OF SPECIAL NOTE – During the draining of Tule Lake in 1907, the rain and snow was unusually heavy. Farm land on the north shore was flooded. Within a two week period, local residents were surprised to not a two foot drop in the lake. William Dalton and J. Frank Adams discovered water flowing into several openings in the lava near Scorpion Point of the west side of Coppock Bay. They cleared away debris and pried open rocks to increase the flow. They later reported that a body of water measuring 200 second feet was rushing down into an underground gorge. Lake waters had not been high enough to reach the open space for years and as waters went down, the whirlpool would disappear unless cut lower.

The Reclamation Service turned down an offer by local residents to work on the opening, embarking on its own experiments in 1908. They began to blast a series of

trenches a vertical holes in the lava rock. The flow of water into the excavated holes increased slightly, but did not duplicate the rate of the year before. It finally tapered off in 1909 as the lake level dropped. In 1915 the Klamath Project brought in several pumps to help speed the drainage, but the amount of water moved into the lava beds was insignificant and the plan was abandoned. The most effective strategy at that point was diverting the Lost River and allowing the water of Tule Lake to evaporate.

THE EFFICIENCY OF AGRICULTURAL WATER USE:

A CDWR study in 1958 of agricultural water use in both the Shasta and Scott Valleys found an average of 6.3 acre feet of water was applied per acre, with an overall consumptive water use of only 2.28 feet per acre, creating an overall irrigation efficiency of 36%. A report of data collected by the U.S. Soil Conservation Service in a 1976 study of a major ditch in Scott Valley, showed delivery was reduced 21-39% as a result of seepage.[51]

HYDROLOGIC CYCLE –

[The hydrologic cycle represents the circulation of Earth's waters from ocean to atmosphere to land and back to ocean. The cycle can be thought of as a huge water pump that is powered by solar radiation (energy from the sun) and by gravity. The hydrologic cycle is a global system, and every molecule of water on Earth is a part of the cycle…"

"The sun provides the energy to transfer water from oceans, lakes, rivers, wetlands, bare soil, and vegetation to the atmosphere as a water vapor (oceans, rivers, etc., are compartments of the cycle, the transfer of water from one compartment to another occurs due to process). Transfer of water from oceans, lakes, rivers, wetlands, bare soil, and plant surfaces to the atmosphere is called evaporation (a process). The transfer of soil water through living plants to the atmosphere is called transpiration. The processes of evaporation and transpiration are revered to together as evapotranspiration."

"Due to gravity, water vapor in the atmosphere falls to Earth as precipitation. Rain and snow are the two dominant forms of precipitation. For this discussion we will only consider rainfall…Before reaching the Earth's surface, most rainfall is caught by vegetation (trees, grass, litter, etc.). This catching of rainfall is called interception. Most intercepted rainfall drips to the soil surface (through fall) or runs down the plant to the soil surface (stem flow). A portion of intercepted rainfall is evaporated back into the atmosphere. That rainfall which reaches the soil surface is referred to as net rainfall."

"Once rainfall reaches the soil surface, a portion passes across the soil surface and enters the soil profile. The process of rainfall crossing the soil surface is known as infiltration. Rainfall that is not infiltrated runs down slope as overland flow. Rainfall carried as overland flow may infiltrate further down slope, or it may enter a stream channel. Infiltrated rainfall is initially stored in the soil profile as soil moisture."

As the amount of water in the soil (soil moisture content) increases during a storm, soil water may move vertically to ground water aquifers due to percolation or laterally

to stream channels as lateral subsurface flow. Ground water may enter streams, lakes, oceans, or it may be stored for long periods in aquifers. Not all soil water will be lost to percolation or lateral subsurface flow. Soils can hold a certain amount of water against gravity. Soil water held against gravity is eventually lost as evapo-transpiration. It is the ability of the soil to hold water against gravity which makes plant life possible."

"Rainfall which enters a stream channel becomes stream flow. Stream flow can be attributed to either storm flow or base flow. During, as well as shortly after a storm event, stream flow is dominated by storm flow resulting from overland flow and lateral subsurface flow. Between rainfall events, stream flow is dominated by base flow resulting from ground water discharge. Runoff is that portion of rainfall that leaves a land area as stream flow. Water yield is the sum of stream flow and ground water discharge from a contributing land area."

[The Following information is taken from the Draft California Water Plan Update (DCWPU), pp. 178-194, and local U.C. Extension Farm Advisor Steve Orloff's presentation to the Scott River Watershed Coordinated Resource Management Planning Group.]

(DCWPU) "The consumptive use of water by crops is synonymous with the term evapotranspiration. Consumptive use is expressed as a volume of water per unit area, annual acre-feet per acre. It is a measure of the water transpired by plants, retained by plant tissue and evaporated from adjacent soil surface over a specific period of time. ET varies throughout the year depending on solar radiation, humidity, temperature, wind and stage of plant growth. For example, as a plant grows, ET increases until the crop reaches maturity. The evaporation component of ET is greatest when the plant is small and does not shade the soil surface. Further, the relationship between evaporation and transpiration is a dynamic one. When evaporation increases, transpiration decreases. Evapotranspiration, ET, is the largesse element in California's hydrologic balance including the ET in forests, natural vegetation, agriculture and landscaping…Crop **ETAW (Evapotranspiration of Applied Water)** represents less that 15 percent of the total evapotranspiration and evaporation in the State…"

"Agricultural water efficiency [**SAE or Seasonal Application Efficiency**] has normally been defined as irrigation efficiency calculated by dividing the ETAW plus the leaching requirement by the applied water. Another measure of agricultural water use efficiency is the agricultural production per unit of water."

$$\underline{\mathbf{SAE=ETAW+LR}}$$
$$\mathbf{AW}$$

(Note: LR is any water requirement for the leaching of salts.)

"The decision by a farmer to bring a particular piece of land into production depends upon a number of factors; the size of the capital investment needed (equipment, land and land improvement costs); the farmer's skill, experience, and financial resources; the risk of crop or yield loss due to disease or drought; the expected income from crop sales; the likely variation in that income due to market price fluctuations; and the costs of production. The compliance requirements and income effects of government

farm programs must also be considered. A primary factor, of course, is the availability of the resources needed to produce and process a particular crop: suitable soils and climate, labor, and water of sufficient quantity and quality."

"Water price affects these factors both directly and indirectly; it affects the cost of production directly and the investment cost indirectly. The indirect link exists because the water cost affects the expected future net return from crop production of the land in question: The higher the water cost, the lower this return is expected to be. The market value of the land for crop production (aside from any speculative value for nonagricultural uses) is, in turn, based on the present worth of this expected net income."

"If the impact of a substantial water price increase cannot be sufficiently moderated by any options available to the farmer, [alternative native water sources, less expensive water management practices, higher valued crop], the farmer may not have the financial resources or economic incentive to continue farming the land affected by the water price increase. In this case, the land will be placed on the market, either voluntarily or involuntarily, and its price reduced, reflecting the water price increase. Under these conditions, the final effect is likely to be a change in the financial status of the person who owns the land and perhaps also the person who farms the land rather than the type of crop grown."

"One business decision the farmer must make is which irrigation method to use. To make any decision regarding an irrigation practice, detailed information is needed about soil properties, the system's capital costs, operation and maintenance costs, new management skills, the availability of water, the effect on water and energy use, and the effect on yields and quality. Most irrigation system improvements will only be made if such a change will increase the net returns of the farming operation."

Efficiency studies indicate that all methods of irrigation or application of water can be efficient, and there is no superior method that will save a large percentage of water. No matter what method is used, the ET of a crop does not change substantially. (See attached graph) The manner of water delivery to the farm also effects water use and irrigation efficiency. It is important to note that improvements in irrigation efficiency do not necessarily result in reductions in depletions (evaporation, transpiration and plant retention). Also, only nominal improvements in irrigation efficiency are still practicable.

The comparison of the Evapotranspiration (ET) consumptive use in acre feet of water by local crops and the acre feet required to be distributed by irrigation systems in order to meet ET or the Evapotranspiration of Applied Water (ETAW) is as follows:

GRAIN – ET 1.4 acre feet; ETAW applied or flood irrigation systems 1.7: ETAW sprinkler delivery 1.4. (Note: grains is commonly used as a rotation crop of 1-2 years between alfalfa crops.)

ALFALFA – ET2.3 acre feet; ETAW applied or flood irrigation systems 3.5; ETAW sprinkler delivery 3.1.

PASTURE – ET 2.4 acre feet; ETAW applied or flood irrigation systems 3.7: ETAW sprinkler delivery 3.2.

ALTERNATIVE CROPS – other crops investigated by U.C. suitable for climate, elevation and growing season were found, in some cases, to use slightly less water, but not a huge amount. Markets for such crops were found to be very limited. Winter wheat uses a little less water even though the harvest date is similar to normal planting cycles, however, there is a chance of early frost damage to the crop if it is blossoming at that time.

A comparison of efficiencies and associated costs of alternative application systems is as follows:

DRIP IRRIGATION – this type of system is obviously inappropriate for pasture. It has been tried on alfalfa on an experimental basis in other areas where prolonged freezing is not an issue. In those trials it was found that there was not much increase in efficiency as the crop has a full canopy. The cost is as much as $1,000 and acre for the system.

CENTER PIVOTS – these systems are common in the Butte Valley area where the terrain is open and flat. They require 160 acres without structures or trees and of a regular shape. Systems cost from $40,000-$55,000. The delivery of water is more uniform with efficiency of 75-80%, so there are cost savings.

WHEEL LINE – SOLID SET – The wheel line is the most common application systems in use in Scott and Shasta Valleys and is also used in Butte Valley. Wheel-lines are used primarily for wheat, barley, alfalfa and clover. The lines come in 20-30 feet sections, each with a large spoked wheel and a “rain-bird” type sprinkler head. Linked together, the lines run ¼-1/2 mile in length depending upon the diameter of the pipe and the power of the supply pump. The line irrigates one section of a field at a time and is rolled to the next section by activating a gasoline motor at the center of the line.

The solid-set sprinkler is used primarily for vegetable crops such as potatoes. The system also comes in sections with one sprinkler head for every 20-30 feet of pipe, but it becomes a semi-permanent fixture during the growing season. Solid-sets can water an entire field at once, needn’t be moved and provides an efficient method of frost control. A frost monitoring alarm warns the farmer at his home when the temperature approaches 32 degrees Fahrenheit. The farmer turns on the system which bathes the plant in water warmer than the air temperature. Unless there is a prolonged freeze, the water protects the crop from damage.

It is estimated that on 22% of the coverage, water application by wheel line and solid set sprinklers is less than 50% efficient.

BORDER OR FLOOD IRRIGATION – this is a common application on pasture lands, particularly on ranches with water rights dating back into the mid 1800’s. It has been found that flood irrigation is not necessarily less efficient, depending upon the slope of the land to encourage even distribution of water across it. Laser leveling and scraping improves the distribution, but can cost as much as $200 per acre.

Another related business decision an agriculturalist must make is the cost of the delivery system of the water to the application system. Various application and delivery alternatives depend on whether the source of that water is surface water or ground water.

“As with urban area, agricultural ground water costs vary considerably throughout California. Many factors influence these costs, including depth to ground water, pump efficiencies, and electricity rates… (Costs in the larger North Coast Region are reported to vary from $10 to $70 per acre foot – this includes capital, operations (including pumping energy costs), maintenance, and replacement costs.)

Conservation of water is a priority issue among agriculturalists. The dynamics of water use throughout the system and the effects of conservation can be illustrated to clarify apparent popular misconceptions regarding actual consumptive use of water by agriculture. The enclosed illustration from the Draft California Water Plan Update shows (with delivery system & crop ETAW and irrecoverable losses constant) how increased efficiencies affecting diverted amounts would affect the system as a whole. The illustration demonstrates that the only real depletion or “consumption” of water in the system is ETAW or “irrecoverable losses”. The remaining water is retained in the system through deep percolation into the aquifer or passed on through outflow for reuse and eventual return to the stream.

From this explanation, opportunities for conservation may be differentiated by categorizing them into: (1) those that reduce actual consumption (ETAW or factors effecting irrecoverable losses); (2) those that increase application efficiency (reducing displacement/diversion/circulation of water away from source aquifer or stream); and (3) those that increase transport efficiency (reducing displacement/diversion/ circulation of water away from source aquifer or stream).

It should be noted that factors effecting item (1) relate to the amount of vegetative transpiration and the amount of evaporation. Upland vegetative management and reduction of surface water exposure to heat and low humidity (such as groundwater pumping and subsurface piping) are methods to reduce consumption.

Items (2) and (3) are water management methods that do not reduce consumption. They close the efficiency gap between water transported and applied and water actually consumed. To the extent that less water is required to be diverted from a stream between diversion point and return, there may be a greater instream flow in that section.

It should be noted that there is also window of profitability in increased application efficiency. Former U.C. Extension Farm Advisor, Roger Benton conducted a study on the Whipple farm in Scott Valley on the effect of amount of water application to tonnage of forage production.

Although production went up when more water was applied, it was found that maximum yield did not equal maximum profit. Expenses of water and harvest increased with yield and at a certain point relative profitability begins to decline. At

the point of peak profitability, a 10% reduction in water may result in a larger corresponding reduction in profit due to fixed costs such as land, pesticides, etc.

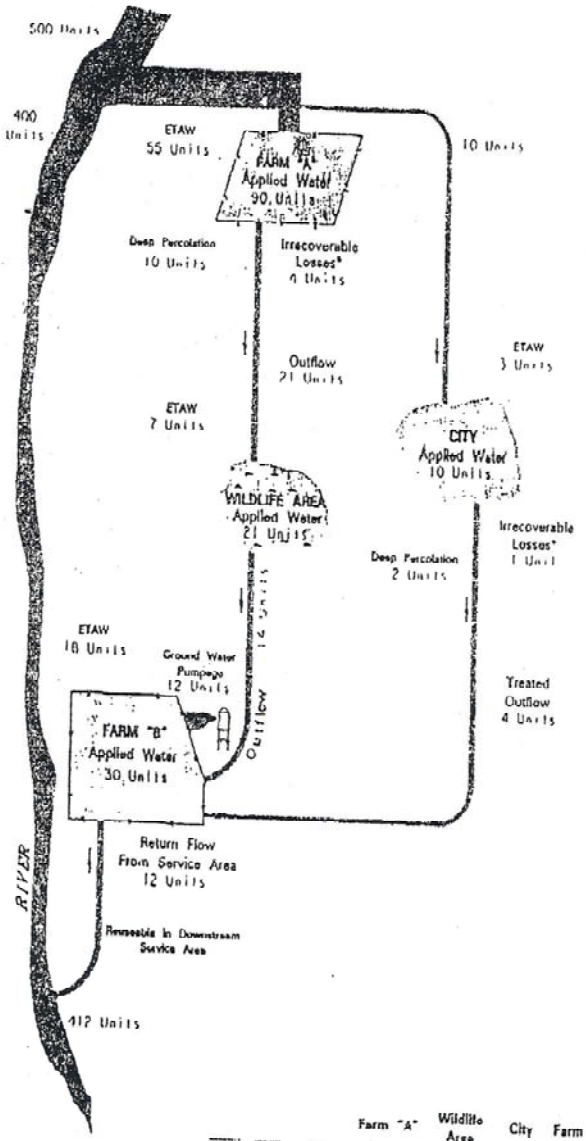
In addition, water management methods must meet moisture frequency needs of crops or long-term productivity will be impaired. As alfalfa is a perennial crop of 5-8 years with a harvest of three to four times a year; and mixed grass/clover pasture is a perennial crop of 20 years or longer; once these plants emerge from winter dormancy, any lapse in the normal irrigation schedule will cause the plant to go into artificial dormancy. When irrigation is resumed, the plant must draw on stored energy to revive causing a long-term negative impact on the overall productivity of the crop or pasture.

Table 1
Summary of Water Users and Contract Water Duty

Irrigation District / Water User	Source of Water Delivered	Contract Water Rights
Klamath Irrigation District	A Canal, Diversion Canal	Beneficial use
Langell Valley Irrigation District	West, East, And North canals	Adjudicated (2.5 acre-feet/acre)
Tulelake Irrigation District	J Canal, Klamath Irrigation District return flows	Beneficial use
Klamath Drainage District	North Canal	Beneficial use
Horsefly Irrigation Districe	Lost River	2.5 acre-feet/acre
Poe Valley Improvement District	Lost River	2.5 acre-feet/acre
Enterprise Irrigation District	Klamath Irrigation District	2.00 acre-feet/acre
Pinegrove Irrigation District	Klamath Irrigation District	2.5 acre-feet/acre
Klamath Basin Improvement District	Klamath Irrigation District / others	3.6 acre-feet/acre
Malin Irrigation District	Klamath Irrigation District	2.5 acre-feet/acre
Van Brimmer Ditch Company	Lost River	Beneficial use
Shasta View Irrigation District	Klamath Irrigation District	Beneficial use
Synnyside Irrigation District	Klamath River	2.00 acre-feet/acre
ADY Improvement District	Klamath River	Beneficial use
Emmitt District Improvement Co.	Klamath River	Beneficial use
Midland District Improvement Co.	Klamath River	Beneficial use
Plevena District Improvement Co.	Klamath River	
Colonial Ralty WID)	Tulelake Irrigation District	2.5 acre-feet/acre
Individual contracts--Lost River Group Individual contracts--Klamath River Individual contracts--KID	Upper Klamath Lake Klamath River (KR) UKL / Lost River	LRG--3 acre-feet/acre KR---3 acre-feet/acre KID---2.5 acre-feet/acre
Upper Klamath Lake contracts	Upper Klamath Lake	2.5 acre-feet/acre
Water rentals	Tulelake Irrigation District, Klamath Irrigation District	2.5 acre-feet/acre
Tule Lake and Lower Klamath Refuges	Tule Lake Sump, Pump D and P Canal, ADY Canal	Necessary to fulfill primary purpose of refuges

Figure III-A. Derivation of Applied Water, Net Water Use, and Depletion

Example of Water Use in Inland Areas



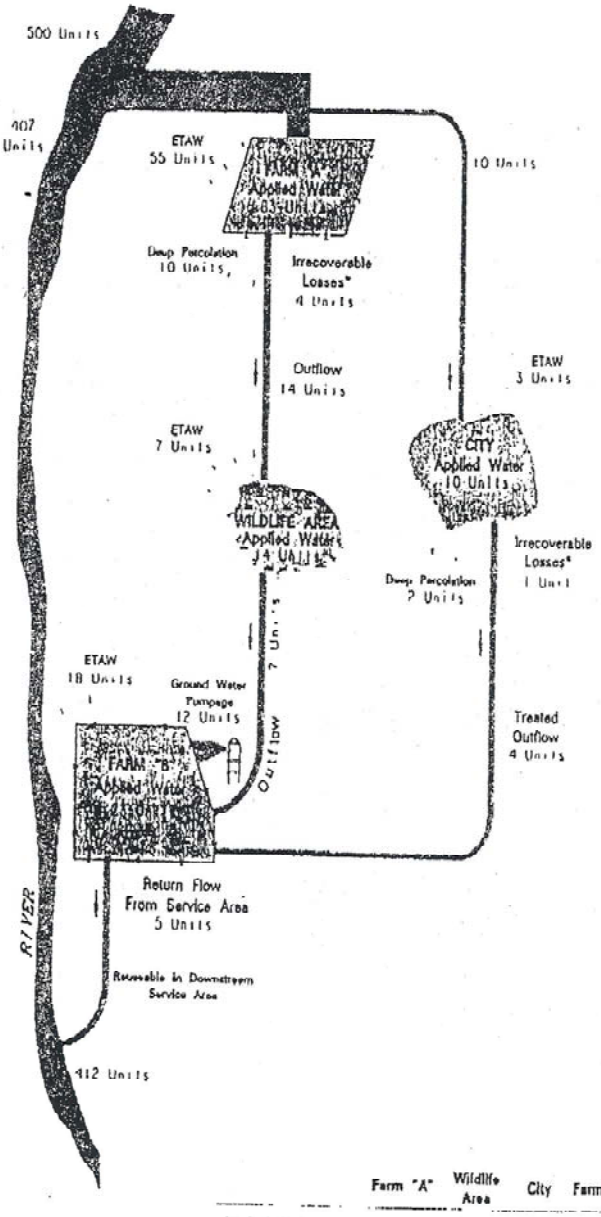
	Farm "A"	Wildlife Area	City	Farm "B"	TOTAL
Applied Water	90	21	10	30	151
Reuse Water	31	14	6	0	51
Net Water Use	—	—	—	—	100
ETAW	55	7	3	18	83
Irrecoverable Losses*	4	0	1	0	5
Depletion	59	7	4	18	88

ETAW = EVAPOTRANSPIRATION OF APPLIED WATER

*Irrecoverable losses are losses from conveyance facilities due to evaporation, evapotranspiration, or deep percolation of water to saline sinks

Figure III-C. Derivation of Applied Water, Net Water Use, and Depletion

Example of Most Inland Areas with High Efficiency



	Farm "A"	Wildlife Area	City	Farm "B"	TOTAL
Applied Water	63	14	10	23	130
Reuse Water	24	7	6	0	37
Net Water Use	—	—	—	—	93
ETAW	55	7	3	18	83
Irrecoverable Losses*	4	0	1	0	5
Depletion	59	7	4	18	88

ETAW = EVAPOTRANSPIRATION OF APPLIED WATER

*Irrecoverable losses are losses from conveyance facilities due to evaporation, evapotranspiration, or deep percolation of water to some sinks

WATER USE IN GOLD MINING

According to Gold Mining in Siskiyou County 1850-1900, Occasional Paper #2; by Gary Stumpf; published by the Siskiyou County Historical Society in 1979.

All of the miners in Siskiyou County, regardless of the mining method used, were faced with the problem of getting sufficient water to the areas they were mining. Water was needed to run their sluices, hydraulic giants, derricks and mills; sometimes in enormous quantity. In some places, such as the wingdam operations along the Klamath and Scott rivers, water could be lifted on the spot by dip wheels and channeled directly to where it was needed, but in most cases, it had to be brought in by means of ditches and flumes, sometimes stretching for miles.

Placers were the first type of deposits to be discovered and worked in California as they were more accessible and easier to work. Lode deposits could only be extracted by crushing the surrounding rock, but placers were already free from the rock matrix and needed only to be separated from sand and gravel. All that was needed was a means of employing the principles of gravity to settle out and collect the heavier gold particles.

In early mining nomenclature, “dry diggings” were deposits found in flats and gullies where there was no ready water supply. “Wet diggings” were deposits found along sand bars or stream beds. “Bench diggings” were located on narrow tables along hillsides. “Bars” were the accumulations of sand and rock opposite the bends of streams.

PAN MINING METHOD – A tin or sheet iron pan was filled with dirt, gravel or sand and water. Larger stones were picked out. The pan was then held under the surface of water with one side slightly higher than the other and swirled with a circular motion. The Swirling current carried away the lighter particles and heavier material settled to the bottom of the pan. The method was slow. It was easily portable and useful only in very rich deposits or for sampling richness of newly discovered deposits.

ROCKER OR CRADLE MINING METHOD – The rocker or cradle was a rectangular box about 3-4 feet long. 1 ½ feet wide, 9-16 inches high at upper end with sides sloping like a cradle. It had a bar across the top near the middle and the lower end of the box was left open. Small cleats or riffles were set into the bottom of the box toward this end. A separate sieve, or hopper, about 4 inches deep was fastened to the upper end. Under this and sloping downward toward the upper end of the cradle, was a canvas apron. The entire box was set on two rockers. The hopper was filled about half way with dirt/gravel. The operator sat at its side, rocking it with an upright handle while pouring water in with the other hand. The water would carry much of the finer material through the canvas apron and over the end. (Much of the gold was trapped in the apron.) The crevices behind the riffles would catch more. Larger stones were tossed out and the process was repeated. A team of 3 men (1 digging, 1 carrying gravel and 1 rocking) was said to average 100 bucketsful of gravel per man, per day (about 4 times more efficient than the pan). Early rockers were made on the site at Thompson’s Dry Diggins (Yreka) with split oaks, centers hewn out, and perforated deerskin to allow water to run through as crude sieves.

LONG TOM MINING METHOD - The "long tom" was built in 2 sections. The first, an inclined wooden trough from 10-30 feet long, 1-2 feet wide at the top and twice as wide at the bottom; about 8 inches deep. Set into the bottom of the trough at the lower end was a piece of sheet-iron, pierced with ½ inch holes. The sheet iron plate was either bent upward into a gradual curve as it approached the end of the trough, or else the end of the trough was cut off at an angle and a flat perforated plate was attached to it. Below this was placed a wider inclined box, perhaps 5 feet long, with a series of riffles. Water was channeled into the trough, through the perforated plate, into the riffle box below and out. The device allowed the use of a continuous stream of water instead of bailing.

Several men could shovel gravel, while one stirred the dirt at the lower end and picked out rocks. The finer material would wash to the lower trough and the gold settle behind the riffles. 6-8 men could work together, each washing 400-500 bucketsful of gravel per day, or 4-5 times as much as a rocker. Rockers were used as early as 1850, in lieu of cradles, whenever there was enough water.

SLUICE MINING METHOD – In the winter of 1850-1851, shortly after the long tom was employed, additional riffle boxes were added to the bottom leading to the development of the sluice. It consisted of an open inclined wooden trough at least 12 feet long, with cleats in the bottom at intervals, or with false bottoms perforated or split to form crevices for the gold to settle. A constant stream of water was run through the trough to wash the gold bearing gravel shoveled into the upper end. A number of sluice boxes could be strung together, with the lower end of one fitted into the upper end of the other and up to 20 men could work the entire length profitably. It was estimated that the efficiency of the sluice was three times that of the long tom.

GROUND SLUICING MINING METHOD - "Ground-sluicing" was one of the techniques used near Black Bear Mine in Salmon River country. In this process, a small ditch was cut into a selected area of riverbank. A stream of water was channeled into the ditch as men worked with picks and shovels at the banks and bottom. The lighter earth was washed away and the heavier material settled into the crevices of rocks in the bottom of the ditch. Sometimes, wooden sluices were set at the lower end of the ditch or rough natural rock served as riffles. At intervals of a few weeks or months, the heavy material in the bottom of the ditch was put through rockers, long toms or wooden sluices to separate the gold.

BOOMING MINING METHOD - "Booming" was a variation on ground-sluicing using a one-time release of dammed water to wash gravel and earth through the sluices. One account of a booming operation run by a man named Westover at Slide Creek was quoted in the Siskiyou Pioneer, Vol. 4, No. 3, pp. 47-52, 77: "He built (a) self chuter, after rip rapping the stream for a number of yards below. A chuter is a dam with a gate built with a trigger set to release the gate when the water fills the dam. I saw a gash cut through a point projecting into the stream…by the chuter, it is almost unbelievable the amount of dirt and rocks moved by this rig in a few days. The chasm was at least thirty or forty feet deep."

WINGDAM MINING METHOD – In 1850, John W. Scott and others discovered gold at Scott Bar near the Scott River's confluence with the Klamath. In this early

operation, the mining practice employed to recover gold was the construction of a "wing dam".

Used on the Klamath, Scott and Salmon Rivers, "wingdams" were temporary dams that "fenced off" and diverted water away from the portion of a riverbed that was to be mined. They were made of sections of 6'x4' pole frameworks (from Willows, Pines and small trees that grew along the river banks). Frame sections were woven with Willows and twigs to form a crib that was filled with rocks, gravel and sand sandwiched between two sections. The sections were sunk in the river to form a reasonably watertight barrier behind which the mining was done. The "head" or upstream dam was often reinforced with planks. It projected out from the bank to the center of the river or farther. A second dam was built at right angles downstream to a "tail" dam that ran at right angles back to the bank.

After a portion of the river was dammed off, water had to be pumped out of the section continuously during the mining operations. "Chinese pumps" or "China pumps" were utilized in the downstream or deepest portion of the area to be mined. The pump was operated by the current of the stream. (Sometimes a second wingdam was constructed from the opposing bank in order to increase the velocity of the water.) An undershot wheel was placed alongside the dam, mounted on a 12" square timber shaft driven into the river bottom, buttressed by large boulders. The diameter of the wheel was usually 10-12 feet and the width from 8-18 feet. Paddles made of inch lumber and 12" wide would dip into the current. A gear connected the wheel with the countershaft, usually a leather belt running on a drum 3 ft. in diameter, ran the pump. The pump was simply an inclined box from 16-36 feet long. Attached in it at the bottom was another smaller drum, connected with the other drum via two leather belts. Attached to the outer side of the belt were paddles approx.. 6"x16". The belt and these paddles filled the pump box (open under the water at the lower end – the top end opening to a discharge flume or box). Some pumps were powered by overshot water wheels, turned by the weight of a falling stream of water channeled into the top of the wheel.

Once the riverbed was exposed and dry, the men could shovel the gravel through sluices. The continuous stream needed for the sluices came through the head dam or was lifted by current or "dip wheels" in buckets over the head dam. These wheels were from 20-26 feet in diameter and 4-8 feet wide. After running through the sluices, the water was discharged over the tail dam.

Mining the placer deposits beneath rivers could only be done during the dry season when water levels were relatively low. (On the Klamath and its tributaries, approx. 8 months from around the 1st of April to the 1st of December – often less.) Since the mining season was short, the wingdam operations often ran day and night using fires or oil lanterns for illumination. When mining was finished, as much as possible of the material of the dam was salvaged. Frequently, the entire operation was washed away by unexpected storms and the dams themselves never lasted the winter.

The Yreka Journal on October 23, 1872, described a local wingdam mining operation as follows: "Just below the junction of the Scott River, on the Klamath River, Mr. W. Learned is carrying on one of the largest mining operations in that section of the country. In this undertaking, he has used over 49,000 feet of lumber, and has a

flume conveying water from the Scott River, carrying about 1,000 inches of water, for the purpose of running two overshot wheels. Altogether, there are four wheels, two overshot and two river wheels, with three pumps in operation, which have a capacity of pumping 100 inches of water each. The derrick is also run by water power, the mast being 60 feet in length and the boom 70 feet, supported by wire guys. Where the wingdam is build, the water in places is 18 feet deep, with a very strong current. He has in his employ about 40 men, who make up quite a mining camp. All who witness this enterprise of Mr. Learned, say it excels in magnitude anything of the kind ever seen. He has expended $8,000 without realizing any profit, but is now within a few feet of bedrock, and in the dirt that prospects well, with a likelihood of taking out very soon, and enormous quantity of the glittering ore…"

WHEEL AND DERRICK TRANSPORT - Bill and Jim Hart are said to have introduced a "wheel and derrick" on the Salmon River in 1857. The "wheel" was a double or single drum hoisting machine, or windlass, powered by a separate current wheel set in the river, or by an overshot waterwheel set up on the bank. Around the drum of this windlass was wrapped a cable that ran to the top of a vertical timber mast several yards away. The mast was 60-100 feet high and guyed securely by 4-6 cables. Toward the base of the mast, a boom, perhaps 70 feet long, was attached so that it could pivot up and down. The cable from the windlass to the top of the mast continued down and connected to the boom through a set of pulleys, so that by engaging the windlass drum with the turning shaft of the water wheel, the boom could be lowered or raised. Attached to the boom was a large bucket into which the rocks were loaded. The entire boom and mast "derrick", as it was called, could pivot on its base, thereby allowing the load of rocks, once raised, to be swung away from the mined area, and onto piles where the large rocks were stacked. Derricks were occasionally used to transport gravel to sluices, but this was usually done through one or more lifts of shoveling or wheelbarrows.

HYDRAULIC MINING METHOD – The mining method called hydraulic mining was invented in 1853. A hose or pipe fed by water pressure carried through wooden flumes loosened ore, and gold was washed out through sluices. The process of hydraulicking changed little from inception. It consisted, simply, of channeling a stream of water to a high point above the claim, letting it fall through a pipe, and directing it under the resulting great pressure to the base of a placer gravel bank. The water caved-in the bank and washed the material (sometimes through trenches) on through sluice boxes placed downslope.

Originally, a rawhide hose with a wooden nozzle was used. The rawhide hose was replaced by canvas, then metal pipe. (Miles and miles of heavy-gauge iron pipe, carefully hand riveted with a double seam in 18 sections was needed to deliver water to hydraulic "monitors".) The wooden nozzle was replaced with the "goose neck", a flexible iron joint formed by two elbows working one over the other. This was superseded by improved models such as the "Craig Globe Monitor", "Hydraulic Dhief" and the larger "Hydraulic Giants" that could move both vertically and laterally. Beams with rock filled boxes were attached to the giants to serve as counterbalances. By adding or discarding rocks, the operator could maintain the nozzle at a given angle without having to support its weight. A "deflector" was patented in 1876, consisting of a short piece of pipe, about an inch larger in diameter than the nozzle. It was attached to the top of the nozzle by a gimbal of flexible ball joint and operated with a

lever. By moving the lever in any direction, the nozzle could be directed by the force of its own water pressure. The force of the water hitting the deflector caused the nozzle to move.

"Hurdy-Gurdys" were water wheels used in hydraulic mining. They originally had small flat buckets around their circumference, against which the spray of a small stream of water was directed under pressure through a nozzle for power. Later, they were improved by cupping the buckets.

The sluices used in hydraulic mining were larger than in other types of mining operations. To prevent finer gold from washing through, the "under current" was developed. An iron grate or "grizzly" was set in a regular sluice, and underneath a second sluice, or "undercurrent" was placed. The finer material and some of the water would pass through the grizzly to the undercurrent sluice, while most of the water and the larger rocks passed through the regular sluice.

In hydraulic mines along the rivers, water had to be channeled to the claim from a source higher in elevation, to provide sufficient pressure to run the hydraulic giants. If the river were used as the source, the ditch or flume might have to begin at a point on the river several thousand feet upstream from the claim in order to reach the required elevation and allow for whatever grade was necessary to provide a good flow back to the claim. Some hydraulic systems in Siskiyou County reached gigantic proportions, with water falling up to 500 feet through a pipe 22" in diameter, resulting in enormous pressure. The giants could throw an effective stream at a bank 200 feet away.

HYDRAULIC ELEVATOR MINING METHOD – The deeper the mining pit, the more difficult it was to raise the gravel up to the sluices. The most efficient way to do this was the "hydraulic elevator". This consisted of an upturned nozzle placed in the bottom of a pit and set into the base of an inclined large-diameter pipe. The point at which the nozzle joined the pipe was open to allow gravel to enter. Water under high pressure was directed through the nozzle and into the larger pipe. This created a suction and pulled the surrounding gravel up into the pipe and out its other end, where it discharged into sluices. The Eastlick Mine (Lafe Eastick) at Oro Fino was extremely deep, making the sluicing of tailings into the Scott River very difficult. Eastlick is credited with inventing the hydraulic elevator.

In 1897, Sidney J. Fore built and operated a hydraulic elevator across from Callahans. A 6 mile ditch was dug by hand and by horse teams from the west side of South Fork of the Scott River to provide pressure at the elevator. An inclined roadway was made to bedrock and the elevator was put in place. A small hydraulic giant was set up to cut down the gravel bank and drive the material toward the elevator. All rocks above 4 inches were picked out by hand and loaded into rock boats or skids and hauled to the surface of the bar. Boulders were loaded on "lizards" and hauled to the surface. A flume for washing material lifted by the elevator was built on a trestle above the surface of the bar, giving the flume sufficient grade to allow gravel to move to the dump.

DREDGE MINING METHOD – Where streams cannot be diverted from their course by flumes and wingdams, so as to expose the bed, or in cases where bench placers

do not have sufficient water for hydraulicking, deposits are commonly worked by dredges. These can be divided into two classes; those that excavate the material by means of line buckets on an endless chain and those of the dipper type, that have a single bucket like a steam shovel.

Bucket dredges are usually employed in working placers in the beds of streams or where there is sufficient water to use a flat boat. The plant consists of a series of buckets on chains that excavate the material and lift it on the dredge. There are also sets of centrifugal pumps to furnish water to sluices. There is usually an elevator for raising the tailings and depositing them behind the dredge. After the material is excavated, it always takes up considerably more space than in the bank, hence the tailings pile is always higher than the bank from which it was excavated.

As the material comes from the buckets, it is usually passed through a trammel to remove larger stones, which pass at once to the tailings or discharge through a chute. The material that passed through the trammel is conveyed over sets of riffles and amalgamating plates. Sometimes there are several sets of trammels to eliminate or screen out material of larger sizes.

Dipper dredges are practically steam shovels that are fitted to operate in gravel banks. They have some sort of gravel elevator for removal of tailings and stacking them to one side or behind the machine. They also have trammels, pumps, sluices, amalgamating plates, etc. The dippers are used where there is insufficient water to use a boat. Where there is no water, dry-placer washers work on the principle of the fanning mill or pneumatic jig – blowing away the lighter sand and leaving the heavier gold.

ARRASTRA PROCESSING METHOD – The Mexicans are thought to have invented or re-invented, the arrastra centuries before the California Gold Rush. The arrastra was a shallow, stone-lined pit with a post set in the center (sometimes a cut off tree). A horizontal cross-beam was attached to the centerpost so that it could turn. One or more large stones (500-1000 lb. granite slabs), called “drags” or “mullers” were put in the pit, attached to the cross-beam could extend so that a mule could be harnessed to turn it.) The ore was crushed by the dragging stones. The resulting creamy mass could be panned or sluiced. To maximize the gold collected, mercury (quicksilver) in amounts equal to expected gold could be added to the ore mud. This would adhere to the gold to form an amalgam, which, being heavier would settle on the bottom of the pit while the rest of the mud was washed out. The amalgam was collected about once a month and placed in a cylindrical iron vessel called a “retort”, which was heated until the mercury vaporized and the pure gold (resembling a sponge) remained. The mercury vapor was passed through a water cooled tube, condensed and saved for re-use. The pure gold was melted and cast into ingots.

Most, if not all, arrastras in Siskiyou County were water powered. Overshot waterwheels turned a shaft to which a pin wheel was attached. This was positioned to mesh at right angles with a second pin-wheel secured to the pivoting centerpost of the arrastra. A double arrastra of this type was in operation on the Commodore Mine on Barkhouse Creek in the 1890’s. It could process five tons of ore every 24 hours and required 2 men (12 hour shifts) to operate. In addition to this arrastra, there were 29 others operating in the county by the turn of the century.

STAMP MILL PROCESSING METHOD – The stamp mill was more expensive than the arrastra and required skilled carpenters and mechanics for framing and construction. The term “mill” referred both to the machine and the building and associated machinery. The mill was always built on a slope to allow the ore to fall, slide or flow from one apparatus to the next by the force of gravity.

The ore carts were dumped I a chute at the top of the building that channeled the ore over an iron grate or “grizzly”. Smaller pieces dropped through to the stamp mill. Larger pieces were fed into a “jaw crusher” (one fixed and one “swing” jaw pulling and pushing across the other. The “V“ at the bottom allowed smaller pieces to fall through.

The stamp mill consisted of one or more heavy pestles, called “stamps”. Each stamp was comprised of 4 parts; and iron shoe; with a conical neck connected to a boss; a stem and; a tappet. The stems were held in place and in alignment by wooden guides fastened to timbers that were part of the frame of the stamp mill. A two-lobed cam on a horizontal steal shaft was situated 5-6 feet above the mortar so that the lobes of the cam when rotating, would engage the undersurface of the tappet, lift the cam, then disengage and drop it. The cams were spaced on the shaft at equal intervals and set so that no two adjacent stamps fell in succession. (As one was falling, the next was rising.) Each stamp weighed up to 850 lbs. and most mills had 5-10 in line. (Black Bear Mine, south of Sawyers Bar had 32 stamps, each weighing 750 lbs.) The stamps fell in a rectangular cast iron mortar, resting on concrete or timbers to absorb shock. Replaceable circular steel dies with square bases were set into the mortar under each stamp to absorb wear. The ore was crushed to powder, mixed with water and the pulp flowed through a screen at the front.

The pulp then flowed onto an inclined table covered with amalgamating plates (copper-coated with mercury). The gold would settle and adhere to the mercury. Periodically, the plates were scraped and the amalgam retorted. Some of the larger mills (Black Bear, Gold Run, and Gold Ball Mines) then channeled the pulp onto “shaking tables” or mechanical concentrators called “vanners”. The shaking table was a large, lightly inclined rectangular table mounted on rockers or slides that allowed it to move back and forth. The upper surface of the table was a series of small, parallel riffles. The vanner was for very fine pulp. It consisted of an endless rubber belt, 4-6 feet wide, stretched across a slightly inclined framework and driven and supported by a series of rollers. The framework oscillated while the vanner operated. The belt moved upslope with a small stream of water coming down so the pulp slowly moved down. The gold settled and adhered to the surface of the belt. Underneath, it was washed into a concentrate box.

Of the 70 stamp mills operating in the county in 1898, 48 were water powered (the cams were turned by overshot waterwheels); 15 were steam powered, utilizing large boilers; and 3 were water and steam powered. (The power source of the remaining 4 is unknown.) The Klamath Mine, at the head of Eddy’s Gulch, had one of the largest stamp mills with 32 stamps and was able to crush from 45050 tons a day.

DRIFT MINING METHODS – “Deep diggings” referred to placers lying well beneath the surface of the ground laid down by rivers of earlier ages, subsequently buried by sediment and debris. In places they ranged up to several hundred feet thick and the only way to exploit them was by digging tunnels or shafts. To mine the deep placers, a method called “drift mining” was used beginning in 1857. In this process holes, called “adits” were dug horizontally into hillsides where gold bearing deposit, or stratum, was expected to be. When it was located, additional excavating, called “drifts”, were driven into it on both sides to extract paying gravel. Tracks were laid in the adits and the gravel was wheeled out in cars to the surface where it was washed in sluices. Alternately, vertical shafts were sunk until paying deposit was reached, then drifts were driven out into the stratum from this point. Underground, the gravel was put in containers, carried to the base of the shaft, then raised to the surface with a derrick and windlass powered by a current or overshot wheel.

Drift mining along the Klamath between Ash and Lungrey Creeks, was described by the Yreka Semi-Weekly Union newspaper on Jan. 28, 1863 as follows: "Up until the fall of 1857, the deep channel of the river through this section had never been prospected. During that fall, Campbell & Co. succeeded in sinking a shaft to the rock and struck a splendid prospect. The consequences was a general 'rush to the Klamath'...many failed to strike immediately on to good pay, and the heavy freshets of the following winter taking off their wheels and improvements, they left in disgust with Klamath mining. Others more fortunate struck good prospects...the channels or pay leads are from 20 to 40 feet wide...the dirt is drifted, thrown into boxes, placed on cars, run to the shaft and raised by derrick and wheel power, the wheels being set in the current of the river. The ground under the river may be drifted with as much safety as the bars (the dirt overhead being solid, but either has generally to be well timbered. There is ground enough in this section...to give employment to hundreds of men for many years..."

WEIR MEASURING METHOD FOR DETERMINGING WATER FLOW – A "weir" is an obstruction placed across a stream for the purpose of diverting the water so as to make it flow through the desired channel. The channel may be a notch or an opening in the obstruction itself and when properly constructed a weir forms one of the most convenient and accurate devices for measuring the discharge of streams. Amount of flow can be determined by simple formulas and coefficients that depend upon observed conditions. Two general forms of weirs evolved – weirs with and without end contractions. "With" – the notch is narrower than the channel through which the water flows, causing a contraction at the bottom and two sides of the "issuing" stream. "Without" (also called a weir with end contraction suppressed) – the notch is the full width of the channel and the issuing stream is contracted at the bottom only.

The edge of the weir should be made from thin pieces of metal having a sharp inner edge (or left flat for 1/8 inch for strength). The bottom edge of the notch must be straight and level, with the sides at right angles to the bottom. The head *"H"* producing the flow is the vertical distance from the crest of the weir to the surface of the water (measured back by reference to a stake driven in near the bank to a height level with the top of the weir). The distance from the crest of the weir to the bottom of the feeding canal should be at least three times the head. The water must approach the weir with little or no velocity. (This can be accomplished by baffle boards.)

WATER LAW PRINCIPLES

ENGLISH COMMON LAW DOCTRINE V. CALIFORNIA DOCTRINE

The English common law riparian right was described by Norris Hundley, Jr., Water and the West – The Colorado River Compact and the Politics of Water in the American West, University of California Press, c1975, pg.66:

"[T]he riparian doctrine guaranteed to the owner of land bordering a river the full flow of the river, less only a reasonable amount taken by those upstream to satisfy domestic needs and to water livestock. An owner's right was strictly usufructuary – that is, he had a right to use the water, but he did not own the stream itself. Most important, however, he had a right to the full flow, undiminished in either quantity or quality, and he was enjoined form impairing the similar right of other riparians. Use was not necessary to create his right, nor did nonuse terminate it. Location alone was paramount, and the water right simply resided in the ownership of the land."

The California application of this right has been determined by the courts to include the following principles:

> *(1) Lands having riparian status are determined by three criteria: a) they must be contiguous to the stream; b) the right extends only to the smallest tract held under one title in the chain of title; and c) the land must be in the watersheds of the stream..*

It is not only the portion of a tract bordering upon a stream "actually washed by the waters of the stream" that is riparian; if a tract originally riparian has never been subdivided, it all remains riparian to the stream.[55] the length of the frontage of the land that abuts the stream is immaterial. It is that there is access to the stream at some point on the land that is important[56]

Riparian lands are those lands that abut the banks of the stream that contain its flow. The law does not distinguish between the riparian right established through "bottom lands" to a stream, even if these lie between higher bluffs that contain the stream during flood.[57] Mere contiguity of tracts to each other cannot extend the riparian right inherent to one section to another not touching the stream, even though both become owned by the same person at the same time.[58] The riparian right may not extend to more land than that embraced within the single original patent that established the initial riparian title.[59] Lands that were originally swampland or marshland, but were reclaimed, are as much subject to riparian rights as any other lands.[60]
In order for land to be "riparian" to a stream, it must be in the watershed of a stream.[61]

> *(2) Domestic purposes (natural use) are first entitled to preference over commercial (artificial use.)*

Domestic purposes includes the sustenance of human beings, for household conveniences and for the care of livestock. Watering of farmstead livestock is a reasonable and beneficial domestic or natural use with perference.[62] The watering of

commercial herds of livestock, although a proper riparian use, is an "artificial use".[63] the use of stream for power is a proper, but artificial use.[64] Recovery of gravel for commercial sale has also been established as a riparian right.[65]

(3) Riparian uses in California were held to include the irrigation of lands riparian to a watercourse as an "artificial" use.

Because of California's arid climate, the courts modified the riparian right to include irrigation of riparian lands.[66] As with commercial livestock use, the irrigation right is subordinate and applies only to the surplus of water above the quantities required for primary natural uses.[67]

(4) In addition to requirements for reasonable and beneficial use, the California riparian right to full flow was subject to the lawful water use rights of upstream users and actual injury.

The riparian right is limited to an entitlement that stream waters flow to his land in such quantities necessary for use on his riparian land; subject to an equitable portion of available water by all riparian users, and subject to appropriative use rights senior to the riparian right.[68] Aesthetic considerations for full flow were not held to be a protected beneficial use when it would deprive upstream users from putting the water to utilitarian purposes.[69] The downstream user has the right to insist that the water not be polluted by upstream use to his real and substantial injury.[70]

(5) the right of the riparian owner to use water of the stream includes both the right to divert it from the channel and the obligation to return it to the stream after it has served his lawful purposes.

Until it reaches his land, the riparian owner has no right or title to water use other than the protective right to see that the full flow past his land to which he is entitled is not illegally diminished.[71] (See section on adverse possession below.) The riparian owner may divert the water to which he is entitled at any point on his riparian land that is suitable, provided he returns the excess to the stream above the lower boundary of his riparian tract.[72,73] The riparian owner may divert at a point upstream of his riparian lands as long as he does not impair the rights of others in the stream and permission and necessary easements are granted by affected users.[74] The method of diversion (dam and headgate, pumps and buckets) is not material, as long as the rights of others are not impaired.[75]

(6) The riparian water use right includes the right to reasonable use of the water on any portion of the tract which is riparian to the watercourse, but not elsewhere, for domestic, stock and irrigation purposes.

Riparian rights are vested in the owner of the abutting land and extend only to the use of the water upon abutting land and none other.[76]

NATURE OF THE RIPARIAN RIGHT AS PROPERTY

(1) The riparian right is considered real property.

Title to the private riparian right is acquired by the owner of riparian land as a part of the transaction by which he acquires title to the land. The riparian right is "part and parcel" of the soil and "runs with the land".[77] It is held to be an incident of property in the land and real property.[78] Normally, the riparian right passes with conveyance of the land.[79,80]

(2) The riparian right is not lost from disuse.

The right is not destroyed or impaired by the fact that the riparian owner has not yet used the water or has no present intention of doing so.[81] Although riparian rights are not subject to loss by abandonment or forfeiture, they **are subject to loss by prescription or adverse possession and use, and many riparian rights in California have been lost in the manner**. An appropriator, or another riparian, who uses the water as an invasion of another's riparian right and with his acquiescence for the period of conditions running under the statute of limitations (5 years), may acquire a vested right to continue to use that water to the detriment of the riparian owner.[82]

(3) The date a riparian right attaches is the date of entry onto domain public domain (private); or the date of land "reservation" (federal government).

Until public domain lands were either disposed of into private ownership, or withdrawn from disposal ("reserved"), riparian rights did not vest in the land.[83] A land patent to an individual conferred the rights of a riparian owner dating back to his "date of entry" onto the land as recognized in the federal or State land patent.[84] The date of creation of the withdrawal from public domain or "reservation" of land by the government is the date recognized as the date upon which (qualified) riparian rights vested in federal reserved lands, subject to State water law.[85]

In 1911, (Calif.Stats. April 8, 1911, pg. 821.) the California State Legislature declared that "all water or use of water within the state of California is the property of the people of the state of California". This was held to apply only to "surplus water" – water available for use over and above that which was private property held as a riparian right (or previously vested appropriative right), or as a federally "reserved" riparian rights.[86] These surplus waters were held to be "public waters", subject to regulation by the State.

On December 19, 1914, the California Water Commissions Act (Calif. Water Code 2774) to regulate "surplus waters" became law.[87]

The Act stated that all new appropriations of surface water required either a certificate of registration (for small scale domestic use), or a permit (leading to a license). The Act was held not to be a "reservation" of riparian rights of State lands as it conferred the State's riparian right on those appropriating water in a manner prescribed by the code.[88]

(4) The riparian right is "correlative" with that of other riparians.

The riparian right is “correlative”, that is, shared equally by riparian owners as a tenancy in common.[89] This means that the individual riparian water use right is not “fixed” in quantity, but is shared equally as available and can be put to beneficial use.

In addition, the use of water by a riparian user must be consistent with the rights of all other owners of land riparian to the same supply.[90]

(The reasonableness of the quantity of water to which any one riparian in entitled is measured by comparison with the needs of all other riparian owners).[91] Once it is quantified, such as in an adjudication, it ceases to be a riparian right and becomes an appropriative right by nature.

CHANNEL AND BEDS AS RIPARIAN PROPERTY –

“Under English common law, private title to land along **navigable** waters – which were defined as waters effected by the ebb and flow of the tides – extended to the high water mark, and land below that belonged to the Crown. **Navigable** waterways were public highways and also public fisheries; the public had the right to use not only the water, but also its banks, both for draft animals to pull barges or other craft and for drying, curing, or cleaning fish. **Non-navigable** streams were quite another matter: the right to use them belonged exclusively to the owner of the land through which they flowed, and the owner could do anything he pleased with the water so long as he did not interfere with the equal rights of landowners further downstream.”[92]

“In America, the law of riparian rights became more complicated than it was in England. For one thing, the common law of riparian rights was adapted only in New York, New Jersey, Virginia, Maryland and the four New England colonies. For another, important variations were forthcoming in New England. By flat of nature, there were precious few navigable streams in New England under common law definition: except in Maine, the New England seashore is located on or near the fall line, and only the Housatonic, Connecticut, and Piscataqua rivers were affected by the tides further than a few miles inland. More significant was the evolution in New England of the law regulating the building of dams on private streams. Owners of such streams could build weirs or weir dams for the entrapment of fish only if they had a license from the colonial assembly, and the license carried with it a fixed price for the sale of fish. Mill dams were licensed ad regulated in the same manner, as were private bridges or ferries. Thus the principle of government regulation of rates and standards of service in ‘public utility’ enterprises was established early in New England. The other five colonies did not adopt the common law in regard to riparian rights; rather, the tendency there was to broaden the definition of navigable waterways until it extended to all fresh-water streams that were potentially navigable…” [93,94]

(Emphasis mine)

At the time of patenting by the federal government, the General Land Office (Bureau of Land Management) made a determination as to whether riparian land was riparian to a navigable or non-navigable stream. All riparian tracts along the Scott River and the Shasta River and their tributaries were determined to abut **non-navigable** streams and the land patents issued included recognition of the private ownership of channel and beds of the streams.[95]

Recently, applicability of the so-called State "Public Trust" Doctrine to these river systems has been asserted by the Klamath River Basin Fisheries Task Force and others. The State describes the Public Trust Doctrine as follows:

(California's Rivers A Public Trust Report – Executive Summary prepared for the California State Lands Commission in 1993):

Page vi. "It is worth noting that the terms of the trust which govern the management of sovereign trust lands, whether in the Delta, riverbeds or elsewhere, are found in the statutes and the decisions of the judiciary and collectively comprise what is commonly referred to as the Public Trust Doctrine. This Doctrine originated in early Roman law and, as incorporated into English Common Law, held that certain resources were available in common to all humankind by 'natural law'. Among those common resources were 'the air, running water, the sea and consequently the shores of the sea'. **Navigable** waterways were declared to be 'common highways, forever free,' and available to all the people for whatever public uses may be made of those waterways.

"In California, the Public Trust Doctrine historically has referred to the right of the public to use California's waterways to engage in 'commerce, navigation, and fisheries'. More recently, the doctrine has been defined by the courts as providing the public the right to use California's water resources for; navigation, fisheries, commerce, environmental preservation and recreation; as ecological units for scientific study; as open space; as environments which provide food and habitat for birds and marine life; and as environments which favorably affect the scenery and climate of the area."[96]

pg. 50-51: "The State of California owns and administers several different types of interests in rivers and streams within the state's borders by virtue of being the sovereign representative of the people. These rights are the property of the state, and the state's powers with respect to these property rights are similar in certain ways to the rights of private property owners, but are governed by the law of public trust. These rights are grounded in English common law, as interpreted and applied by the federal and state court systems of the United States. The state is guardian of those rights which fall under the protection of the ancient 'Public Trust Doctrine', which in England governed certain rights and responsibilities which were entrusted to the King. As a result these rights collectively are often referred t as 'sovereign' rights, or 'sovereign lands'.[97, 98]

"In California, sovereign rights and responsibilities of the state which are traditionally associated with real property ownership have been designated to the State Lands Commissions (SLC). The Public Trust Doctrine, as it affects these rights, is designed

to protect the rights of the public to use watercourses for commerce, navigation, fisheries, recreation, open space, preservation of ecological units in their natural state, and similar uses for which those lands are uniquely suited."

"The state owns, as trustee for the public, the beds of tidal **navigable** rivers and streams up to the Ordinary High Water Mark (under natural conditions, that elevation reached by the average of all tides over an 18.6 year period). The state similarly owns, in its sovereign capacity, the beds of all nontidal, **navigable** rivers and streams up to the Ordinary Low Water Mark. (The term "ordinary" in each of the above statements is a legal term of art which refers to property boundaries, which may sometimes, but not necessarily always, visible from the ground.) Where the state owns the fee interest in the underlying land, its ownership has some of the same characteristics as private property ownership, but is subject to the constraints of the public trust doctrine. For example, the state can and does require compensation to the public for any private use of its property, including both surface use and the extraction of resources from the land. However, the state does not have the unfettered right to alienate its trust property.

"Along **navigable** nontidal waterways, the state also owns a right often termed a 'public trust easement' in the area between the Ordinary Low Water Mark and High Water Mark. The state has both the right and the obligation to balance competing land uses in the easement area. In general, the title of the private owner of the fee underlying the state's easement is subservient to the easement, although the fee owner may use the lands in any way 'not inconsistent with public trust needs." **(Emphasis mine.)**

The imposition of a public trust easement on patented lands determined in the patenting process to be riparian to **non-navigable streams**, would be, in effect a challenge to the patent, or a taking of private property for public use.[99]

APPROPRIATIVE WATER USE RIGHTS:

HISTORY OF THE APPROPRIATIVE RIGHT

In the early years of California, the federal government did little in regard to the issue of public domain lands and their disposal. As the use of water was necessary in developing mineral deposits, mining districts developed local systems to recognize claims to water use. These "appropriative" rights were acquired simply by physically controlling and beneficially using water under posted claim. As Charles w. McCurdy explained, in Stephen J. Field and Public Law Development in California. 1850-1866: A Case Study of Judicial Resource Allocation in Nineteenth Century America. (pg.236):

"Following a tradition of collective action on the mining frontiers of other continents, the miner formed districts, embracing from one to several of the existing 'camps' or 'diggings' and promulgated regulations of marking and recording claims. The miners universally adopted the priority principle, which simply recognized the superior claims of the first arrival. But the…miner's codes defined the maximum size of claims, set limits on the number of claims a single individual might work, and established regulations designating certain actions – long absence, lack of diligence and the like

– as equivalent to the forfeiture of rights. A similar body of district rules regulates the use of water flowing on the public domain."

According to Wells A. Hutchins in Water Rights Laws in the Nineteen Western States. (pg.161):

"This development and the resulting mining industry had a profound influence upon the political and economic growth of California and on the development of water law throughout the West. As water was required in much of the gold mining process, rights to the use of the water were of fundamental importance. This mineral area was Mexican territory when gold was discovered, but was ceded to the United States less than 6 months later by the Treaty of Guadalupe Hidalgo. There was no organized government there in the early years, nor much law except that made by the miners who helped themselves to the land, gold, and water under rules and regulations of their own making as they went along. In the words of the United States Supreme Court (Jennison v. Kirk, 98 U.S.453, 457, 1879), speaking through Justice Field who had been Chief Justice of California, the miners 'were emphatically the law-makers, as respects mining, upon the public lands in the state'.

"The rules and regulations of the miners were made by and for the individual camps and hence varied from one locality to another, but essentially the principles that they embodied were of masked uniformity. These principles related to the acquisition, holding and forfeiture of individual mining claims, based on the priority of discovery and diligence in working them. And to the acquisition and exercise of rights to the needed water were applied comparable principles-posting and recording notice of intention to divert a specific quantity of water, actual diversion and application of water to beneficial use with reasonable diligence, continued exercise of the right, priority of time of initiating the appropriation, and doctrine of prior appropriation of water for beneficial use. These property rights in land and water were thus had, held, and enjoyed under local rules that were enforced by community action."

In 1851, the California Legislature passed the California Practice Act stating: "In actions respecting Mining Claims, proof shall be admitted of customs, usages or regulations established and in force at the bar, or diggings, embracing such claim; and such customs, usages or regulations, when not in conflict with the Constitution and Laws of this State, shall govern the decisions of the action," (Stats. Ch.5, section 621, pg.149; 9 Stat. L. 928) This act affirmed common law, or customs and usages, as the rule in court decisions regarding mining. This included recognition of the rule of primacy of prior appropriation of water – or "first in time, first in right". Water rights of this era were upheld by the courts as "possessory rights" – perfect against any other claimant but the U.S. government.

The recognized method for legal appropriation of water followed principles relating to the establishment of mining claims. An appropriator would post notice of intention to divert a specified quantity of water, proceed with the diversion and application of the water to beneficial use with reasonable diligence and maintain the water right with continued use. Priority of time established the primacy of right relative to other users.[100]

Three Common Law principles were the foundation for the massive body of Western State law that evolved largely in California to govern the use of "public lands" in the absence of Congressional action or enforcement: (1) the Doctrine of Presumption; (2) the right of possession; and (3) a period of silent acquiescence.

(1) In Conger v. Weaver,, 6 Cal. 548,555; (1856), the California Supreme Court relied on the Doctrine of Presumption, under which it was presumed from the absence of specific legislation that everyone who wished to "appropriate" water or to dig gold on the public domain within California had a license to do so, provided that the prior rights of others were not thereby infringed. **101, 102, 103**

These principles were affirmed in numerous subsequent cases such as McDonald v. Bear River and Auburn Water and Min. Co.. 13 Calif. 220, 232; (1859), where the ownership of a water right "as a substantive and valuable property" was held to be "distinct sometimes, from the land through which it flows".

(2) In California, until transfer of title from the public lands to private ownership could be made through patent, "the right of possession", or priority of use, determined the right of ownership in water use, mineral extraction, range use (SEE Section of **Ranching and Dairy)**, rights of way (SEE Section on **Transportation and Rights of Way**), entry and homesteading of land as between individuals – perfect against any claimant but the U.S.**104**

An excellent description of the application of the principles of the Common Law right of possession or "first in time, first in right" may be found in the 1914 case of Palmer v. Railroad Commission, 167 Calif. 163, 168, 138, 170-173, 138 Pac 997 where the Court stated:

"An analogy was found in the rules of the common law relating to controversies over the possession of land between persons who had no title thereto and in which the real owner did not interfere or intervene…the matter between the persons litigating was to be decided according to the rules of law in regard to priority of possession of the land."**105**

(3) As time progressed, the eastern U.S. government, embroiled in the issues of slavery and the Civil War, made no effort to assert ownership control over the public lands and its resources. Land, mineral claims, water use rights, the right to customary range and right of way were staked out, developed and sold. The Courts recognized the legitimacy of such transactions based on the Common Law "right of possession" sanctioned by the "period of silent acquiescence" evident by the inaction of the U.S. Congress as tacit consent. (See the 1877 case of Forbes v Gracey, (94 U.S. 762, 763, 766-767).

Under the Act of July 26, 1866 or "Lode Act" (U.S. Statutes at Large, XIV, pp. 2510253), "An Act Granting the Right of Way to Ditch and Canal Owners over the Public Lands and for other Purposes." Congress recognized "That whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and decisions of the

courts, the possessors and owners of such vested rights shall be maintained and protected in the same…"[106]

The "Placer Act" or U.S. Mining Law amended July 9, 1870, (vol. 16 Statutes at Large p. 217; U.S.C. vol 30, section 35), certified the intent of Congress that the water rights and rights of way to which the 1866 legislation related were effective not only against the United States, but also against its grantees; that anyone who took title to public lands took such title burdened with any easement for water rights or rights of way that had been previously acquired against such lands while they were in public ownership.[107]

Effective January 1, 1873, water appropriators were given the option under California Civ. Code Sections 1410-1422 to file their water claims with the county recorder to preserve priority. Such filing officially dated the water right as of the filing date. If no filing was made, the water right was still valid, but dated back to the time the first substantial steps were taken to put the water to beneficial use. These options remained in effect in California until 1914.

Under the "Desert Land Act" of 1877, (19 Stat. 377; 43 U.S.C. 321 et seq.), Congress declared that all surplus water of lakes, rivers and other non-navigable water on public land is free for appropriation by the public, subject to existing rights. (Applicable to California – See California Oregon Power Co. v. Beaver Portland Cement Co. 295 U.S. 142, 154-155, 160-163 (1935).

The California Constitution article XIV, sec. 1 states: "The use of water now appropriated, or hereafter to be appropriated, for sale, rental, or distribution, is hereby declared to be a public use, and subject to the regulation and control of the State, in the manner to be prescribed by law."[108]

In 1911, under Calif. Stats. Of April 8, the California Legislature declared "all water or use of water within the State of California is the property of the people of California". This declaration, in effect, asserted a State reservation to unappropriated "surplus" waters existing as of that date to the State by virtue of its riparian interests in State owned lands.[109]

It was not until December 19, 1914, that the Water Commissions Act, (Calif. Water Code 2774) became law. The act stated that all new appropriations of surface water require either a certificate of registration (for small-scale domestic use), or a permit (leading to a license). Appropriative water rights subsequent to enactment of the California Water Commissions Act on December 19, 1914 were acquired by authority of the State of California through a permitting and licensing of those riparian rights that the "State may have retained by virtue of its ownership of lands bordering upon a stream" which were dedicated to public use under the 1911 statute.[110]

Section 1007 of the Civil Code established that a title by prescription, good against all owners of private property, could be acquired by adverse occupancy or possession for the period of 5 continuous years (statute of limitations). This was ruled applicable to water diversions. (See also Rice v. Meiners 138 Calif. 292, 293, 68 Pac 817,

(1902): Turner v. East Side Canal & Irr. Co. 169 Calif. 652, 655-658, 147 Pac. 579
(1915): San Bernardino v. Riverside 186 Calif. 7, 13-14, 198 Pac. 784, (1921)

APPROPRIATE RIGHT AS AN INVASION OF RIPARIAN RIGHTS

In Lux v. Haggin, 69 Calif. 225, 255, 338-339, 417-419, 4 Pac. 919, 1984; 10 Pac. 674, (1886) held, on a principle called "absolute territorial sovereignty", that, whereas the "owner" (for the purposes of disposal), was the U.S., it could control the distribution of unappropriated waters on public land, even if this abrogated riparian rights. It was only until after public land was disposed of that riparian rights inhered.[111]

In Duckworth v. Watsonville Water & Light Co., (150 Calif. 520, 525, 528-529, 531, 89 Pac. 338 (1907, the court held that the United States formally consented to the acquirement of appropriative rights on the public domain in the acts of 1866, 1870 and 1877 and thereby waived its right to object to the impairment of the rights of its public lands in the use of the non-navigable streams flowing through them. So long as the lands remained in Government ownership, riparian rights would not be asserted against intending appropriators. (See also 1922 San Joaquin & Kings River Canal & Irr. Co. v. Worswick. (1922))

In Duckworth v Watsonville Water & Light Co., 170 Calif. 425, 432, 150 Pac. 58 (1915). It was the opinion of the court that the diversion of water on public lands, if recognized by local laws, conferred upon the diverter the riparian rights in the stream pertaining to the United States contiguous thereto, on the theory that the United States by the Act of 1866 granted a part of the property in its lands to such diverter.

In 1921 Holmes v Nay, 186 Calif. 231, 234-235, 199 Pac. 325, the court interpreted the Act of 1866 as validating appropriations made on public lands as constituted an invasion of the title held by the United States in riparian lands

In San Bernardino v. Riverside, 186 Calif. 7, 29-30, 198 Pac 784 (1921), regarding the amendment to the Civil Code in 1911 that provided that all water or the use of water within the State of California is the property of the people of the State, the court said; "Taken literally, this would include all the water in the state privately owned and that pertaining to the lands of the United States, as well as that owned by the state. It should not require discussion or authority to demonstrate that the state cannot in this manner take private property for public use…The constitution expressly forbids it… The water that pertained to or was contained in the lands of the state was already the property of the people when this amendment was adopted. The statute was without effect on any other property."

In Meridian v San Francisco, 13 Calif. -2d- 424, 445, 447, 449, 90 Pac.-2d- 537; (1939), the court held that as a result of the state constitutional amendment of 1928, excess waters in streams above the quantities of water to which riparian rights and prior appropriative rights attach are public waters of the state, stating: "There are waters in the rivers and streams of the state to which the riparian right first attaches. The rights of other lawful users on the stream also rightfully attach. In addition there are in many of the rivers and streams of the state great volumes of water which pass

on unused to the sea or to an inland drainage basin. In a real sense the excess water is a great volumes of water which pass on unused to the sea or to an inland drainage basin. In a real sense the excess water is a great natural resource available for the benefit of this and future generations, as the occasion for its use may arise. These excess waters constitute the public waters of the state to be used, regulated and controlled by the state or under its direction."

On August 4, 1943, the California Water Code went into effect. Section 1201 states "All water flowing in my natural channel, excepting so far as it has been or is being applied to useful and beneficial purposes upon, or in so far as it may be reasonably needed for useful and beneficial purposes upon lands riparian thereto, or otherwise appropriated, is hereby declared to be public water of the State and subject to appropriation in accordance with the provisions of this code."

ELEMENTS OF AN APPROPRIATIVE RIGHT

(1) Waters available for appropriation include water not yet appropriated that may be found in rivers, streams, lakes or swamps.

In Duckworth v Watsonville Water & Light Co., (150 Calif. 520, 525 528-529, 531 89 Pac. 338 (1907) it was ruled that a watercourse may terminate in discharge to another stream, a swamp, sandy wash or lake. A lake physically connected with a watercourse is legally part of it and lake, and stream, are subject to appropriative rights.

The court stated: "The right to appropriate water under the provisions of the Civil Code is not confined to streams running over public lands of the United States. It exists wherever the appropriator can find water of a stream which has not been appropriated, and in which no other person has or claims superior rights and interests. And the right cannot be disputed except by one who has or claims a superior right or interest, and by him only as far as there is a conflict. It cannot be vicariously contested by another on behalf of the owner of the better right."

(2) Physical control of the water is necessary in establishing and excerising an appropriative right.

Yba River Power Co. v. Nevada Irr. Dist. (207 Calif. 521, 525, 279 Pac. 128, (1929) – Control of the water by taking it from the source of supply is necessary in exercising an appropriative right.

In Parks Canal and Mining Co. v. Hoyt, 57 Calif, 44, 46, (1880) the court affirmed that a water right does not attach unless one has acquired control of the water. (See also Yuba River Power Co. v. Nevada Irr. Dist. 207 Calif. 521, 525, 279 Pac. 128 – control of the water by taking it from the source of supply is necessary in exercising an appropriative right; and Bader Gold Min Co. v. Oro Electric Corp. 245 Fed. 449, 451-452, C.C.A. 9th, (1917).

(3) Upon completion of necessary work with due diligence and good faith, priority date of the appropriation relates back to the date of the first act of possession.

Kelly v. Natoma Water Co., 6 Calif. 105, 108 (1856); [reference to Stark v. Barnes 4 Calif. 412, 413-414 (1853)], in regard to the "doctrine of relation" with respect to the acquirement of a water right: "where a number of acts are to be performed, in virtue of which right accrues, the time of performance of the last act, when all have been performed in good faith, relates back to the commencement of the series of acts which create the right, so as to make it perfect when the first act was being commenced" (relates back to the first act of possession but not to the intention to appropriate). (See Maeris v. Bicknell. (1857))

In Kimball v. Gearhart, 12 Calif. 27, 31, (1859), the court ruled that the mere construction of a ditch with the intention of appropriating water from a stream is not sufficient, in itself, to establish a right to the use of such water. The title is perfected when the appropriation is complete. When completion of the appropriation occurs, then the priority dates by relation from the beginning of the work, provided that the necessary prerequisites have been fulfilled. (See also **1894** Hewitt v. Story 64 Fed. 510, 514-515- C.C.A 9th)**112**

Effective January 1, 1873, water appropriators were given the option under California Civ. Code Sections 1410-1422 to file their water claims with the county recorder to preserve priority. Such filing officially dated the water right as of the filing date. If no filing was made, the water right was still valid, but dated back to the time the first substantial steps were taken to put the water to beneficial use. These options remained in effect in California until 1914.

In Wells v. Mantes, 99 Calif. 583, 584, 34 Pac. 324, (1893), the court ruled that an appropriation completed without complying with the provisions of the Civil Code had priority over one initiated pursuant to the Civil Code, but after the completion of the nonstatutory appropriation.

In Haight v. Costanich, 184 Calif. 426, 431, 433-434, 194 Pac 26; (1920), on the question as to whether the Civil Code destroyed the doctrine of relation back for nonstatutory appropriators, the court stated: "But the code section by its terms destroys the right of relation back of an appropriator who does not comply with the code, only as to a subsequent appropriator who does. As to all others, his rights are not affected by the code provisions and are to be determined by the law governing the subject of appropriations as it exists independently of the code."

> *(4) Actions by a downstream user to enjoin an appropriation on the grounds of impairment to water quality are subject to proof or real and substantial infury to the property interest of its use.*

In Dripps v. Allison's Mines Co., 45 Calif. App. 95, 99, 187 Pac. 448, (1919), the court stated: "A prior locator cannot insist that the stream above him shall not be used by subsequent locators or appropriators for mining purposes and that the water shall flow to his claim in a state of absolute purity. While the subsequent locator will not be permitted so to conduct his operations as to unreasonably interfere with the fair enjoyment of the stream by the prior locator, or to destroy or substantially injure the latter's superior rights as a prior locator, nevertheless, the law recognizes the necessity for some deterioration, which, within reasonable limits, is *damnum absque*

injuria. Any other rule might involve an absolute prohibition of the use of all the water of a stream above a prior locator in order to preserve the quality of a small portion taken there from. The reasonableness of the use is a question for the jury, to be determined by them upon the facts and circumstances of each particular case."

GROUND WATER

Owners of lands overlying the same supply of percolating water have equal rights therein for use on their overlying lands.[113] Their rights in the common supply, that is, are "correlative".[114]

Owners of lands overlying the same supply of percolating waters have equal rights therein for use on their overlying lands.[115] For beneficial purposes upon or in connection with his overlying land, the holder of the right may take such quantity of water as is reasonably necessary:[116] and only that quantitiy;[117] provided the supply is sufficient therefore.[118] If the percolating water supply is not sufficient for all overlying lands, each tract is entitled to a reasonable, fair and just proportionate share of the available supply.

The right to make reasonable use of underlying water on or in connection with overlying land is limited by the legal maxim "Sic utere tuo ut alienum non laedas, which is expressed in the Civil Code sec. 3514 as "One must so use his own rights as not to infringe upon the rights of another." No one may extract more than such reasonable share when the rights of others are injured thereby.[119] The principle of reasonable and beneficial use of all waters within California was affirmed by 1928 amendment to the Constitution of the State of California, which denied any right to the waste or unreasonable use or unreasonable method of use of water. Whenever a landowner exceeds this reasonable use, he is appropriating to himself that which belongs to others who are entitled to a like use and to that extent is obstructing the free use of property so as to interfere with its comfortable enjoyment, which is a public nuisance.[120]

The overlying owner is entitled to make this reasonable use of the water according to the custom of this locality, and so long as he does so, others may not complain.[121]

TRANSFER OF CONSERVED WATER:

Under Water Code Section 1011, conserved water is considered a reasonable beneficial use of water and is not subject to forfeiture. Amounts conserved through actual reduction in consumptive use, as well as increased efficiencies in water application or transport resulting in reductions of water diverted are considered "conservation" under the code. The continued right to the amount of water conserved may be secured from forfeiture by (1) (for pre- 1914 rights) a letter notifying the state Water Resources Control Board (SWRCB) that water is being conserved; (2) (for post 1914 rights) reporting under paragraphs 21 and 22 of a required "Report of Licensee"; or (3) reporting under paragraphs 23 and 24 of a required "Progress Report by Permittee". Required filings under (2) and (3) should mention the full extent and amount of the reduction in water use.

As an incentive to conserve water, under Water Code Section 1011(b), the amount conserved may be “sold, leased, exchanged, or otherwise transferred pursuant to any provision of law relating to the transfer of water or water rights, including, but not limited to, provisions of law governing any change in point of diversion, place of use, and purpose of use due to transfer”.

Under Water Code 1707, SWRCB can authorize conversion of an existing appropriative right into an instream appropriation to benefit fish, wildlife, or other instream beneficial. Use

The California Water Plan Update Bulletin 160-93 (pages 38-42) indicates that pre-1914 appropriative water right holders may transfer water without seeking approval of the State Water Resources Control Board (SWRCB), provided no other legal user of water is injured. Water held pursuant to riparian rights is not transferable from place to place, although downstream appropriators may contract with riparians to leave water in the stream for potential downstream diversion. (Riparian rights quantified in and adjudication may be transferred if the adjudication permits.) Those with licensed or permitted rights (appropriations dated 1914 or later) must obtain SWRCB approval for transfers as they result in a change in terms and conditions of use.

Short term (one-year or less) temporary transfers of licensed or permitted rights are exempt from environmental impact assessments under the California Environmental Quality Act (CEQA), provided SWRCB approval is obtained. (This approval involves a determination by SWRCB that there is no injury to other legal users of the water and no unreasonable effect on fish, wildlife, or other instream beneficial uses) Long-term transfers require CEQA compliance.

Transfers of ground water, and ground water substitution agreements, (whereby ground water is pumped to substitute or replace surface water sold by transfer), may be, in some cases, subject to statutory restrictions designed to protect ground water basins against long-term overdraft and to preserve local control of ground water management.

Typical transfers (or sales) of water use rights or conserved water are structured so that water is transferred for a price while the original holder retains the water right. Several statutes provide that transfers of water do not impair or cause forfeiture of water rights.

APPENDIX 8 Customs and Culture – Forests and Forest Products

The forests and forest products industry figures prominently in Siskiyou County's economic and cultural past. Many of the County's cities and towns grew up around sawmills and the employment they provided. The towns of Weed, McCloud, Tennant and Hilt were built as "company towns" by lumber companies. Communities within the county rely on the forest products industry for education, roads and basic infrastructure. Past land and resource use often shapes future land and resource use decisions which affect community stability; therefore, to plan for the future it helps to understand the past.

The first sawmills were built in 1852 to supply miners and settlers with building materials and used human powered whipsaws. H.L. Wells states in his "History of Siskiyou County" (circa 1881). "It is said that at Scott Bar there is enough timber under the ground to construct a number of towns like the one on top. In 1860, there were 30 sawmills in the County. By 1873, there were four steam powered and thirteen water powered sawmills in the county producing 3.5 million board feet of lumber and 1 million shingles for local use.

The arrival of the railroad to Siskiyou County in 1886 dramatically affected the timber industry. Within several years of the coming of the railroad, over 45 mills were operating between Dunsmuir and Weed. Siskiyou County's high quality pine timber was used for finished lumber; box shook and finished window sash and doors which were hauled out by rail to distant markets. By 1902, the timber industry exceeded the mining industry in total employment with 2,300 employed in Siskiyou County. By 1909, the lumber industry was the number one manufacturing industry in the State, both in terms of wage earners and value of production. After introduction of the railroad into the Grass and Butte Valleys, which contained vast tracts of almost pure pine on flat easily logged land, the number of railroad car loads of logs went from zero in 1905 to over 18,000/year in 1928. Over 10 mills operated in this region alone helping to make Siskiyou County the leading country in the State in terms of lumber production during the 1920's.

The county also benefited from the tax base provided by the large aount of private land. Up until 1891, public land policy had been committed to transferring the public domain into private ownership. Through various laws, large tracts of timberland were bought by lumber companies and individuals. Lands acquired were those with the highest quality timber and easiest access. Large land grants to the railroads as well as to the State schools also transferred land into private ownership. By 1912, the Weed Lumber Co. alone owned 76,000 acres with an assessed value of $390,000.00.

In accordance with the Forest Reserve Act of 1891, Klamath Forest Reserve was created in 1905 from the remaining public domain forest land which had not been transferred to private ownership. Reserves were created in response to public fears over a looming "timber famine" resulting from the fast paced destructive logging of private timberlands throughout the country. The 1905 "Use Book" stated, "Forest Reserves are for the purpose of preserving a perpetual supply of timber for home industries, preventing destruction of the forest cover which regulates the flow of streams, and protecting local residents from the unfair competition in the use of forest

and range. They are patrolled at Government expense, for the benefit of the *Community* and home builder." Opposition to the creation of the Forest Reserves revolved around the loss of local control. In response to these concerns, Forest Service policy held that Reserve timber was to be supplemental to, not competitive with, private timber. Reserve timber was to be made available only to meet *local* needs and to stabilize *local* industry. Timber designated for sale had to be appraised, advertised and sold at, or above market value.

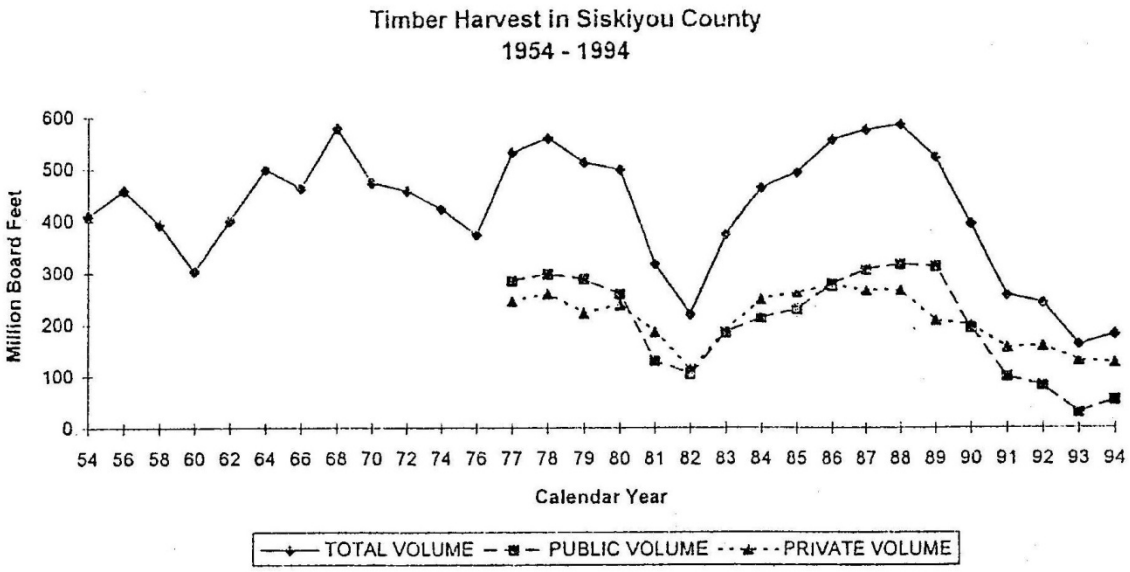
With the crash of 1929 came the end of many sawmills, particularly in eastern Siskiyou County. The larger mills: Fruit Growers, Weed Lumber (now Long-Bell), and McCloud River continued operations albeit at a slower pace. A 1939 USFS study predicted these mills would be closed in 15 years due to the depletion of their timer holdings (2 of the 3 are still operating). By the late 1930's there were 37 small circular sawmills in Scott and Quartz Valley, each producing 1 to 5,000 bd. ft./day-enough income to feed their families.

The post-war housing boom and improving lumber market stimulated interest in Klamath Forest timber. Very little timber had been sold prior to the mid 1950's from the Forest prompting one Regional Inspection report to state that the Klamath has perhaps the largest single block of virgin timber of any California Forest. Construction of timber access roads were begun on the west side of the Forest in 1946. Beginning in 1949, the Klamath River Highway was upgraded in order for the County to benefit from the developing logging and lumbering activity in the Happy Camp area.

In 1948, the Klamath Forest acquired over 32,000 acres of private ground in exchange for timber cutting rights. The County Board of Supervisors unanimously requested the USFS to acquire all the remaining Southern Pacific sections within the Klamath Forest to assure a long term logging and lumbering economy. By 1954, there were 4 sawmills and 2 peeler mills in Happy Camp. Scott Valley had 4 mills producing 40MBF/day and 9 mills producing less then 5MBF/day. Other mills were built in Seiad Valley, Horse Creek, Yreka and Salmon River. While private timber harvest continued, accounting for roughly half of the county's annual timber harvest (see chart), production emphasis shifted to the National Forest as the private regrowth matured. For the first time, sawmills were built to mill federal timber instead of private.

From the 1940's to the mid-1970's, over 20% of the county's employment and 90% of the county's manufacturing jobs were in the lumber and wood products industry. Sagging lumber markets and competition for federal timber by southern Oregon and Humboldt County mills resulted in the closure of some mills in the early 1970's. High interest rates of the early 1980's severely impacted the home-building industry and thus the lumber market. Timber harvest activity plunged and unemployment rose to 18.8% during the lowest levels of production in 1983.

Recent reductions in federal timer as a result of Endangered Species (i.e. spotted owl) considerations as well as policy changes made in Washington DC have resulted in a drop in federal harvest levels of 89% from 1986-1993. Private harvest levels were also affected by the listing of the spotted owl and dropped 50% in the same period.



For the first time a drop in harvest levels was not related to market conditions or local resource depletion; harvesting declined due to political imperatives. This has resulted in the closure of more mills and the loss of 65% of the County's logging jobs and 50% of its manufacturing jobs from 1989-1994. Under a 1908 Act, 25% of all money received by the national forests is paid to the County for the benefit of public schools and roads. Between 1977 and 1993 these payments averaged $6,492,664.60 annually to the County. The reduction of federal harvest levels after years of government assurances of a sustainable level of harvest have left many residents unemployed, angry and bewildered at their lack of voice in decisions made in Washington D.C. and distant courtrooms. Having built their economies and livelihoods around promised federal timber development, towns such as Happy Camp have seen their custom and culture change almost overnight from that of hard work, prosperity and pride to that of welfare, dependency and despair.

Despite these reductions, Siskiyou County is still a leading producer of forest products in California. The forest products industry is still the largest industrial employer maintains the greatest capital investment and is the largest tax payer in the county. The forest products industry remains an integral part of the county's industrial infrastructure of suppliers, services and transportation as it has for over 140 years. The fact that the county's forests are still producing forest products is testament to the fact that humans can and do manage forests wisely for the long term benefit of both.

Addendum

*1852 First sawmills built to supply gold miners and settlers
*1853 B. Johnson builds sawmill on Shackleford Creek in Quartz Valley
*1854 McDermit & Davidson build sawmill in Aetna Mills
*1857 Oliver & Prevost build sawmill on Kidder Creek near Greenview
*1859 Ross McCloud builds sawmill in Strawberry Valley near Sisson (Mt.Shasta)
*1860 Festus Payne builds water powered circular sawmill on French Creek near Etna. With a daily production rate of 5MBF/day, it is considered the most extensive of the 30 sawmills now in operation in Siskiyou County.

*1873 Of the County's 17 sawmills in operation, 4 are steam powered and 13 are water powered. Annual production is 3,500MBF of lumber and 1,000,000 million shingles; the majority used locally.
*1877 Shingle factories built at Deetz (near Mt. Shasta) and Keyser.
*1880 Eleven sawmills are in operation at the following locations: 2 in Little Shasta, 2 on the headwaters of the Sacramento River; 1 between Greenhorn and Cherry Creeks; 1 on Hamblin Gulch near Fort Jones; 1 at Etna Mills; 1 at Scott Bar; 1 on French Creek; 1 on Dogger Creek near Oak Bar n the Klamath River; 1 on Kidder Creek and 1 on Cottonwood Creek. Annual production is 3.500MBF.
1886 Southern Pacific completes rail line from Redding to Sisson (Mt. Shasta).
*1887 Rail line completed to Montague
*1888 Sisson Mill and Lumber Co. builds sawmill in Sisson (Mt. Shasta). This was sold to Wood and Sheldon Lumber Co. in 1901 who operated a sawmill and logging operation in the Box Canyon/Deer Creek (Lake Siskiyou) area. This was sold to Rainbow Mill and Lumber Co. in 1914.
*1889 Yreka rail line completed between Montague and Yreka.
*1890 Pioneer Box Co. builds box factory near Sisson (Mt. Shasta). In 1928, Pioneer merges with Rainbow Mill & Lumber to form Mt. Shasta Pine Manufacturing Co.
*1891-13 sawmills/box factories operating within 6 miles of Sisson.
*1892 Cantera Lumber Co. builds and operates a sawmill, box factory and logging operation at Cantera on the Sacramento River north of Dunsmuir. Logging conducted in Ney Springs Creek drainage below Castle Lake. Operations ceased in 1917.
*1894-27 Rail carloads of sugar pine logs and 10 carloads of sugar pine planks exported to England via San Francisco from sawmills near Mott (by Dunsmuir).
*1902 Timber industry exceeds the mining industry in total employment; 2,300 employed (McCloud River 100; Klamathon 375; Coggins Bros. 175).
*1903 Ash Creek sawmill, dry kiln and 4,500MF of high grade lumber burns.
*1905-Klamath Forest Reserve created by Theodore Roosevelt's proclamation.
*1908-Klamath Forest sells 55 Class A Ranger sales and 3 Class B timber sales mostly to miners Scott Bar Hydraulic mines buys largest sale to date: $527.34 of flume timber.
*1909-Southern Pacific completes rail line from Weed to Klamath Falls.
*1914-Klamath Forest issues timber sale prospectus for 2 billion board feet of timber north of the Klamath River between Happy Camp and Hornbrook. It would require building a 72 mile ail line from Hornbrook to Happy Camp and sawmills on the mouths of Beaver, Thompson and Indian Creeks. No bids were received.
*1915-4,000 men, 1/5 the population of Siskiyou County, are employed by the timber industry. 50 sawmills produce 200,000MBF annually. 50 billion feet remain to be cut.
*1918-Fruit Growers purchases 22,000MBF of Klamath Forest timber in Beaver Creek.
*1921-Siskiyou County receives $2,278.73 in Klamath Forest receipts.
*1924-Secretary of Agriculture sets Klamath Forest annual harvest limit of 147,000MBF.
*1926-Southern Pacific completes line from Klamath Falls to Eugene Oregon.
*1928-Southern Pacific hauls over 18,000 car loads of private logs in Siskiyou County.
*1929-Klamath Forest sells 103 timber sales of less than $500.00 in value and two sales of over $1,00.00 in value.

*1931-Klamath Forest sells 92 timber sales all less than $500.00 in value.
*1938-Fruit Growers purchases 11,000MBV of Klamath Forest timber in Beaver Creek.
*1939-USFS releases economic study titled “The Forest Situation in Siskiyou County”. It predicted that the 4 large mills (Fruit Growers, Long Bell, McCloud River & Associated Box) would all be closed in 15 years. Projected annual yield of the Klamath Forest was 137,000MBF.
*1944-J.F. Sharp Lumber Co. purchases 2,000MBF of Klamath timber in Greenhorn Creek.
*1945-State of California adopts a Forest Practice Act regulating logging on private land.
*1946-Construction begins on the 11 mile Humbug Creek timber access road. Opening the area to logging would tap approximately 100,000MBV of timer (75% Gov’t, 25% Sharp Lumber) and extend the lumbering payroll in Yreka 8-10 years. A Regional General Integrating Inspection observed that the Klamath Forest has perhaps the largest single block of virgin timber of any California Forest. The Klamath Forest returns $5,000.00 in receipts to Siskiyou County.
*1947-Klamath Forest sells 7,859MBF of timber and returns $8,800.00 to Siskiyou County.
*1948-Klamath Forest, through a tripartite land exchange, acquires 25,294 acres of Southern Pacific land in Russian, Etna, and Beaver Creeks as well as the Carter Meadows area. The Siskiyou County Board of Supervisors unanimously requested the Forest Service to acquire all the remaining Southern Pacific Railroad sections within the Klamath Forest to assure a long term logging and lumbering economy. The Klamath also acquired 6,900 acres of Sharp Lumber Co. land in Humbug Creek in exchange for timber in the same area.
*1949-Construction of timber access roads begun in Grider and Indian Creeks. Plans to upgrade Klamath River Highway in order for Siskiyou County to benefit from the developing logging and lumbering activity in the Happy Camp area.
*1952-Southern Pacific Land Co. establishes forest management program of sustained yield.
*1952-Eastlick Mills builds sawmill at Finley Camp on the Salmon River. Klamath Forest sells 51,000MBF and cuts 43,000MBF.
*1953-Small circular sawmills in operation on Grider and Horse Creeks and at Hamburg.
*1954-Plywood plant built up Indian Creek. 6 mills are not operating in Happy Camp, 2 peeler mills and 4 sawmills. Timber cut is virtually all federally owned.
*1955-Sale of salvage timber from the Haystack, Kidder, Six Mile & 3 Devils fires begins within 3 weeks of the fires being put out. Salvage sale buyers must pay a replanting charge of $2.35/MBF and a reseeding charge of $5.00/acre to prevent erosion of the land.
*1960-Multple Use-Sustained Yield Act directs USFS to give equal consideration to recreation, range, timber, water, and fish & wildlife.
*1964-Wilderness Act passes, Marble Mountain & Trinity Alps declared wilderness.
*1968-Wild and Scenic Rivers Act passes, portions of the Salmon, Scott and Klamath rivers are declared wild and scenic.
*1969-National Environmental Policy Act is passed requiring Environmental Impact Statements (EIS) to be prepared on federal activities that affect the environment.
*1970-California Environmental Quality Act (CEQA) passes requiring Environmental Impact Reports to be filed on State actions affecting the environment.

*1971-State Forest Practice Act found unconstitutional in Bayside vs. San Mateo County.
*1972-Forest Practice Act passed by legislature requiring State approval of private logging. State Supreme Court holds in Friends of Mammoth vs. Mono County that CEQA applies to private activities where State permit is required.
*1975-In Natural Resource Defense Council vs. Arcata Redwood Co. the court rules that private timber harvesting must file an EIR. The legislature declares that Timber Harvest Plan (THP) is a "functional equivalent" to an EIR.
*1976-National Forest Management Act passed requiring all national forest to prepare Land and Resource Management Plans which are to be updated every 15 years.
*1978-Siskiyou County receives $9,620,532.86 in National Forest Reserve funds.
*1984-California Wilderness Act passes, Russian & Siskiyou wilderness' created.
*1990-Northern Spotted Owl declared a threatened species by US Fish & Wildlife.
*1991-US District Judge Dwyer issues an injunction against the Forest Service barring them from awarding timber sales in suitable spotted owl habitat until an EIS outlining standards and guidelines to ensure the owls viability is adopted.
*1994-Option 9 of the proposed standards and guidelines is adopted. 58% of the county's manufacturing jobs are in lumber and wood products-630 less jobs then 1989.

Weed Lumber Co.-Abner Weed built a sawmill, box factory and the company town of Weed in 1900. Weed purchased extensive holdings northeast of the Mt. Shasta in the Grass Lake area. A rail line was built into these holdings by 1905. A sash and door factory was built in 1907 and enlarged in 1914 and produced 2,500 doors and 3,000 windows each day. A plywood factory was built in 1911 and modernized in 1943. The company of Tennant was built in 1921. A sawmill at French Creek was also operated. Long Bell Lumber Co. assumed control of the company in 1924 and ran it until it was sold to International Paper Co. in 1956. In 1959 Weed became incorporated as a city and by 1960 Long Bell had sold the remaining company homes and stores. In 1982 Internal Paper sold the mill to Roseburg Lumber Co. and the land to Fruit Growers. Both the land and the mill are still in production today.

Klamath-Klamath River Lumber Co. purchased a tract of Southern Pacific timberland in 1981 as well as other parcels totaling 27,000 acres. A sawmill, box factory and a town was built 20 miles downriver of their holdings on the Klamath River and rail line near Hornbrook. Logs were transported to a dry chute which sent them into the river; then they floated down to Klamathon. In 1894, Pioneer Box Co. built a box factory in Klamathon with a capacity of 30MBV/day. This was purchased from the adjacent mills. In 1902, a fire destroyed the mill, both box factories, 8 million board feet of lumber and most of the town (pop. 1,000). The town and mills were never rebuilt. The timberland was sold to two companies. Potter & Sons Lumber Co. and Algoma Lumber Co. Algoma operated a box factory in Montague.

McCloud River Lumber Co.-In the early 1890's, George Scott and William Van Arsdale purchase a sawmill near Mt. Shasta. A box factory and planning mill were built and the sawmill enlarged. In 1897, Scott and Van Arsdale purchase a mill on the McCloud River as well as adjoining timberland. Rail line into the newly constructed company town of McCloud is completed in 1898. After constructing a new sawmill in McCloud, the Mt. Shasta and McCloud River sawmills were

dismantled. By 1915, the sawmill was cutting 100,000MBV/year and the company employed 1,800 men. A 50 year timber cutting contract was purchased on 25,000 acres of adjacent land owned by Red River Lumber co. in 1919. This tract was estimated to contain 500,000MBF of timber. McCloud River's sawmill closed in the early 1970's and was sold along with the land to Champion International Corp. Champion retrofitted the mill for smaller logs before selling it to P & M Cedar Co. in 1982. The land was sold to John Hancock Life Insurance in 1992. Both the land and mill are still in production today.

Fruit Growers Supply Co.-In 1854 a sawmill was built on the West Fork of Cottonwood Creek (near Hornbrook) by the Mill & Fluming Co. This mill was relocated 5 miles up the creek in 1864. John Hilt bought the mill in 1877 and operated it until it was purchased by the Hilt Sugar Pine Co. in 1901. They in turn sold it to Northern California Lumber Co. who obtained financing from Fruit Growers Supply Co. When Northern California went into receivership in 1910, Fruit Growers assumed ownership. A new sawmill, planning mill and box factory were built at Hilt as well as a company town. The Cottonwood mill was dismantled. A division of the Sunkist Exchange, this mill provided box shook to the California Citrus Growers. In 1915, Fruit Growers expected to log and mill 30,000MBF from which they would make over 3 million boxes – enough to fill 700 train cars. By 1934, over 50 miles of private rail lines extended through company land west of Hilt. Contract logs were hauled into Hilt from as far away as Yreka, Gazelle, Castella and Chiloquin Oregon (170 rail miles away). After the introduction of cardboard boxes in the 1950's, the Hilt mill turned to milling finished lumber. The sawmill was shut down in 1974. Fruit Growers kept their timberland and now sell logs to other mills.

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Appendix 9 Customs and Culture – Recreation and Tourism

BACKGROUND

Recreational activities have played a major role both monetarily and socially in Siskiyou County for many generations. Since the early 1800's, people from all points of the globe have traveled to Siskiyou County to enjoy the beauty and abundant recreational availabilities this county has to offer. This has created a tourism industry which in recent years has become a major segment of the economic base of Siskiyou County.

With its varied topography, the vast land expanse and acreage of this county has established a diverse inventory of available recreational opportunities. The central location of Interstate 5 running north/south, connecting the Mexican border to the Alcan Highway and ultimately Alaska, is assisted by major east/west highways to create a network of corridors supported by the paths, trails, logging access roads, and motor vehicle roads as described in the TRANSPORTATION AND RIGHTS-OF-WAY section of this document. These highways and byways have made available, to a large segment of the population and citizens of the United States, a nucleus of natural and man-made recreational and entertainment opportunities. Extreme care must be exercised to protect the access to the recreational areas of Siskiyou County to assure the continued benefit to the economic base of the country.

HIKING/CLIMBING AND RECREATIONAL SNOW ACTIVITIES

In the southern part of the county, climbing and hiking activities date back to the first recorded ascent of Mount Shasta in 1854 by an eight (8) man party led by Captain E.C. Pearce of Yreka. In 1916, the city of Mount Shasta paid for a toboggan slide on Orem Street in the downtown area to provide recreation and entertainment to the local citizens, as well as visiting tourists. In 1930 there was a community toboggan slide created on Spring Hill at the base of Mount Shasta and the Snowman's Hill ski area was established as one of the first in the nation. In 1933 four (94) ski jumps were installed, the largest being the "A" jump (now known as the 100 meter). In 1932-33, a rope tow was installed on Snowman's Hill which attracted Olympic competitors from the entire nation for practice sessions. In 1957 Roger Hines and Audry Handley placed a rope tow at Bunny Flat on the slopes of Mount Shasta to accommodate expanded skiing opportunities. In 1957 local investors created the Ski Bowl, a ski facility permitted by the United States Forest Service. The Everrit Memorial Highway was paved for the benefit of all visitors to the ski facility. In 1985 the United States Forest Service issued a permit to re-establish the original Ski Bowl as the Mount Shasta Ski Area on the slopes of Mount Shasta. Also in 1985, the Mount Shasta Ski Park was established and continues to operate.

FISHING

In 1946 it was reported that sport fishing on the Klamath River was flourishing with as many as 20 fishermen using the same pool or eddy and all available motels and cabins filled by advance reservations. The reports indicated other rivers in Siskiyou County receiving heavy sport fishing traffic as well, including, but not limited to, the McCloud, Sacramento, Scott and Salmon River. In the 1980's the Sacramento River was rated as one of the top 100 fishing steams in the United States. Over 50 years of stream and lake trout planting by the California Department of Fish and Game have assured a continual recreational opportunity to anglers and families from the

entire county. However, recent restrictive management practices have adversely affected this much sought after form of leisure activity and the attendant tourism industry with its economic benefit to the county.

CAMPING AND HUNTING

In 1907 the Siskiyou County Clerk's office was selling hunting licenses for $1.00. By the year 1907, hunting had become a grand pursuit by both locals and tourists. In 1923, the Klamath River Highway was completed which opened additional attractions to tourists, campers, hunters and anglers. The end of the year showed a large increase of recreational visitors. Subtotals indicated 18,839 people with 7,802 using campgrounds. Development on campgrounds included, but were not limited to, Bluff Creek, Spring Flat, Finley Camp or Idlewild and Perch Creek.

RECREATIONAL ATTRACTIONS TO SISKIYOU COUNTY: The list of attractions and attributes that entice a large segment of tourists to Siskiyou County each year include, but are not limited to:

Cantara Loop
Captain Jack's Stronghold
Castle Crags State Park
College of the Siskiyous
Elk Herds
Excursion Trains
Forests
Glaciers
Glass Mountain
Headwaters of the Sacramento River
Historic Homes/Buildings
Horseradish Factory
Lakes
Largest free-standing mountain in the United States
Largest gold display south of Alaska
Lava Beds National Monument
Living Memorial Sculpture Garden
Lumber Mills
Military Pass
Mountain Wilderness Areas
Mountains
Museums
Northern California's Oldest Fish Hatchery
Pacific Crest Trail
Pacific Flyway
Petroglyphs
Rivers
Sisson Callahan Trail
Shasta Abbey
Ski Facilities
Soda Springs
Start of the Alcan Highway
Stephens Pass Earthquake Area

Streams
Waterfalls

RECREATIONAL OPPORTUNITIES AND POSSIBILITIES: The list of recreational and entertainment possibilities available to the local citizen and visitor to Siskiyou County includes, but is not limited to:

Animal packing – commercial, non-commercial
Backpacking
Bicycling
Bird watching
Boating – canoe, drift, kayaking, motorized, patio, sail
Bowling
Bungy jumping
Camping – developed and undeveloped
Christmas tree cutting
Climbing – mountain, rock
Dining – varied cuisine, culture and nations
Equestrian activities, rodeos, rides, etc.
Fishing – fly, ice, lakes, streams and rivers
Flora & fauna – observation and collection
Flying – airplanes, hang-gliding, gliders, hot air ballooning
Forest by-products gathering (moss, lichen, burls)
Gathering – berries, herbs, nuts, plants
Golfing
Guided Tours – animal, auto, foot, motor coach
Hiking – trails, cross country
Hunting – fowl, mammal
Ice skating
Mushrooming
Mining and panning
Painting – artistry, drawing
Picnicking
Photography
Rafting – commercial, non-commercial
Racquetball
Repelling
Rock hounding
Sightseeing – hatcheries, historic, museums, misc. Points of interest
Skiing – cross country, downhill, snow, snowboarding, water
Snowmobiling
Snow play
Spelunking
Square Dancing
Swimming
Tennis
Trapping
Windsurfing
Wood cutting and gathering

ANNUAL EVENTS:

Annual events which enhance the tourism economic base in Siskiyou County include, but are not limited to:

Christmas holiday celebrations
Dunsmuir Railfare
Edgewood Flea Market
Happy Camp Bigfoot Jamboree
Klamath River Blackberry Festival
McCloud Flea market
McCloud Forest Festival
McCloud Lumberjack Fiesta
McCloud Winter Festival
Mount Shasta Blackberry & Bluegrass Festival
Mount Shasta Old Fashioned Fourth of July
Old Etna Days
Rodeos in several towns and communities
Saint Germain's "I AM" Pageant
Siskiyou County Golden Fair
Tinman Race
Tulelake Butte Valley Fair
Tulelake Waterfowl Festival
Weed Carnevale
Weed's Chinese Auction
Weeds and Wild Flowers Festival
Yreka Citywide Sidewalk Sale

RECREATION / TOURISM
SUMARY:

Recreation and tourism has been an important part of the history, customs and culture of Siskiyou County for many generations. It is constantly changing and reflecting the evolution of the entertainment needs of the population of the United States. Any attempt by any agency to alter, restrict, or control recreational activity within the county could have devastating effects upon the peoples and economic base of Siskiyou County.

APPENDIX 10 Customs and Culture – Transportation and Rights-of-way

BACKGROUND:
In the debate over mineral legislation that occurred in Session 1 of the 39th Congress of 1866, Congressman George Julian of Indiana, then Chair of the Public Lands Committee of the House, favored subdivision and sale of mineral lands at auction to pay the war debt, with some vague restrictions to prevent monopoly and ensure ordinary claimants some opportunity to purchase the land.

Senator William Stewart of Nevada, however, favored a ratification of the status quo, with additional inducement of giving the successful miner fee-simple title at a nominal price. He introduced a bill on the floor of the Senate stating; "All there is in this bill is a simple confirmation of the existing conditions of things in the mining regions, leaving everything where it was, endorsing the mining rules. It simply adopts and perfects the existing system allowing these people to enjoy their property without being subject to the fluctuation created now by agitations in Congress."

The Senate passed the bill, but Congressman Julian buried it in his House committee. Stewart countered by amending the contents of a House passed bill on rights-of-way across public lands with his mining bill and pushed it through the Senate. It was returned to the House Committee on Mines and Mining instead of the Public Lands Committee and passed the House as the *Act of July 26, 1866* (U.S. Statutes at Large, XIV, pgs. 251-253 or "An Act granting the Right of Way to Ditch and Canal Owners over the Public Lands and for other Purposes."

The integration of Stewart's two original pieces of legislation on rights-of-way and mining into the *Act of July 26, 1866,* (also known as the "Lode Act"), provided a broad contextual basis for the Congressional recognition of the vesting of various possessory rights on public lands as had been obtained under local customs and laws.[122]

The *Act of July 26, 1866*, included provisions that "The right-of-way for the construction of highways over public lands, not reserved for public purposes, is hereby granted." (These provisions were later separated from the mineral and water use provisions as R.S. 2477).

In California, State law recognizes both *informal prescriptive* creation by customary use by the public and *formal* action by public authority sufficient to constitute the acceptance of a right-of-way and dedication as a "public highway."[123] In Bull v. Stephens, 158 P. 2d 207 (Cal. Ct. App. 1945), citing Pol. Code Section 2618 as reenacted in 1883 and in force until 1935, established that "Acceptance of the offer of the government could be manifested and dedication could be effected by selection of a route and its establishment as a highway by public authority. Dedication could also be effected without action by the state or county, by the laying out of a road and its use by the public sufficient in law to constitute acceptance by the public of an offer of dedication. In order that a road should become a public highway, it must be established in accordance with the law of the state in which it is located." [124, 125]

It should be specially noted that according to California law, the "public" may manifest acceptance of the U.S. offer of a right-of-way over public lands just by laying out a road and using it. The process requires no action by the state or county.

In 1870, under the "Placer Act" or U.S. Mining Law amended July 9, 1870, (vol. 16 Statutes at Large p. 217; U.S.C. vol. 30, section 35), Congress also clarified that it was its intent that the water rights and rights-of-way to which the 1866 legislation related were effective not only against the United States but also against its grantees; that anyone who took title to public lands took such title burdened with any easement for water rights or rights-of-way that had been previously acquired against such lands while they were in public ownership.

In 1873, the portion of the body of federal Mining Law applicable to rights-of-way for the construction of highways over public lands was separated from the historic context of the original Acts and reenacted as Revised Statute (R.S.) 2477. In 1938, it was recodified as 43 U.S.C. Section 932). [126]

The mining Law of 1866 applied the free-access principle to "all mineral lands of the public domain." The 1872 Mining Law changed this to "all valuable mineral deposits in lands belonging to the United States." In numerous cases decided both before and after the period of 1866-1872, the courts had held that the "public domain" embraced only lands available for disposal under the various disposal laws – that is, those areas not withdrawn from disposal and reserved by the federal government for other uses. [127]

In Siskiyou County, the Modoc national Forest was created on Nov. 29, 1904. The Klamath national Forest was, in large part, created on May 6, 1905; the Trinity National Forest on April 26, 1905; the Shasta National Forest on October 3, 1905; the Upper Klamath Wildlife Refuge on April 3, 1928 (with additions on Feb. 26, 1954); the Lower Klamath Wildlife Refuge on Aug. 8, 1908 (with reductions on May 14, 1915 and March 28, 1921); Lava Beds National Monument in 1925 (transferred to National Park status in 1933); and the Tule Lake National Wildlife Refuge was created Oct. 4, 1928 (enlarged in 1932 and 1936 and reduced in 1942.) [128, 129, 130]

These "creation" dates would correspond to the dates in which these lands were withdrawn or reserved from the public domain and the dates that the free access offer of the Mining Law of 1866 or R.S. 2477 ceased to apply. However, public rights-of-way that had been established prior to withdrawal or reservation became grandfathered as vested rights.

(NOTE: Activities that do not ordinarily cause any appreciable disturbance or damage to public lands, resources or improvements have been generally designated as "casual use" by federal agencies and have not normally required a right-of-way grant or temporary-use permit. Traditionally, this has included foot traffic and use of pack animals or horses. Off-highway vehicle use may also be included – generally as posted. However, current management trends appear to be moving toward more restrictive control and permitting requirements.

There is an implied right of reasonable access for those engaged in valid uses of public lands and for "in-holders" of private lands. This includes patented and unpatented mining claims, grazing allotments or other permitted use. Court decisions have upheld agency requirements for helicopter access to Wilderness mining claims, and there are many local incidences of helicopter logging. So, mode of access may be specified for access. Route of access may also be specified for resource concerns. Season of access may also be specified, as has been done to protect spotted owl nesting habitat.

Grazers currently require a trailing permit to move cattle overland to allotments and Rangeland Reform proposes to charge them a fee for forage consumed along the way.

There is some unresolved question as to whether the Taylor Grazing Act of 1934 withdrew lands from public domain into grazing districts.[131] It appears not, as the Act states; "…in order to promote the highest use of public lands pending its final disposal…) The 1866 Mining Act and R.S.2477 were repealed with the Federal Land Policy and Management Act (FLPMA) on October 21, 1976, but under 43 U.S.C.'s 1769, all rights of way that existed on the date of repeal were expressly preserved.

DEFINITION OF A "HIGHWAY":

The dictionary defines a "highway" as a road or route to some end destination. The criteria for the conditions that constitute the establishment of a "highway" necessarily vary from era to era. Certainly, pre-European Native Americans in Siskiyou County traveled by foot or by boat. Centuries of use of deer traces/foot trails established seasonal migratory paths and trade routes between tribes across prairies, along rivers/streams, through the forest and across mountains, which are evidenced by remnant artifacts constructed of materials not native to an area.

Many of these same historic trails, such as the Siskiyou Trail, were later used by Russian, Hudson Bay Co. and Rocky Mountain Fur Co. trapping parties in the early nineteenth century. (Peter Skene Ogden, Jean Baptiste McKay, John Work, Alexander McLeod, Jedediah Smith, Michel La Framboise, Stephen Meek and Thomas McKay were known to have trapped the county and there was a permanent settlement at Squaw Valley.) Early explorers such as Lt. George Emmons (as part of the Wilkes expedition), John Fremont and Kit Carson passed through the county along the trails that were the highways of that era.

As the original Indian and trapping trails were used and re-used, by foot, mule, horse and cattle, they compacted and became broader. As wagons passed over sod, the way became compacted in defined ruts. In many cases, very little preparation of the trail was performed. The public simply established permanent passage as a highway and widened it through repeated use.[132]

It was really not until the era of established communities that clearing and preparation of the path was required in order to accommodate the easy passage of freight wagons and stage coaches to central points of commerce.

These conditions continued as the general status quo well into the 20th century in many parts of the West. Most motor vehicle roads were not even started in the county until the late 1920s and many overlay earlier routes.[133]

Transportation via horseback is still a common practice among ranchers and recreationalists in Siskiyou County. According to the Annual Report of Estimated Crop and Livestock Production of the Year Ending December 31, 1994 issued by the Siskiyou County Department of Agriculture, there are an estimated 13,500 horses and mules in the county with a human population of 46,426 and a cattle population of 84,500. It is obvious that there is a large equestrian population. The era of access and transportation that exists in Siskiyou County today is a mixture of prepared motor vehicle roads, (most of which are gravel and dirt,) traditional trails that have evolved from continued public use, logging access roads and four wheel drive paths similar to the pioneer wagon wheel rutted roads of the 1850s.

These are the realities of our "highways" in the contest of our culture. They include main equestrian routes and footpaths to some end destination such as a pasture, mountain cabin, lake or fire lookout; foot paths used by hikers along old Indian and mining trails that branch off the main Pacific Crest trail or end at lakes or mountain summits; dirt roads to access timber stands for harvest; or 4-wheel drive ruts over former foot or horse paths to hunting grounds or mining claims. (*Please see the attached paper entitled "HISTORIC REFERENCES TO OLD TRAILS, ROADS, & RAILROADS In SISKIYOU COUNTY.")*

ABANDONMENT & STATUTE OF LIMITATIONS – FEDERAL PERSPECTIVE:
(From pg. 15 of the Draft R.S.2477 Report of March 1993)

"Current policy and case law do not recognize any form of Federal provision for abandonment of R.S.2477 rights of way. In the absence of a waiver of sovereign immunity, no one, including State and local governments, may challenge the title of the United States to Federal property. In recognition of this, Congress passed a quite-title statute that now appears at 43 U.S.C. Section 2409a. It allows those who have been put on notice that the United States has a claim adverse to their property interest to file a law suit to quiet-title. However, the statute also provides that quiet-title action must be filed within 12 years of the date the affected party discovers the Federal claim. R.S. 2477 rights-of-way are easements and, therefore, interests in land subject to the quiet title statute. If they are not acted upon within 12 years of the date of the Federal Government takes action that is consistent with their existence, then arguably, they are gone whether they existed in the first place or not. This would be true where Congress established a wilderness area, where BLM designated an area as Wilderness Study Area, or where the U.S. Forest Service blocked off a former right-of-way and no one had acted on it for over 12 years."

Conclusions

All existing public roads and trails in Siskiyou County are an integral part of Siskiyou County's infrastructure. Plans for changing, altering, eliminating or otherwise modifying any public roads or tails or their access has the potential for impacting infrastructure and thus community stability, thereby requiring coordination.

HISTORIC REFERENCE TO OLD TRAILS, ROADS AND RAILROADS IN SISIKIIYOU COUNTY

There are many historic references to old trails, wagon roads, state roads and railroads across the public domain lands in Siskiyou County that were established and developed prior to the federal reservation and management of lands within the County.[37]

1827-1828 or 1829-1830 and 1833: Military Pass – Sheet Rock Trail

1828: Trapping trail through the Pass of the Siskiyou over the ford across the Klamath River near Klamathon known as "Six Cailloux"

(prior to) 1833: The California to Oregon Sacramento River Trail

1837: The Siskiyou Trail to Oregon was travelled by Ewing Young.

1843-1844: John C. Fremont guided by Kit Carson, mapped, surveyed and chartered trappers trails, publicizing maps of the western territory in his report. Fremont may have cross Siskiyou County to enter Nevada.

1846: The Applegate or Southern Emigrant Trail, said to pass two miles from Butte Valley

1848-49: The trail from the east Applegate Trail diverted near Goose Lake, south to the gold fields.

1850s: One of the main trails to Oregon began at Fort Reading and wormed its way through the mountains, crossed Scott Mountain, continued north along Scott River on the east side of Wheelock's trading post in Ft. Jones, then followed Cherry Creek, or McAdamas Creek northward to Deadwood, then to Thompson's Dry Diggings in Yreka. It also connected with the Scott Bar Trail.

1850s: Deadwood, on the junction of Deadwood and Cherry Creeks was a stop on the California-Oregon stage line.

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[37] 1904: Nov. 29, Modoc National Forest created.
1905: April 26, Trinity National Forest created. May 6, Klamath National Forest created. June 2, Lassen National Forest created. Oct. 3, Shasta National Forest created.

February 13, 1909 Klamath National Forest Proclamation No. 3 added about 22 sections to the Goosenest – Ball Mountain area. The KNF made this a separate Ranger district.

The Upper Klamath Wildlife Refuge was created on April 3, 1928 with additions on Feb. 26, 1954; the Lower Klamath Wildlife Refuge was created on Aug. 8, 1908 with reductions on May 14, 1915 and March 28, 1921; the Tule Lake National Wildlife Refuge was created Oct. 4, 1928 and enlarged in 1932 and 1936 and reduced in 1942.

There is some unresolved question as to whether the Talor Grazing Act of 1934 withdrew lands from public domain into grazing districts. It appears not as the Act states, "…in order to promote the highest use of public lands pending its final disposal…)

1851: A trail from coast was cut to the Klamath River and up its course. Large rocks had to be removed, river points cut away and trees thrown across streams for bridges. The River was crossed by a toll ferry run by Captain Thompson.

1851: Early gold seekers from the south traveled through the Trinity Trail route over Trinity and Scott mountains into Scott Valley, and on to Yreka Creek, Greenhorn and Cottonwood Creeks.

1851: Most merchandise was packed in from Trinidad on the coast (by way of Kerbyville and Jacksonville, Ore.); from Shasta over Trinity and Scott Mountains; or by the Sacramento Trail.

1851: One or two steam paddle boats connected Sacramento with Colusa once or twice a week. These were met by stages and freight teams to haul passengers and freight to Shasta City. Pack trains averaging 30-60 mules hauled from Shasta to Yreka.

1851: Steele operated an express from Ft. Jones to Scott Bar with goods and beef. Later, an express line from Scott Bar to Yreka and Sacramento was started and taken over by Cram, Rogers & Co.

(circa) 1852: Mule pack trains brought supplies into Forks of Salmon and later ran between Etna and Sayers Bar. A mule pack train ran from the coast to Bestville, below Sayers Bar.

1852: The Yreka Trail branched left from the Applegate Trail just west of the divide between Willow Creek and Laird's LANDING ON Lower Klamath Lake and southwest of the latter place. Turning southward it followed up Willow Creek some four miles to Willow Springs, passing in route a place later to become the Van Brimmer ranch… Thence the trail ran southwesterly across Red Rock Valley to cross Butte Creek near the present day Southern Pacific siding of Kegg. Continuing southerly through the Orr lake gap, the old trail passed along the southern shores of Grass Lake and around the south base of Sheep Rock where the old trappers trail coming down from Military Pass was intersected. The trail then took a northwesterly course pass the old Snelling place, later the Herd and now the Coonrod ranch, to divide within a few miles, with one branching leading to Little Shasta and the other to Yreka.

1852: A party of men under the leadership of William H. Nobles left Shasta City (west of Redding) scouted out a new emigrant route to the Humbolt River called "Nobles Cut-Off". They met a party of 23 men from Yreka heading east to St. Louis. Nobles Cut-Off turned from the Applegate Trail at Black Rock, continued southwesterly to Susanville, crossed the Sierras north of Mt. Lassen, and entered the Upper Sacramento Valley near Redding. A later branch off Nobles Cut-Off cross(ed) Pit River near Fall River Mills and entered Shasta Valley via the Military Pass Trail.

1852: a minister making his way from old Shasta over the Swift Creek Trail from old Shasta (Trinity County) Sunrise Pass – past Big Flat and Abrams Trading Post into Siskiyou County became lost in a snow storm and froze to death. When they found the body they named the mountain "Preacher's Peak."
1854: Eddy's Map

1854: Many of the California stage lines merged into the California Stage Company and shortly after, steamers merged into the California Steam Navigation Company. Hugh Slicer brought two Concord coaches to Yreka and began a stage line from Yreka through Scott Valley to Callahan Ranch. A train of saddle animals connected from that point to Shasta City. McLaughlin and Comb began a stage line north from Shasta City in May.

1854: Road completed from Scott Valley to Yreka. Also a toll road was built over Scott Mountain.

1854: A road connected the Ohio House in Scott Valley with Aetna Mills. Near the Ohio House, the main trail branched off, crosses the Scott River (near Young's Dam) and continued through the foothills to Aetna Mills. Then it crossed over the Salmon Mountains. Ohio House was a stage stop on the California Oregon Stage Road until 1871.

1854: Callahan was a stage stop. It was known as Callahan Ranch, Callahan, Callahan's and Callahan's Ranch.

1854: Ross McCloud, surveyor and miner, purchased a squatter's right on the Soda Springs property from the Lockhart Brothers, and built a Camp and trail to serve pack trains from Shasta to Yreka.

1855: The State Legislature authorized Hugh Slicer and others to construct a road from Sacramento Valley to Yreka. By late summer loaded wagons passed over the route, "The Lockhart Wagon Road" from Red Bluff to Yreka and back.

1856: Extensive Government Land Surveys were made in both the Shasta and Butte Valleys by C.C. Tracy. Many of the original roads were noted in these surveys.

1856: First freight wagon road from Red Bluff to Yreka. (Previously by pack animal only.) The route taken was the old Pit River Road around the eastern end of Mt. Shasta, but Indians drove the stages off in September. The route remained from Shasta to Yreka by mule or horse over the Trinity and Scott mountains. A stage line was established from Jacksonville over the Siskiyou Mountains to Yreka by Dan Cawley.

1856: Military Pass, leading from Mt. Shasta into the Shasta Valley, began as an Indian trail, was used by Hudson Bay trappers, gold seekers and later, the military. Emigrants using the route constructed a wagon road in 1856. In 1857 the military escorted wagons to protect them from the Indians.

1856: Bartle was a weigh station and stage stop east of McCloud on the first wagon road in Siskiyou County.

1856: The town of Yocumville (Centerville) was established on the South Fork of Salmon River. Phil Dunphy had a pack train. A footbridge was stretched across the river.

1857: Charles Henry Stone purchased half interest in a ranch north of Weed. During the early part of the summer of 1867, the stock was driven to a range around Medicine Lake using a road that went west of what is now the town of Weed and east of Black Butte, crossing into Squaw Valley at the old Mountain House. All salable cattle were driven each year to Red Bluff where it was loaded onto river boats for South San Francisco.

1857: Stage line from Yreka to Shasta.

1858: Freight wagon route over Scott Mountain to Salmon River.

1858: W.L. Lowden built a road from Shasta to Weaverville. The California Stage Co. operated stages through the entire Trinity Valley, but ten miles over the Trinity Mountains and 14 miles over the Scott Mountains still required mule or horse.

1858: The Shasta and Yreka Turnpike Co. was formed with stock purchased mostly by farmers of Scott Valley. Within 12 months the road was completed over the Trinity Mountains to the foot of Scott Mountain. The County of Siskiyou was granted, by special act of state legislature, to appropriate their portion of the state's poll tax for improvements of roads. The Supervisors applied the money to building a road from Callahan to the summit of Scott Mountain to intersect with the turnpike in 1859.

1860: An excellent road, many miles blasted from solid rock eleven feet wide had been completed over the Trinity and Scott Mountains. Ample turnouts allowed eight mule teams to travel safely.

1860: First road from Sacramento to Portland was completed.

1860: Shasta Valley stage station listed as "Starveout", later "Juliens".

In the 1860's, the road across Scott Mountain between Siskiyou and Trinity was completed. Callahans Ranch became the principal freight depot for South Fork and the Klamath River. Packers starting from Callahans used the Jackson Creek Trail East Fork route and Brownsville boomed briefly.

1861: Large snow plows to e pulled by oxen were in readiness to clear Scott Mountain for passenger sleighs.

1862: (circa) a new road crossed Scott River through Horn Lane, connecting Etna (Rough and Ready) with Callahan. As a result, the number of mule trains increased. Those who had large pack trains included: Charles Baird, James Abel, Henry Peters, Elza and Araron Eller, Marcus Isaacs, John and Henry Grant, Herbert Finley, Mrs. Martha Smith, Mrs. Neilon, and the Bennett and Miller train with 50 animals was the largest. All the packers had their headquarters at Rough & Ready. More than 200 mules were used to haul about 600,000 pounds of merchandise annually.

1862: The upper crossing of Bear Creek, now called Upper Crossing, was then called Ager Sheep Camp. The lower crossing was then called the Sager Crossing.

1863: The Soda Springs and Pit River Turnpike Road Co. was formed by Willard P. Stone, his brother Norton Stone and father Elias Stone. The road began near Lower Soda Springs near the Shasta-Siskiyou line and followed the Sacramento river most of the way, unless there were high bluffs. There were 17 bridges. Stringers were cut from trees along the river and were green and heavy. Some had to be floated to the desired spot, and then raised up on the foundations. The road followed the Sacramento to Pollock (now under water above the Shasta Dam,) and then eastward to the McCloud River, about a mile from where the McCloud flowed into the Pit. The station of Baird was near the junction of these two rivers. The road followed along the pit for a short distance to a Ferry.

1864: W.L. Laird came to Lairds Stage Station. The ranch was known as Laird's Ranch or Virginia Ranch. (Confluence Klamath River and Willow Creek.)

1864: In February, Hickox and Co. established the Yreka-Sawyer's Bar route. Mule trains were used for the mountains, connecting with Dunlevy's express at Etna Mills.

1864: Map filed with the Siskiyou County Clerk, H.A. Rogers on May 10, 1864.) Notation on the map reads: "Plat and field notes of a wagon road Survey commencing at the old sawmill on Little Shasta River and terminating at a large ded (sic) pine tree at Butte Creek Valley, four miles above Ball's cabin, one and a half miles west of Butte creek and six miles west of the emigrant Road leading to the Klamath Lakes. The entire distance by the survey is twenty and a half mile, on a strate (sic) line from point to point is fifteen and three fourths miles. The grade is easy and neutral. The ground is generally good, though some is inclined to be swampy; more again is inclined to be sandy; but neither in sufficient quantity to prove an obstacle to the construction of a good wagon road." Yreka ----May 8, 1864, A.M. Jones Surveyor."

(Helfrich notes in The Siskiyou Pioneer – Butte Valley Edition: vol.2, No. 9; Siskiyou County Historical Society; c1957, that the road described is the old Ball Mountain Road. A prior road must have been in existence at the time this was established. The 1862 road, in comparison with the current road, crossed the ridge about 5 miles further south and entered Butte Valley at the same location as does present Highway 97. "The old sawmill" was the old Breed Mill on little Shasta at Cold Springs on the northeast side of Table Rock. The old mill site later occupied by the Forest Service Guard Station would probably be "Cleland and McMurrin's Sawmill" located some 5 ½ miles upstream.)

1864: The three Van Brimmer brothers took up a homestead on Willow Creek. Willow Creek is a small winding stream that empties into Lower Klamath lake. The place was located along the Yreka Trail branch of the Applegate Emigrant Trail. A later road to Alturas built by H.C. Tickner ran past the ranch.

1865: The road over Forest House Mountain into Scott Valley was declared a toll free road.

1866: George Nurse and Edgar Overton built a cabin next to the Link River, which joins the Upper Klamath Lake with Lake Ewauna. The area was on the route linking Fort Klamath to Yreka and near a fork in the Applegate Trail. Nurse and Overton

operated a ferry over Link River. A small settlement was established known as Linkville, Oregon. Linkville was renamed Klamath Falls in 1892.

Freight to Linkville was brought over the old Ball Mountain Road, first from Red Bluff (head of river navigation,) later from Redding and even Montague after the railroad had reached those places. The old freight road went straight across Butte Valley from the Ball Ranch to the little knolls near Macdoel, then north along the base of the hills to Cedar Point. Then it cut once more across the valley to leave it just east of Dorris.

1866: Storms interfered with stage and freight traffic in January. A foot of snow fell at Tower House, 4 feet on Trinity and 10 feet on Scott Mountain. Heavy winds uprooted pines to block passage. Oxen traveled back and forth to beat down snow and sleighs were used. When road became mush, mud wagons were used.

1866: James Carr purchased Shasta and Yreka Turnpike Road beginning at Tower House, through the Trinity Valley and up the valley, over Scott Mountain to the Callahan Ranch. Toll houses, buildings, tools and wagons were included in the $10,000 sale.

1866: After establishing the “D” ranch in Siskiyou, P.A. Dorris staked claims on the Pit River. In order to cross the river with cattle from one ranch to the other, Pres and Jim Dorris (his nephew) and others built a bridge made of poles cut from Juniper trees. The site was first called Dorris Bridge and later, Alturas.

(Prior to) 1870: California-Oregon stages travelled northeasterly from Yreka, crossing the Shasta River northwest of Montague and ferrying across the Klamath just north of Willow Creek. They then traveled on the older trapper trail route over the Siskiyous. In 1870, the route was redirected over the Anderson grade. Stages passed through Cottonwood/Henley six miles north of the ferry.

1870: What is believed to be the first quartz mill in Eddy Gulch was hauled in carts pulled by oxen over the Deacon Lee Trail from Callahan.

1870: Construction of the California & Oregon Railroad north from Roseville, up the east side of the Sacramento Valley reached Chico via Marysville on July 2, 1870. It then crossed the Sacramento River at Los Molino’s to reach Red Bluff in 1871 and Redding in 1872.

1870: Stage lines were changed from Cole’s Mountain House run to Rough & Ready, replacing the Yreka to Ohio House run. The stage company transferred its line eastward from the Trinity to Sacramento run. This left a vacuum in travel to and from Scott Valley.

1871: H.C. Tickner built a road from Butte Valley to Alturus. The road began on the Ball Mountain Road at Bull meadows, entering Butte Valley east to the Boyes Ranch (now owned by Butte Valley Irrigation Co.) and across Red Rock Valley. It then passed south of Van Brimmer Mt. (now Mt. Dome,) and the Lava Beds to meet the Pit River road at Hot Springs Valley at the Boiling Springs a few miles east of Canby.

1872: Railroad reaches Redding.

1873: Stage stops – Henley/Cottonwood, Butteville.

1873: There was a stage from Oak Bar-Yreka-Happy Camp. Happy Camp is mentioned as a stage station at “Murderer’s Bar”. This was Del Norte county at the time.

1875: H.C. Tickner completed the first wagon road up Klamath River by way of Shovel Creek to Linkville. (Helfrich assumes that shortly after a connecting road was established into the northern end of Butte Valley from the Topsy Grade vicinity.)

1876: Ager was established as a stage stop by J.B. Ager. Later, the town was on the C & O Railroad and had a depot. Supplies were freighted here for distribution in eastern Oregon, Klamath Basin and River. There was also passenger service, Wells Fargo Express and mail.
Shovel Creek (near Copco) is listed as a stage stop on the Yreka-Linkville (Klamath Falls) via Bogus Creek route.

1876: Heavy snow storms hit in January and the trail over Scott Mountain was not broken for sleights until March. Snow on the mountains was sufficient to last until June or July and teaming would be difficult until June.

1877: The Etna and Sawyer’s Bar Wagon Road Co. offered stock for sale to build toll road connecting the 2 towns (About 2,500,000 pounds of freight annually was transported by various routes to the Salmon River area.

1878: James Camp started a trading post called James Camp & Co. at Ferry point (Klamath River south of Clear Creek.) Travelers using the Kelsey Creek Trail stopped here and there was a ferry across the Klamath River. (Note: For extensive documentation on the Kelsey Creek and trail to the coast, consult the Kidder journal records.)

(early)1880s: Sam Sargent built a home on the Shasta River at a point that was shallow and accessible. Early settlers had used it as a ford when the water was low. When water was high, it was necessary to use a bridge that the Orr family had built further downriver (Grenada Ranch Bridge.) After the Sargents moved to the river, it was known as Sargents Crossing or Sargents Ford.

1881: Historic Map covering major drainages and mountain ranges (available through the Siskiyou County Museum)

1881: George Washington Deter homesteaded on Goosenest Mountain at Forestlawn. On the main road from Butte Valley to Shasta Valley, it became a stop-over.

1883: Benjamin Van Brimmer sold his ranch to William Davis and his partner, John Bull. Davis’s kept a stopping place for travelers from southern Oregon to Montague. Large droves would stop the night and feed the cattle. It was also a stop for the 4-6 freight teams. Davis sold the stop in 1911 to J.C. Mitchell. It was continued as a

stop by Harry Mitchell for several years, then taken over by the Grayson-Owens Packing Co. of Oakland. E.M. Hammond later bought the 2,000 acre ranch to run Hereford cattle.

1883: L. Swan of Yreka built six stages for use between Redding and Roseburg, Oregon. P.O. LeMay did the iron work, Jake Martin the painting and Fred Ringe the upholstering. Wagon making, capital industry in Siskiyou County, continued until after the turn of the century.

In 1884, Charles Henry Stone switched his range two days away to the middle and south fork of the Sacramento River drainage. There were only deer and Indian trails to follow, so it was necessary to realign and brush new trails (from Weed to south fork of Sacramento River drainage.)

1857: Butteville (later “Cavanaugh’s” and then “Edgewood”) was a stage stop.

1886: (circa) The Grenada Ranch and the Butte Creek Ranch had been bought from Bill Orr by 5 partners. About the first week in May, milk cows would be driven to Butte Creek, with some beef stock. Weak calves would be taken by wagon. The drive would stop at Salt Springs and the corrals overnight. In the fall about the first week in October, the process was repeated.

1885-1886: The Oregon Railroad had reached as far as Ashland, Oregon. The Central Pacific railroad had gone as far north as Delta, 40 miles north of Redding. In July, 1885, the Central Pacific purchased the Oregon-California, agreeing to complete the gap between Ashland and Delta in three years. The Central Pacific became the Southern Pacific Railroad Company in 1886.

1886: An estimated 2,000 men were at work on the railroad north of Delta. The first train to a new terminus, McCloud, arrived Nov. 13. Survey stakes were completed to Edson’s and 4,500 Chinese at Dietz engaged in grading the road toward Butteville.

1887: Charles B. High settled near Picard in Butte Valley. Mail was brought to Shovel Creek once a week and supplies had to be hauled by 4-hourse team from Ager.

1887: In January, the Southern Pacific was open to traffic as far as Edgewood Station. On Feb. 1, Sisson & Croker’s supply train was at the Shasta River Bridge. By March 1, Gazelle was the new terminus. On the 10th, stages connected with passenger trains at Montague. Ager was surveyed in May as the center from which eastern Oregon business would pass. A Siskiyou Tunnel in Oregon, north of Cole’s and a long 3,300 foot tunnel was not progressing well. On December 17, 1887, the stages made their last run and the last railroad spike was driven at Ashland, Oregon connecting the railroad.

1888: Judge J.S. Beard homesteaded property in Squaw Valley where the city of McCloud is presently located. In the early 1890’s, McKay’s mill at Esperanza, Neiland Anderson’s mill at Pig Creek; Harper’s mill north of McCloud and “Friday” George’s mill were established. The first sawmills had their difficulty. The road was long and rugged and it took days to get the wood by oxen to the railroad and lumber

buyers. George built a shorter road. "Friday" George's Grade is no longer passable. The present site of Mt. Shasta Snowman's ski jump is located on the steepest part of the grade. Elk Lawn at Elk Creek, 5 miles east of McCloud, was a stopping place for teamsters between Fall River and Sisson.

(early)1890s: "Forest Meadows", or the Prather Ranch in Butte Valley, was purchased from Edgar Ball by the Prathers. The meadows also served as a "stopping place" for drovers and cattle moving across Ball Mountain to the railroad.

1880-1910: Road in the area were described as including the main road from Yreka through Hawkinsville over the mountain into Humbug and down main Humbug to the Klamath River. There was a ferry at the mouth of Dutch Creek and a short section of wagon road on the north side of the river from there to Visea Creek. There were also wagon road of 1-2 miles up Dutch Creek, Lumgray and Empire Creek. Pack mules were used beyond that point.

1890: Floods – Ohio House Bridge, slough bridge, Goodale bridge and new bridge at the mouth of the Scott were gone. (Fort Jones bridge stood). Nearly all the bridges but the railroad bridge on the Shasta was gone.

(prior to) 1890: Old Skeen Place on the Lower Klamath Lake, later "Laird's Stopping Place" – transportation needed from Linkville (Klamath Falls, Oregon) to the uncompleted railroad in Oregon was supplied partially by steamboat service on lower Klamath lake. By 1905, a canal had been dredged by J. Frank Merrill from a main channel to the Laird Place, and "Laird's Landing" was a stopover until 1907.

Much freighting was done from Montague, via Ball Mountain, through Red Rock Valley and on around the east side of Lower Klamath lake into Oregon. Large droves of cattle were taken on this route to be shipped on the Railroad to market. Laird's "stopping place" was established for the riders with hay for the stock. In 1905, the "Klamath", an 80 foot propeller driven steam boat owned by the Klamath Lake Navigation Co. ran to a point near the Laird House. The "Davis Road" had been built to Bartlle, by way of Pumice Stone Mountain, to the McCloud River Railroad. William Davis and Charles Laird ran a stage from the steamboat to Bartle. When the Weed Lumber Co. completed the railroad to Grass Lake, the stage line was shifted there. The "Klamath" began to carry freight and cement for the Reclamation service. In addition to passengers, the Grass Lake route was used by 6-mule jerk line teams owned by "Cap" McIntyre

1891: Road completed over Salmon Mountain. Mule trains were still used as cheaper than stage and freight wagons.

1891: The Klamath River Lumber Co. was sold to wealthy Michigan lumber man John R. Cook. A log chute 2650 feet in length with a vertical drop of 834 feet, carried logs from a plateau above the river. As logging operations progressed, a railroad 4-5 miles in length was built to the head of the chute.

1891: Five unpatented mining claims belong to the Blue Nose Mines Company. The Blue Nose Bridge crossed the Klamath River at Blue Nose Bluff (named for the mine).

1892: The road over Salmon Mountain from Etna to Sawyers Bar was built. In 1895, John Dagget built the road from Black Bear to Sawyers Bar. Prior to this, all freight and service had been by pack train and saddle horse. Machinery for the first mills had come in on pack train from Trinidad, some being brought via the cut-off trail up the lower Klamath River Canyon by Indian women in their pack baskets. All the heavy equipment used by the English company had been hauled by mule train by "Deacon Lee (Trail)" from Callahan.

1892: Julius V. Russell moved to the John Kegg Ranch. Southern Pacific Co. bought the right of way and tore down the Russell house. Mollie Russell Coonrod recalled a tree stump at a steep grade on the emigrant road known as "Jump Off Joe". The stump bore rope or chain marks from where the emigrants tied them to help the teams down the very steep grade or with heavy loads.

1893: Apple buyers had been in the county through October, purchasing from various orchards. Teamsters hauled apples from Scott Valley to the Yreka Railroad for shipment to Bay markets in November.

1896: Abner Weed built his big mill in Weed. A logging railroad was pushed to the northeast over the next several years around the slopes of Mt. Shasta until it reached Grass Lake around the turn of the century.

1896: The road from Sawyer's Bar to Forks of Salmon was still by mule-back.

1896: Scott and Van Arsdale filed articles of incorporation forming the McCloud Valley Railroad Co., along a proposed route from Mott to Squaw Valley to tap timber resources. It was planned to start with a 20 mile extension of the line. Construction began in July. By August, 7 miles of line had been completed from Upton. The summit, 4557 feet above sea level, was 10 miles from Upton. A switch back was needed on each side. The mill site was 19 miles from Upton. Timber was fallen and cut to length and the logs hauled to Sisson (later Mt. Shasta.) Each trip would dig a bit deeper into the woods until the rail finally reached Squaw Valley (McCloud). To encourage the growth of the railroad, it was given every other section of land for a distance of 25 miles on either side of the railroad.

1897: Sidney J. Fore built and operated a hydraulic elevator across from Callahan. A 6 mile ditch was dug by hand and by horse teams from the west side of South Fork of the Scott River to provide pressure at the elevator. The Fore ditch was not kept in repair and soon filled with serpentine rock. In 1913, the Forest Service cleared a trail on the ditch, thus eliminating the need to ford at South Fork and Fox Creek. Later a road replaced the trail and became a part of the county road system. Then the old road from French Flat to Fox Creek was abandoned.

1899: Erkine Park ranched and maintained stock horses for the wagon teams used at the Pokegama Lumber Co. until 1912. The place was formerly the Shackenburg's who ran a stage stop for stages traveling over Topsy Grade.

899: Major Bruce came to Tecnor and kept a "stopping place" at Tecnor Springs.

1900: The bridge over Shasta River at the Louie Ranch near Big Springs was built. Until this time, settlers had to ford the Shasta River.

1901: In the 1901 Pokegama Sugar Pine Lumber Co. purchased W. Laird Ranch (near Iron Gate, different from Laird's Landing at Lower Klamath Lake.) The town became known as Thrall. A railroad was laid from Thrall to a vast timber belt at Pokegama Flats on the Oregon border (26 miles away).

1903: Lew Parsons took up a homestead in Red Rock Valley. With the extension of the Southern Pacific Railroad to Mt. Hebron in 1908, the cutting of ties for the railroad became a thriving business. Lew produced many thousands of ties for Weed Lumber Co. and Southern Pacific Co. In 1926, horse and wagon lumbering was replaced by Fageol trucks with solid rubber tires and caterpillars.

1903: June 11, Dr. Thompson and Manuel Perry drove the first automobile into Yreka, three hours after leaving Sisson (Mt. Shasta.)

1904: It was announced that the "Weed" railroad (later known as the California and Northeastern, was to be built to Klamath Falls. Weed built 23 miles of track he called the California Northeastern Railroad. The line, with wood burning locomotives hauled logs to the mill.

1905: Lee Morford from his book, 100 Years of Wildland Fires in Siskiyou County, indicates the following roads were in existence in 1905: road along the Klamath to a point below Happy Camp; a road along the county line south to Callahan to the Klamath along the Scott River; a road from Etna to the Forks of Salmon and to a few mines in Eddy Gulch and Black Bear areas; a road from Yreka through Humbug to Walker at the mouth of Barkhouse Creek; a road from Yreka up the Little Shasta River and over to Butte Valley; a road from Sisson (Mt. Shasta) to Bartle through McCloud; the military Pass Road north and east of Mt. Shasta into the Shasta Valley. (There were also short sections of 2-4 miles on these roads leading to mines and ranches.) In addition, there were 3 major logging operations in the County: McCloud, Long Bell at Weed and Fruit Growers Supply at Hilt. There were few improved trails and all of the travel by Forest Rangers and Guards was by foot or horse. An 1881 map showing all the major drainages and mountain ranges was available.
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1906: Macdoel, named for William Macdoel, was a station on the railroad to Klamath Falls, Oregon.

1906: The California and Northeastern railroad had been constructed as far as Grass Lake. It was then purchased by Southern Pacific, who confirmed that they would continue the line into Klamath Falls. Construction occurred until completed on May 19, 1909. Two freighting companies competed for the route between Grass Lake and Klamath Falls in the interim. One crossed Butte Valley via Red Rock to Laird's Landing, serving communities of Merrill and Tule Lake. The other crossed Butte Valley at Teeter's Landing on the Klamath River. Freight was conveyed to Klamath Falls at both sites by boat. This was eliminated when the railroad reached Ady Siding at the Klamath Straits.

1906: A transportation link from Klamath Falls to Upton on the main Southern Pacific Railroad was briefly established along the eastern side of Butte Valley. The steamer Klamath ran from Klamath Falls to Laird's Landing. A passenger stage then ran to Bartle, owned and operated by Bill Davis and Charlie Laird who constructed the road over which it ran. The McCloud River Railroad then completed the route to Upton.

1907: Mr. Wade started dredger mining at Callahans. 26 horses were required to move the 50-ton "spud" over Yreka Mountain; 18 were used on level ground.

1908: The railroad reached Dorris and in 1909, the tunnel came through for the trains.

(circa) 1909: George Phenegar and the Bridgeford Bros. erected the Bray box factory. The town was named for William Bray who donated land for the railroad right of way to the Southern Pacific Railroad Co.

1909: Road built from Dorris to Mt. Dome.

1909: The State Mining Bureau issued in limited quantities, a one-quarter inch equals one-mile scale map of Siskiyou County showing the boundaries of the KNF, existing road and trail systems.

1910: The Mount Hebron lumber Co. set up a sawmill at the Prather Ranch near the foot of Ball Mountain. A railroad was constructed from the sawmill to what is now Juanita Lake.

1911: The Alta Burt Gold Dredging Co, moved a dismantled bucket line gold dredge from below Callahan to Trinity Center over 34 miles of narrow crooked roads and weak bridges. Loads were pulled by at least 32 horses or mules stringing out about 300 feet. Layers of heavy planking were placed on bridge decks for reinforcement. Teams were trained by vocal calls to start, stop and turn in order to get around sharp turns and up steep grades. Block and cables were set on trees to maneuver the loads around curves using a "mainline" cable and resulting "siwash" blocks to make the necessary changes in the direction of pull.

1911: Freight wagons pulled by 6-10 horses passed along the Callahan to Gazelle Road. At this time, the freight traffic from Siskiyou to Trinity County had slacked because maintenance of the Scott Mountain Road was neglected and the southern access to Trinity was improved. A freight haul from Ft. Jones to Trinity Center would consist of two wagons, a lead and tailing wagon. The first would carry about 4 tons and the second about 3. They were typically pulled by 8 horses under average conditions. The wagons would make Ohio House (McBride Ranch) the first day and Masterson Ranch at the foot of Scott Mountain the second. The following day, they would double team the lead wagon to the top of Scott Mountain and return to the Masterson Ranch to spend the night. The next day, they would double team the trailing wagon to the summit, connect the 2 wagons and proceed down the south side of the mountain to the Doge House or New York House.

1914: The bridge at Gottville was built as a community project.

1915: The Farnsworths built a road to Cecilville from their headquarters at Petersburg. The job was accomplished with the help of J.O. McBroom of Cecilville and $500 provided by the Siskiyou County Board of Supervisors. When the road was completed in 1916, the Farnsworths bought a Star automobile, drove it to Sayers Bar, dismantled it and had it packed via Black Bear to Cecilville.

1916: Siskiyou County and the KNF co-financed building of the Forks of Salmon to Somes Bar road. The Siskiyou county Board of Supervisors petitioned the Secretary of Agriculture for State and Federal Aid under Section 8 of the Federal Aid Road Act for constructing a wagon road from Happy Camp to Somes Bar. Surveys were done in 1917, construction began in 1919 and the road was finally completed under the Forest Highway Program in 1924.

1919: The County petitioned the State of California to make the Klamath River Road a State Highway. It was announced work would start on the Happy Camp to Somes Bar Road under the direction of the Bureau of Public Roads. Work would resume on the Salmon River Road and construction of a road from Hoopa to Weitchpec on the Trinity River would start.

1909: Southern Pacific completed a line from Klamath Falls to Weed. Rails north were not completed until 1926.

(early) 1920s: Many roads were developed into logging areas of McCloud and Long Bell Co. operating out of Weed and Tennant. In addition, McCloud, Long Bell and Fruit Growers had extensive railroad logging systems.

1920s: It has been summarized by Morford that major roads were limited to one down the Klamath; one down the Scott River from Scott Mt. to the Klamath; one from Etna to the North Fork of the Salmon River and over to Butler Flat; one through Hawkinsville and Humbug to the Klamath River; and one up the Klamath to Beswick and on into Oregon. Another principal road was from Yreka through Little Shasta into Butte Valley. There were also a few short roads form Hilt to Hungry Creek, Sayers Bar to Black Bear Mine; Happy Camp up Indian Creek. A few automobiles were being used in Yreka, but most were in Sisson (Mt. Shasta) and McCloud.

1920s: The Dwinnel, Peppers-Cotton and Standard Lumber companies operated a railroad from Macdoel west into timber lands west of Meiss Ranch during the first half of the 1920s.

1920: G.W. Smith & Son's Co. was running 2 stages daily either way with parcels and passengers between Etna and Forks of Salmon. Goods were commonly purchased by miners from the Bennett Co. at Forks and packed by mule trains down the Salmon River.

1920: George Doran came to Butte Valley bringing with him five solid rubber tire trucks to be employed in contact hauling for the Pepper Cotton mill at Macdoel. The road from Weed to Macdoel, much of it over mountainous terrain, had to be laid out in advance of the trucks. Doran hauled logs for the Pepper Cotton mill until 1923, when he bought new equipment and, in addition to hauling logs for the various mills, contracted road building for Siskiyou County. The forerunner of the present-day

Highway 97 was built across Butte Valley, paralleling the railroad from the Oregon border to Leaf, where it turned to cross over Deer Mountain on the route of the old wagon road. At first a graded dirt and gravel road, it was paved in 1921. In 1936, the Weed-Klamath Falls highway was dedicated. A portion from Macdoel via Grass Lake to the western base of Deer Mountain was relocated to present configuration in 1938.

1921: Tennant is a sawmill town built by Long Bell Lumber Co., named after Graner Tennant, a company official. A logging railroad was constructed from Leaf on the main line to the new camp and in time extended to the eastern slopes of Glass Mountain in Modoc County. During the 1920s, logging spurs were built out from Tennant to the north and east (Garner Mountain, Garner Butte, Van Brimmer Well, Wild Horse Mountain and Sharp Mountain). Raw material was sent to the mills at Weed.

1923: The Klamath River Highway was completed.

1926-1928: Railroad construction was renewed with the Natron Cut-off between Eugene, Oregon and Weed, California. Rails in the form of logging railroads had been extended from Eugene south to Oakridge and north from Weed to Klamath Falls and Kirk. A complete reconstruction of existing rails took place and the new extensions were completed in 1928. All through traffic was rerouted from the old Southern Pacific lines through Shasta, Rogue and Umpqua Valleys to the new lines through Butte Valley and the Klamath country.

1929: The Mt. Shasta and Mt. Lassen road (Highway 89) was completed. The Mccloud River Railroad connected with The Great Northern and Western Pacific Railroads to the east.

19302: U.S. Forest Service maps used in establishing fire lookouts.

1934: Timber cruising map of the North Klamath National Forest (KNF) of about 40,000 acres at Horse Creek and Beaver Creek drainages.

1944: Forest map and supportive aerial photos of the KNF beginning in 1944 used for timber cruising.

1946: KNF Maps developed from transportation studies and the pilot aerial photogrammetry and sample plot project for the development of California Forest survey procedures initiated in 1946 with compilation assistance form U.C. Berkeley.

End Notes

1. Private Spanish land grants to establish pueblos or towns were first introduced in California in 1774. These provided colonists with seed livestock to establish hers to be grazed on common grazing grounds. The procedure was codified in California Governor Felipe de Neve's Reglamento issued June, 1779.

A private land grand was made by Commander Rivera to California's first rancher, Manuel Butron, in 1775. However, it was not until 1784 that California Governor Fages, empowered to make private grants not to exceed three square leagues, employed the land-grant system in ernest. East grantee was required to agree to build a storehouse and to stock his holdings with at least 2,000 head of cattle. By 1790, there were 19 private rancheros in California.

By 1824, Mexican Colony Law established rules for petitioning for a land grant. First the settler could petition for citizenship, pledging loyalty to Mexico and the Roman Catholic Church. After a year's probation, he could receive citizenship and petition for a land grant.

By 1828, the rules for establishing land grants were codified in the Mexican "Reglamento." The minimum size of a ranchero was set at one square league (about 4,500 acres), with an 11 square league maximum. There was no limit on family holdings or holdings from inheritance or purchase. Of the 11 leagues, one was to be in irrigable soil, for dependent upon rain and six fit only for grazing.

A native born or naturalized Mexican citizen could make an application for a land grant, setting forth location boundaries or approximate size; testifying that it did not overlap another grant; declaring that he would stock with the legally required number of horses and cattle; and supplying a "diseno," or rough topographical map.

A blotter copy or "borrador" of the grant was kept at the governor's office; minutes of the transaction in the record book called the "toma de razon;" and the diseno and borrador placed in the archives in a file called the "expediente".

A land survey was carried out under a magistrate with witnesses and neighboring rancheros. Surveyors measured the grant starting at a pile of stones called a "mojonera" using a 50 foot "reata", or rawhide cord tied to stakes that the riders thrust into the ground as they rode along. Validity of the grant depended on fulfillment of certain conditions such as building a house, stocking the land with cattle, and planting trees on boundaries.

2. "A patent of the United States issued to a conformance of a Spanish or a grant under the act of Congress of March 3, 1851, 9 Stat. 633, treated simply as the deed of the United States, is in its operation, like the deed of any other grantor, and passes only such interest as the United States possessed; the deed taking effect by relation at the date of the presentation of the petition of the patentee to the board of land commissioners. But such patent is not merely a deed of the United States. It is a record of the government – of its action and judgment with respect to the title of the pantentee existing at the date of the cession of California – and as such record is conclusive evidence of the title of the patentee at the time the jurisdiction of the

subject passed from Mexican government to the United States." (Leese v. Clark, 20 Cal. 387, 412.)

3. In the first Trade and Intercourse Act, ch. 33 1 Stat. 137 (1790), Congress provided that non-Indians could not acquire lands from Indians except by treaty entered into by the federal government pursuant to the Constitution.

In Johnson v. McIntosh, 21 U.S. (8 Wheat.) 543 (1823), the Court held that Indian tribes were incapable of conveying their land directly to individuals. Chief Justice Marshal concluded that discovery conferred upon the European sovereign a title good against all European governments. The United States succeeded to that title to the extent that it was held by the British.

Marshall stated as to the Indians: "They were admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it, and to use it according to their own direction; but their rights to complete sovereignty, as independent nations, were necessarily diminished, and their power to dispose of the soil at their own will, to whomsoever they pleased, was denied by the original fundamental principle, that discovery gave exclusive title to those who made it."

Indian tribes that occupied and used land to the exclusion of others (except for mere temporary incursions) had an interest denoted as "right of occupancy". This right of occupancy later came to be known as "Original Indian title", "Indian title" or "aboriginal title". That title could not be compromised by any other party except the federal government who could obtain it by conquest, purchase or simply taking it; Oneida Indian National vs. County of Oneida 414 U.S. 661 (1974). The United States, and only the United States, could extinguish the Indian right of occupancy.

Until the United States extinguished "original Indian title", a cloud of Indian occupancy right remained on the individual's title. The national authority of the "federal land patent" became the vehicle by which the individual's legal title in the lands became perfected – a quitclaim document that evidenced that any aboriginal or further federal claims or cloud on the legal title had been extinguished. In this manner, the authority of the federal patent, by necessity, could not be challenged by competing State authority without leaving original Indian title unextinguished.

4. In 1846, Congress abandoned the leasing policy for federal minerals used in the Midwest and offered mineral lands for sale by means of various statues applying selectively to particular geographic area.

About the same time, Congress began to divide public domain lands into two categories – mineral and non-mineral lands. Only non-mineral lands were opened to various land disposal policies. Because a homestead claimant would take title to full property ownership, including any minerals subsequently discovered a determination of whether lands were mineral or non-mineral in character was called for when a nonmineral claimant asserted a right under disposal laws. (See 1914, Burk v. Southern Pac.)

Although the disposal of mineral lands were debated in 1850-51 and 1858-60, it was not until the Civil War was drawing to a close that a generic policy was developed with the Act of 1866, which stated: "In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law." (See 1918, United States v. Sweet)

5. With GLO (BLM) inefficiency in facilitating the settlement of public lands in California and the absence of clear federal direction, the California Supreme Court in 1864 ruled that whether public land could be considered closed to settlement would be based on whether, on the whole, the lands appeared better adapted to mining than other uses.

6. "The courts held that the operation of a patent as a deed was the nature of a quitclaim to any interest as the United States possessed in the land; Beard v. Federy, 70 U.S. 478, 3 Wall, 478, 18 L.Ed.88. A patent to land of the United States constituted a full conveyance of title out of the United States; McArthur v. Brue, 67 So. 249, 250, 190 Ala. 563. The issuance of a patent divested the government of all authority and control over the land; Moore v. Robbins, Ill. 96 U.S. 530, 24 L.Ed. 848.

A patent passes to the patentee all interest of the United States, whatever it may have been, in everyting connected with the soil and in fact everything embraced within the maning of the term "land"; Damon v. Hawaii, 194 US 154,48 L.Ed 916, 24 S.Ct. 617; Energy Transp. Systems, Inc. v. Union P. R. Co., (DC Wyo) 435 F.Supp 313, 60 OGR 427, affd (CA10 Wyo) 606 F2d 934, 65 OGR 576; Moore V. Smaw, 17 Cal 199; Hamilton v. Badgett, 293 Mo 324, 240 SW 214; Crawford Co. v. Hathaway, 67 Nob 325, 93 NW 781 (ovrid on other grounds Wassburger vs. Coffee, 180 Neb 149, 141 NW2d 738, adhered to 180 Neb 569, 144 NW2d 209.

7. Section 34 of the Mining Act of May 10, 1872 (concerning challenges to an application for patent) states:

"It shall be the duty of the adverse claimant, within thirty days after filing his claim, to commence proceedings in a court of competent jurisdiction, to determine the question of the right of possession, and prosecute the same with reasonable diligence to a final judgment; and a failure to do so shall be a waiver of his adverse claim. After such judgment shall have been rendered, the party entitled to the possession of the claim, or any portion thereof, may, without giving further notice, file a certified copy of the judgment roll with the register of the land office, together with the certificate of the Director of the Bureau of Land Management [that federal statutory requirements for labor, description and fees have been met] whereupon the whole proceedings and the judgment roll shall be certified by the register to the Director of the Bureau of Land Management, and a patent shall issue thereon for the claim, or such portion thereof as the applicant shall appear, from the decision of the court, to rightly possess…"

8. As early as colonial times, transferable “bounty lands” or military warrants or scrip, (entitling the bearer to claim a certain amount of unappropriated public land,) had been awarded to soldiers in compensation or incentive for service. The issuance of “soldier’s warrants” continued well into the nineteenth century. These were used in redemption for some of the earliest claims in Siskiyou County.

9. “Once the federal patent requirements are satisfied, and there is no question of legitimate national interest in respect to treaties or trusts, the BLM is compelled to issue a patent to a claimant in rightful possession. Pittsburgh-Pacific Corporation applied for patents to a dozen claims in the Black Hills National Forest, upon which it asserted a discovery of iron ore. At the request of the Forest Service, the Bureau of Land Management challenged the existence of a discovery. When the contest came before the Interior’s Board of Land Appeals, the State of South Dakota participated and argued that the Bureau must prepare an environmental impact statement on the patent application. The board held the EIS was not required because patent issuance is not discretionary once Mining Law requirements have been met. [United States v. Pittsburgh-Pacific, 84 I.D. 282, (1977); Confirmed South Dakota vs. Andrus, 462 F. Supp, 905, D.S.D.(1978); affd. 614 F.2d 1190, 8th Cir, cert. denied 449 U.S. 222 (1980.)]

10. A patent to land is the judgment of the Land Department and the conveyance of the title in execution of it to the party adjudged entitled, and, when the land described was in the jurisdiction and subject to the disposition of the Land Department, it is impervious to collateral attack; Neff v. United States, 165 F. 273, 277, 91 C.C.A. 241.

A patent is recognized as the highest evidence of title, conclusive against the government and all claiming under junior patents or treaties until it set aside or annulled by some judicial tribunal; United States v. Mullan, 10F. 785, 792; Bayner v. Stanly, 13 F. 217, 223.

If other parties possess equities superior to those of the patentee, a court of equity will, on property proceedings, enforce such equities; but in an action in the federal court in which the legal title is involved, the patent when regular on its surface is conclusive; Redfield v. Parks, 10S.Ct. 83, 88, 132 U.S. 239, 33 L.Ed.327.

After issuance of a patent, any subsequent claim of the United States to titles therein or other disputes between private claimants must be determined by the courts; U.S. vs. McKenzie County, North Dakota, D.C.N.D., 187 F.Supp., 470 affirmed Murray v. U.S., 291 F.2d 161.

11. Suites to cancel a patent could only be brought within the statute of limitations, except for actions brought by the U.S. government (1) to recover the value of lands fraudulently obtained; (2) to construe and enforce a patent as construed; and (3) to impress a trust of the lands for the rightful owner – U.S. vs. Whited, 38 S.Ct. 367, 246 U.S. 552, 62 L.Ed. 879; Issac Walton league of America v. St. Claire, D.C. Minn, 55 F.R.D. 139, affirmed 497 F 2d. 849, certiorari denied 95 S.Ct. 329, 419 U.S. 1009, 42 L.Ed.2d 284.

The expression "patent", used in Act of March 3, 1891, Section 8, 43 U.S.C.A. Section 1166, requiring suits to annual patents to be brought within six years after issuance, means a grant of land from the government. (United States v. La Rogue, 198 F. 615, 648, 117 C.C.A. 349.)

A suit to cancel a patent must be brought by the United States, and, unless by virtue of an act of Congress, no one but the attorney general or someone authorized to use his name, can initiate the proceeding, (U.S. – U.S. v. Throckmorton, Cal. 98 U.S. 61, 25 L. Ed. 93.)

A patent conveying land which was a part of the public domain cannot be attacked or impeached by a person having no interest in the land, (U.S. – Roberts v. Southern Pacific Co., 185 P. 934, affirmed 219 1022, 134 C.C.A. 685; see also Issac Walton league v. St. Claire.) Such a patent is subject to impeachment only by the United States, or its grantee, (Idaho – Johnson v. Hurst, 77 P. 784, 10 Idaho 308), or a person who has succeeded to its rights, (Utah – Ferry v. Street, 7 P. 712, 11 P. 571, 4 Utah 521), or by a person who was defrauded or deprived of his rights by the issuance of a patent to another, (Cal. – Mery v. Brodt. 53 P. 818, 121 Cal. 322).

12. Acts granting short term "preemptive" rights were passed in 1830 and 1834.

In 1840, Thomas Hart Benton introduced the "Log Cabin Bill" which provided for permanent pre-emption where any adult male could pre-empt a quarter section of the public domain by building a cabin and making certain improvements, then buying the land at the minimum price when it went on sale. The Bill passed the senate, but was introduced too late for the House. A Distribution-Pre-emption Law was passed in 1841 with the provision that it would not go into effect as long as import duties were above 20%.

In applying the doctrine of "relation back", the patent has been regarded as relating back to the date of entry, (S.D. – Broadhurst v. American Colloid Co., 177 N.W.2d261, 85 S.D. 65; Utah – Washington Rock Co. v. Young, 80 P. 382, 29 Utah 108, 110 Am.S.R. 666), to the date of purchase, (Mich. – Fisher v. Hallock, 15 N.W. 552, 50 Mich. 461), to the date of filing of an application by the assignee of a soldier's additional homestead certificate, (Minn – Gilbert v. McDonald, 102 N.W. 712, 94 Minn. 289, 110 Am.S.R. 368), to the date of certificate of location, (Iowa – Klein v. Argenbright, 26 Iowa 493), and to the inception of the equitable right upon which title is based, (Wyo. – Walliker vs. Escott, 608 P.2d 1272.)

13. In 1866, only 147,000 acres sold for cash or were homesteaded. In 1869, land homesteaded or purchased with either scrip, military warrants or cash totaled 2.4 million acres. In 1873, 658,000 acres were claimed.

14. A bill authorizing construction of the Pacific railroads in 1862 was illustrative of the practice of awarding "indemnity" lands as an incentive for development. The Union Pacific was authorized to build a line from Omaha, Nebraska to the California-Nevada line. The Central Pacific was to build a line from Sacramento eastward. The land grant for the "roads" included odd-numbered, alternate sections of land for twenty miles on either side (a swath 40 miles wide). The companies were required to

allow preemption by settlers on any land remaining thre years after completion of the road, which would be sold to them for not more than $1.25 per acre. A loan was made directly to the railroad of $16,48,000 for each mile of track laid; (U.S. Statues At Large XII p.492 –authorization, and P.356-appropriation).

In 1886, many of the “in Lieu” of or “indemnity” lands still remained withdrawn from settlement, pending selection by the railroads. Guilford Miller complained to the General Land Office because Northern Pacific had claimed his homestead as part of their indemnity selection. Secretary of the Interior Lucius Lamar sent the dispute to the U.S. Attorney General for a legal opinion. In 1887, he upheld the railroads contention that a settler could acquire no rights to title of public land while railroad privilege of selection within a prescribed area was pending; (Report of the Secretary of the Interior, 1887, pp. 9-10.)

In 1888, President Grover Cleveland wrote an executive order to the Interior Secretary to withdraw land from the contingent indemnity lists and reopen it to settlement. Lamar reopened over 21 million acres; (land Office Report 1888, p.41).

Much of the lands managed by the BLM and some of that managed by the U.S. Forest Service (particularly in the Scott Valley) were indemnity lands for a planned rail line that was never built.

15. In 1850, California adopted the common law of England (Ca. Stats., pg. 219), so far as not repugnant to or inconsistent with the Constitution of the United States or laws of the State, as the rule of decision in all the courts of the State.

16. Blackstone, Commentaries, 2:32-33. See also The Agrarian History of England and Wales, vol. 4, 1500-1640, ed. John Thirsk (Cambridge, Eng., 1967); and J.A. Yelling, “Agriculture, 1500-1730,” in An Historical Geography of England and Wales, ed. R.A. Dodgshorn and R.A. Butlin (London and New York, 1978), 151-172. (As cited in Forest McDonald, Novus Ordo Seclorum, The Intellectual Origins of the Constitution, University press of Kansas, c1985, pp.20).

17. In the southern States, open-range herding prevailed from the early seventeenth to the twentieth century. This was due partly to the high ratio of empty land to people and partly to the fact that the south was settled by immigrants from upland northern and western England and the Celtic portions of the British Isles where open-range herding was practiced.

The Virginia fencing act of 1632 provided that “every man shall enclose his ground with sufficient fences or else to plant, upon their own perill.” Fencing of any land except arable acreage actually under cultivation was prohibited by law in all southern colonies, and even non-landholding cattle and hog raisers could freely grace their animals upon the land of others. North Carolina attempted in acts of 1715, 1729 and 1775 to restrict and regulate common gracing rights, but the laws were found to be unenforceable. As late as 1830, Virginia planters were still attempting to get legislation passed to allow them to fence entire estates, or even private pasturage.

From: Forrest McDonald, Novus Ordo Seclorum, The Intellectual Origins of the Constitution, University Press of Kansas, c1985, pp.21-2; citing Gray Southern

Agriculture, 1:138-151, 2:843; Forest McDonald and Grady McWhiney, "The Antebellum Southern Herdsman: A Reinterpretation," Journal of Southern History 41 (1975): 147-166, and "The South from Self-Sufficiency to Peonage: An Interpretation," American Historical Review 85 (1980): 1105-111; and J. Crawford King, "The Closing of the Southern Range: An Exploratory Study," Journal of Southern History 48 (1982: 53-70. See also Terry G. Jordan, Trails to Texas (Lincoln Nebr., 1981) 1-58.

In 1885, in response to the threat of preemptive property claims, Congress passed "An Act to Prevent Unlawful Occupation of the Public Lands" (23 Stat. 321), forcing removal of fenced on the public domain. President Cleveland implemented with an order "that any and every unlawful enclosure of the public lands…be immediately removed."

18. "The 1890 U.S. Supreme Court case of Buford v. Houtz, 133 U.S. 618, the court held: "We are of opinion that there is an implied license, growing out of the custom of nearly a hundred years that the public lands of the United States, especially those in which the native grasses are adapted to the growth and fattening of domestic animals, shall be free to the people who seek to use them where they are left open and unenclosed and no act of government forbids this use… The government of the United States, in all its branches, has known of this use, has never forbidden it, nor taken any steps to arrest it. No doubt it may be safely be stated that this has been done with the consent of all the branches of the government and, as we shall attempt to show, with its direct encouragement… Everybody used the open unenclosed country, which produced nutritious grasses, as a public common on which their horses, cattle hogs and sheet could run and grace." at 620.

The court stated; "The whole system of control of the public lands of the United States as it has been conducted by the government, under Acts of Congress, shows a liberality in regard to their use which has been uniform and remarkable. They have always been open to sale at very cheap prices. Laws have been enacted authorizing persons to settle upon them, and to cultivate them, before they acquire any title to them. While in the incipiency of the settlement of these lands, by persons entering upon them, the permission to do so was a tacit one, the exercise of this permission became so important that Congress by a system of laws called the Preemption Laws, recognized this right so far as to confer priority of the right of purchase on their persons who settled them and cultivated any part of this public domain. During the time the settler was perfecting his title… both he and all other persons who desired to do so had full liberty to grace their stock upon the grasses of the prairies and open other nutritious substances found upon the soil." at 621.

19. An excellent description of the application of the principles of the Common Law right of possession or "first in time, first in right" may be found in the 1914 case of Palmer v. Railroad Commission. 167 Calif. 163, 168, 138, 170-173, 138 Pac 997, where the Court stated:

"An analogy was found in the rules of the common law relating to controversies over the possession of land between persons who had no title thereto and in which the real owner did not interfere or intervene… It was held that since the real owner of the water-rights, that is, the United States or the state,, permitted these diversions and

was not in court to assert its rights or to be bound by the decision, the matter between the persons litigating was to be decided according to the rules of law in regard to priority of possession of the land. The diversion of the water was declared to be the equivalent of possession and the doctrine was laid down that he who was first in time was first in right."

Silver Lake Power & Irr. Co. vs. Los Angeles, 176 Calif. 96, 101-102, 167 Pac. 697 (1917) established that the right of possession was a property right claimed under the color of title.

1865, Statutes at Large, vol. 13, p.44; U.S.C. vol. 30, section 53; directed that no possessory action for recovery of any mining title would be affected by the factor that the paramount title to the land belonged to the U.S. Each case would be judged by the law of possession.

20. Article 1 of the Constitution of the State of California still recognized as among inalienable rights, the rights of "acquiring, possessing and protecting property."

21. As an incidence of their sovereignty, the monarchies of England, Spain and France held absolute dominion and legal title over all the lands of their kingdoms with the capacity to grant proprietary use of such lands to individuals conditional on the royal prerogative to rescind such grants. The sovereign also has the prerogative to reserve any property rights in the land that he desired.

22. "Western wastelands" east of the Mississippi were included in the charter grants of many of the original thirteen colonies. After they became States, they specifically ceded title and jurisdiction to the lands to the federal government. Congress assumed that the cession passed "sovereignty" to the federal government. In 1807, using the rational that under English law, one could not alienate title from the "sovereign" through adverse possession, Congress passed U.S. Statues At Large, Congress, Sess. II, Ch. 46, pp. 445-446 "An Act to prevent settlements made on lands ceded to the United States, until authorized by law." According to the Act, those who settled beyond the federal paperwork were technically "squatters" or trespassers. Unless the "sovereign" government agreed to recognize the squatters claims, no amount of occupancy, land economic contribution or civic good could validate those claims.

23. "According to the theory of the British constitution all vacant lands are vested in the Crown as representing the nation and the exclusive power is admitted to reside in the crown, as a branch of the royal prerogative. It has been already shown that this principle was as fully recognized in America as in the Island of Great Britain… [W]hen the Revolution took place the people of each State became themselves sovereign; and in that character hold the absolute right to all their navigable water and the soils under them for their own common use, subject only to the rights since surrendered by the Constitution to the general government." See Martin v. Waddell's Lessee (also known as Martin vs. Waddell). 41 U.S. (16 Pet.) 367, 410, 10 L.Ed. 997, 1012-1013 (1842); quoting Johnson and Graham's Lessee vs. M'Intosh (also known as Johnson vs. M'Intosh), 21 U.S. (8 Wheat.) 543, 595, 5 L.Ed. 694 (1823).

Under Pollard's Lessee v. Hagan (a.k.a. Pollard v. Hagan) 44 U.S. at 225 ll L.Ed at 572; (1845), the Court made it clear that the transfer of legal title from nation to nation did not supersede the essence and distinct forms of sovereignty as established by the people and their Constitutional form of government:

"It cannot be admitted that the King of Spain could, by treaty or otherwise, impact to the United States any of his royal prerogatives; and much less can it be admitted that they have capacity to receive or power to exercise them. Every nation acquiring territory, by treaty or otherwise, must hold it subject to the constitution and laws of its own government and not according to those of the government ceding it. (Vat. Law of Nations. bk. 1, ch. 19, sec, 210, 244, 245, and bk. 2, ch.7, sec. 80.)

24. Under the Color of Title Act, the Secretary of the Interior may be required to issue a patent if certain conditions have been met, (43 U.S.C.A. Section 1068-1068b), such as that a tract of public land has been held in good faith and in peaceful adverse possession under claim of color of title for more than a specified period; (Beaver vs. U.S., C.A.Cal., 350 F.2d 4, certiorari denied 86 S.C. 1067, 383 U.S. 932,15 L.Ed.2d. 854; U.S. v. Wharton, C.A.Or., 514F.2d 406; Day v. Hickel, C.A.Alaska, 481 F.2d 473).

In other cases, the court ruled that although the possessory right of an occupant of public land, (such as in a grazing parcel), is a valuable property right that he can legally transfer and convey to his vendee, or which may be the subject or consideration of a contract. (Neal v. Kayser, 100 P. 439, 12 Ariz. 118,); the purchaser acquires no rights as against the United States, (Gozales v. French, Ariz. 17 S.Ct. 102, 164 U.S. 338, 41 L.Ed. 458).

25. On February 21, during the second hearing on what was to become the Taylor Grazing Act of 1934, Representative J.S. Scrugham of Nevada offered an amendment to Section 3 linking grazing rights to water rights with the following statement:

"It is not the grass on the range that controls its use, it is the water. The control of the water is absolutely in the jurisdiction of the State. This point should be clearly understood because it has a very important bearing on matters of range control. In the arid western States the law separates water use and land use in a manner different from the custom in areas of ample rainfall. The old riparian doctrine of water rights was found absolutely unsuitable to the needs of the people of the arid west. Therefore, there grew up a doctrine entirely different from that which is accepted under the old English common law in the older parts of the country. This new concept is called the 'doctrine of beneficial use." No matter where the water may be situated, he who beneficially use[s] water can have the continued usufruct as long as beneficial use is continued. This bill proposes to take absolute control over grazing on the public domain, and admittedly the control of the water is the governing factor.

"The water is legally controlled in the State of Nevada by what is known as the stockwatering acts. He who has used the water beneficially is entitled under the police powers of the State, to continue the beneficial use and be protected from the transient newcomer. Federal grazing control might be in direct conflict with State control of stock water.

"Forage on the public domain…is not worth anything whatever unless related to other factors in State or private control…Now the fallacy is wide-spread that the western range user is getting something for nothing, that he is obtaining the free use of something for which he is not paying, something that belongs to the people. The idea is utterly erroneous. The present system is based on the customs and use developed by a hardy, self-reliant, pioneer people who are wresting a living from the land which would deny existence to farmers untrained to its adversities…[T]he controlling factor in grazing is not the number of stock allowed on the range but the beneficent Diety who brings the rain that falls over the surface of this ground and brings out the grass." (House hearing record pp.124-5 as cited in Frederick W. Obermiller, "Did Congress Intend to Recognize Grazing Rights? An Alternative Perspective on the Taylor Grazing Act,"The Grazer, No. 185, December, 1995, Extension Service, Corvallis, Oregon.)

26. In Hunter v. United States, 388 F. 2d 148 at 149 Ninth Circuit Court-C.A. Cal. (1967), the court ruled that the right to water by prior appropriation from public domain for any beneficial use is entitled to protection. Evidence by ownership of livestock that Hunter and members of his family had since prior to 1880 persistently grazed and watered livestock in public domain…clearly showed a legal basis for acquisition of an appropriation to water by virtue of local decision. In view of practically uncontroverted proof establishing that Hunter and his predecessors had appropriated water from public domain…and that they had always used all water that was available from springs and creek whose flow fluctuated from year to year, judgment was to protect the grant of use of waters.

Hunter's grazing had been excluded when the land in question was withdrawn as a national monument. The court agreed that Hunter's water rights based on grazing use were valid, but also concluded that his right to graze lands adjacent to the water was not essential to the use of the water. The court reasoned Hunter could still exercise his right to use of the water by piping it out of the boundaries of the monument.

Squatter on public domain may acquire by appropriation right to use of water that is used by him to irrigate such land, and if he is evicted he may nevertheless divert water elsewhere if he is able. (*Public Lands,* Ch. 15 Appropriation of Waters, 43 Section 661, Pg. 722)

27. According to William D. Rowley in U.S. Forest Service Grazing and Rangelands: A History, p. 19 (1985):

"These grazers who had arrived earlier attempted to establish prescriptive rights to the range by their customary occupancy and acceptance of those rights among themselves, their stock organizations and roundup committees. Some western writers have compared these range rules to the customs of mining districts in their attempt to regulate and distribute access to ore in rich stream beds or quartz lodes. As with mining-district rules, western legislatures sometimes reinforced the regulations of stock organizations by authorizing inspections of cattle shipments for legitimate brands and passing water laws that gave rights to the first users. It was in

the area of water rights that early arrivals established their most effective power. Whoever controlled the water sources often controlled great areas of land."

28. According to Earnest Staples Osgood in The Day of the Cattleman, P.185 (1929):

"The presence of others along a stream, too long to permit individual control, meant that exclusion of outsiders must come through some sort of an understanding among those already on the ground. Cooperation among neighbors in the conduct of their business resulted in the growth of a certain amount of range privilege and good will. Participation in the roundup, in the use of common corrals, in the group protection against Indians, thieves and predatory animals and, in some cases, in the group drive of the beef turnoff to the railroad could be permitted or denied to the newcomer. To deny such privileges, often appeared to be the only way of preventing overcrowding of a range already taxed to its full carrying capacity. The success of such a method would, of course, depend upon the size of the outfit so denied and upon the amount of cooperation among older stock growers."

29. The Latin term "foris" refers to exclusion from the application of the ordinary law and not to a wooded land.

(Information taken from Joseph and Frances Gies, Life in a Medieval Castle, Harper & Row Publishers, c1979, pp0. 135-9)

William the Conqueror brought "forest law" from France, reserving large tracts of land embracing villages, wastelands and woods for his own exclusive use under the sovereign prerogative. By the thirteenth century, forest law was more strictly enforced in England than on the Continent and William's successors had vastly extended the royal forest.

Provisions of the Magna Carta limited the royal prerogative to reserve e forests, reducing their scope to those that had existed in 1199 and denying the king the right to extend the borders. Provisions reducing the severity of the forest laws and their arbitrary application became separated into the Parva Carta (Little Charter) or Forest Charter. This codified forest law and designated the administrators and courts to enforce it: local courts met every six weeks; special forest inquisitions were called to deal with serious trespass; and the royal forest eyre (circuit court) had ultimate jurisdiction. The local attachment courts dealt with minor offenses to the "vert" – the greenwood of the forest: cutting, clearing; gathering dead wood, honey and nuts; allowing cattle to graze or pigs to feed on acorns or beechnuts. When a graver offense to the vert or a crime against the "venison" – the right to hunt deer – was committed, a special court was called to hear the case before the forest officers, and either send the offender to prison until the next eyre or attach him by other's pledges to appear before it.

The hierarchy of officials that administered the forest was headed by a justice who directed the whole forest administration of England. Next in authority were the wardens, also called stewards, Bailiffs or chief foresters, who had custody of single forests or groups of forests. Below them were officers called verderers, knights or landed gentry nominally in charge of the vert but actually with a variety of duties.

There were also foresters who acted as gamekeepers, responsible to the wardens and appointed by them. Usually, each forest also had four agisters appointed by the wardens to collect money for the pasturing of cattle and pigs in the king's demesne woods, allowed at certain seasons. The agisters counted pigs as they entered the forest and collected the pennies as they came out.

Every three years an inspection of the forests was made by a body of 12 knights, the "regarders" who were supposed to report any encroachments on the king's demesne – the erection of a mill, fishpond, enlargement of a clearing, enclosure of land without a license, or any abuse of the right to cut wood.

30. There are several questions concerning the power of the federal government to "reserve" lands.
The Court appears to make a differentiation between the federal reservation of lands from disposal from lands still in Territorial status, (prior to statehood,) and reservation of lands from disposal subsequent to Statehood. (Alaska is the only State where the federal government has formerly appropriated land from a Territory to itself and reserved it <u>from</u> the Statehood process specifically as federal property.)

Regarding the question as to whether the federal government may "reserve" "Territory" from the process of Statehood, the following discussion from Rotunda & Nowak, Treatise on Constitutional Law: Substance and Procedure, 2D, supra, Section 3.6, footnote 4, p. 322 is submitted:

"[U]nder the equal footing doctrine the judiciary treats the property in a territory that is destined for statehood as being owned by the federal government in trust for the future state. Congress could sell parts of the territory, which it owns under its Article IV property power, to private persons prior to admitting that territory to statehood. The court has not determined whether Congress could defeat a future state's title to land simply by reserving title to a portion of the territory for the federal government prior to admitting the state to the union.

"The Supreme Court has adopted a strong presumption against finding that Congress intended to defeat a state's title to land that had once been part of a federal territory, prior to the state's admission to the union. In <u>Utah Division of State Lands v. United States</u>, 482 U.S. 193, 107 S.Ct. 2318, 96 L.Ed.2d 162 (1987), on remand 846 F.2d 618 (10th Cir. 1988) the Court assumed, arguendo, that the federal government could reserve title to territory so as to overcome the presumption of state title to land, but it found that Congress would have to demonstrate clearly and affirmatively that it intended to defeat the future state's title to land within its borders, which otherwise would be state-owned public lands (such as river beds or lake beds)."

Regarding the reservation of lands subsequent to Statehood, in <u>Friedman v. Goodwin</u>, (CC.1856) Fed. Cas. No. 5, 119, 1 McAll. 142, the court decided:

"On the cession of [Mexican] California to the United States, all the public lands therein became the property of the United States. On her admission to the Union, she became the owner of all public land not disposed of by law of congress."

After extensive lobbying by John Muir, Yosemite was designated to a National Park in 1891. However, in order to vest exclusive jurisdiction and ownership in regard to these lands in the United States, it was necessary for the California Legislature to approve a deed of cession for Yosemite to the U.S. in St. 1891, p. 262 as follows:

"The State of California hereby cedes to the United States of America exclusive jurisdiction over such place or parcel of land as may have been or may be hereafter ceded or conveyed to the United States…"

On the question of the nature of jurisdiction that the federal government may exercise over lands reserved or withdrawn from disposal, or remaining in her possession, the court has held:

In People, by McCullough vs. Shearer, 30 C. 645, 1 P.L.M. pt. 2, 97 (1866,) the court clarified:

"The relationship of the United States to the public land since the admission of California into the Union is simply proprietary, that of any owner of lands like any other Citizen who owns lands, and not of a municipal sovereign."

In the case of Kansas v. Colorado, 185 U.S. 143 (1902) and 206 U.S. 46 (1907), the federal government argues that the amount of the flow of interstate river was "subject to the superior authority and supervisory control of the United States" by virtue of its ownership of substantial national "territories" through which the river passed, and its powers under: (1) Article IV, Section 3 – "…the power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States," and (2) the power vested in the national government to acquire territory by treaty.

The Court agreed that the federal government did have full power of legislation in respect to all Territories, (public domain lands held prior to statehood,) subject to no restriction other than those expressly named in the Constitution. The right to dispose of and make all necessary rules and regulations on federal "properties" located within the States were, however, subordinate to the legislative powers of general government of the States.

The Court found that the powers of the national government within the geographical limits of the States, was the same as those within the limits of the original thirteen States. Absent a definite power enumerated in the Constitution the federal government could not legislate in respect to lands within State borders.

The Court concluded: "…It is enough for the purpose of this case that each state has full jurisdiction over the lands within its borders, including the beds of streams and other waters."

31. The Timber Culture Act granted a homesteader a patent to 160 acres of land in the Great Plains if he agreed to plant ¼ of land in trees. (This was later changed to eliminate tree planning provision.)

32. Sec. 24: "That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations; and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof."

The rider was never referred back to its originating committees, (House and Senate Public Lands Committees,) technically an illegal procedure.

Later challenges in 1911 questions the Forest Service's right to impose grazing permits and fees on the use of range in the public domain on the basis of the "implied license" affirmed in Buford v. Houtz. The Court ruled in Light v. U.S. (220 U.S. 523, 55 L. Ed. 570, 32 Sup. Ct. Rep. 485) and U.S. v. Grimaud (220 U.S. 506, 31 S. Ct. 480, 55 L.Ed. 563) that the Forest Reserves had been withdrawn from the public domain and that the "implied license" of Buford v. Houtz had been "curtailed and qualified" by Congress, to the extent that the privilege of grazing should not be exercised in contravention of the rules and regulations of the permit system. (At the time of the Grimaud case there were extensive valid permits to grace in the Sierra Forest Reserve with which his grazing activities would have conflicted. Under Forest Service "Use Book" rules for granting grazing permits, transient herders, such as Grimaud, who could make no claim to local property ownership were given Class C, or last priority is granting of permits.)

33. In 1894, the Department of Agriculture prohibited the "driving, feeding, grazing, pasturing or herding of cattle, sheep and livestock" as its first administrative policy on the forest reserves. (Frederick Coville, "Forest Growth and Sheet Grazing in the Cascade Mountains of Oregon, U.S. Department of Agriculture, Division of Forestry Bulletin no. 15, p. 10.)

34. The Act states: "…but it is not the purpose or intent of these provisions of the Act Providing for Such Reservations to authorize the inclusion therein, of lands more valuable for the mineral contained therein and for agricultural purposes, than for Forest Reserve purposes…"

35. Statues at Large, vol. 30, p. 36; U.S.C. vol. 16, sec. 478 provided that nothing in the act would "prohibit any person from entering upon such national forests for all proper and lawful purpose including that of prospecting, locating and developing the mineral resource thereof…such persons must comply with the rules and regulations covering such national forests." The section also provided that the Secretary of the Interior to "make such rules and regulations…as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction."

36. In 1896, restrictive Forest Rules regarding sheep grazing were challenged in United States v. Tygh Valley Co., 76 V. 693. The Forest Rules were upheld on the basis that closely herded sheep were damaging the resources; (see also Dastervignes v. United States, 122 F. 30; 1903; and Dent v. United States, 76 P. 455, reversing 71 P. 920; 1904.) According to Colorado Judge Ethelbert Ward, The Legal Aspect of the Grazing Problem, these were essentially civil cases by injunction to prevent damage to property "and would apply as well to the individual as to the

United States. They are founded on the law of the land, and do not depend on rules and regulations." (Forest Service Law Office Correspondence RG 49, Drawer 16, National Archives.)

The grazing system devised by the Bureau of Forestry in 1902 issued the first grazing permits for sheep. A circular issued by the department of Interior on January 8, stated livestock on the forest reserve would receive preference in the following order: 1) Stock of residents within the reserve; 2) Stock of persons who own permanent stock ranches within the reserve, but who reside outside of the reserve; 3) Stock of persons living in the immediate vicinity of the reserve, called neighboring stock and 4) stock of outsiders who have some equitable claim.

37. Forest Service "Use Book" of 1905 or "*The Use of the National Forests"*, (subtitled "Regulations and instructions for the use of the National Forest Reserves",) July 1905, p.22 listed three classes of grazing permits; A.) For those who owned adjacent ranch property ("small near-by owners"); B.) For those who owned nonadjacent property and traditionally used the public forest ranges (all other regular occupants of the reserve range") and C.) For transient herders who could make no claim to local property ownership ("owners of transient stock".)

"In relation to Forest Officers to the public, the administration of Forest Reserves is not for the benefit of the government, but of the people. The revenue derived from them goes, not to the general fund of the United States, but 10% of it directly to the counties in which the reserves are situated, and the other 90% towards maintaining upon the reserve a force of men organized to serve the public interest. This force has two chief duties: to protect the reserves against fire and to assist the people in their use. Forest officers, therefore are servants of the people. They must answer all inquiries fully and cheerfully, and be at least as prompt and courteous as they would be in private business. It is no less their duty to encourage and assist legitimate enterprises. The continued prosperity of agriculture, lumbering, mining, and livestock interests is directly dependent upon a permanent and accessible supply of water and forage. The dominant industry on the land will be considered first, but with as little restriction to minor industries as may be possible. In the long run, where conflicting interests are concerned, the question will be decided from the standpoint of the greatest good of the greatest number whether it be mining, lumbering, or the livestock industry. Every effort will be made to assist the stock owner to a satisfactory distribution of stock on the range. The prime objective is the best permanent good of the livestock industry. The Reserve Officer will see to it that water, wood and forage are used to the benefit of the home builder. It is the home builder, first of all, upon whom depends the best permanent use of lands and resources alike.

"The Secretary of Agriculture has the authority to permit grazing to the best permanent good of the livestock industry through proper care and improvement of the grazing lands. Grazing permits will be given preference in the following order; small nearby owners and then persons living in or close to the reserve whose stock have regularly grazed upon the reserve range and are dependent upon its use. The protection of settlers and home builders against unfair competition in the use of the range is prime requisite. Priority in the occupancy and use of the range and the ownership of improved farming land in or near the reserve will be considered, and

preference will be given to those who have continuously used the range for the longest period.

"All the resources of the forest reserves are for use, and this use must be brought about in a thoroughly prompt and businesslike manner, under stuck restrictions only as will insure the permanence of these resources. The vital importance of forest reserves to the great industries of the Western States will be largely increased in the near future. The permanence of the resources of the reserve is therefore indispensable to continued prosperity, and the policy of the Forest Service for their protection and use will invariably be this fact…

"The timber, water, pasture, mineral and other resources of the Forest Reserves are for the use of the people. They may be obtained under reasonable conditions without delay. Legitimate improvements and business enterprises are encouraged. The Forest Reserves are open to all persons for lawful purposes." (Federal Lands "UPDATE", Dec. 1991, pg. 3)

In the Forest Service "Use Book," (*The Use of the National Forest Reserves, July 1905, 1910 edition*) it is stated under Regulation 45: "Whenever any live-stock association whose membership includes a majority of the owners of any class of livestock using National Forest or a portion thereof shall select a committee, an agreement on the part of which shall be binding upon the association, such committee upon application to the district Forrester, may be recognized as an advisory board for the association, and shall then be entitled to receive notice of proposed action and have an opportunity to be heard by the local Forest officer in reference to increase or decrease in the number of stock to be allowed for any year, the division of range between the different classes of stock or their owners, or the adoption of special rules to meet local conditions."

38. According to a circular released in 1906 by the Chief of the Forest Service in Washington, D.C., grazing permits for the 1906 season would be required. This meant that all stockmen and settlers using the Forest for grazing were placed under the permit system. R.L.P. Bigelow wrote to local Rangers that a man living in the Forest Reserve was entitled to six head of domestic stock to run on the range free of charge. The authorized use of the Forest was 9,750 cattle and horses; 2,300 head of sheep and goats; and no hogs. Frank Harley at Scott Bar and Chris Quigley at Walker were instructed to meet with stockmen at Fort Jones or Etna and get applications made out.

According to Davies and Frank, there was significant hostility from locals for the need to obtain a permit for activities they had been doing for two or more generations.

In 1907, the designation "special privilege permits" was changed to "special use permits." Klamath Forest Supervisor Bigelow issued grazing orders addressed to all Forest Officers outlining procedures for establishing seasons. The 3 seasons were for six months, eight months and one year starting on May 1. Payments were to be made before stock entered the range by bank draft or money order – no cash. During a meeting with stockmen, Bigelow felt that since the stockmen could not come to reasonable terms among themselves on range use, he would decide for himself. (Davies, Gilbert W. and Frank, Florice M., editors; Stories of the Klamath National

Forest The First 50 Years: 1905-1955; HiStory ink Books, P.O. Box 52, Hat Creek, CA; cl1992.)

39. "Possessory interest" by grazers in "public lands" is considered a valuable property interest that is recognized and taxable in the State of California. According to State of California Board of Equalization Property Tax Rules, Chapter 1, Subchapter 1, Rule 21 "Possessory interest Definitions":

"Possessory interest means an interest in real property which exists as a result of possession, exclusive use, or a right to possession or exclusive use of land and/or improvements unaccompanied by the ownership of a fee simple or life estate in the property. Such an interest may exist as the result of:

(a) A grant of a leasehold estate, an easement, a profit prendre, or any other legal or equitable interest of less than freehold, regardless of how the interest is identified in the document by which it was created, providing the grant confers a right of possession or exclusive use which is independent, durable, and exclusive of rights held by others in the property;
(b) Actual possession by one intending to the property to the exclusion of any other interfering use, irrespective of any semblance of actual title or right."

Decisions in Board of Supervisors, County of Modoc v. Archer (18 Cal. App. 3d 717, 1971 – 96 Cal. Rptr. 379 and Dressler v. County of Alpine (64 Cal. App. 3d 557; 1976 – 134 Cal. Rptr. 554) resulted in additions to the California tax code. Possessory Interest Tax was codified in 1939, Calif. Stats, c. 154, pg. 1277, Section 107 as meaning: possession of, claim to, or right to the possession of land or improvements, except when coupled with ownership of land or improvements in the same person; taxable improvements on tax-exempt land. The grazing allotment tax was imposed by the California Board of Equalization and added to the code in 1971 as "the right to grace livestock or raise forage on public lands."

"Exclusive use means the enjoyment of a beneficial use of land or improvements, together with the ability to exclude from occupancy by means of legal process others who interfere with that enjoyment. Co-tenants may each make use of land or improvements without impairing the other's right to use the property, as this constitutes but a single use jointly enjoyed. Exclusive use is not destroyed by one or more of the following:

(a) Multiple use by persons making different uses of the same property in such a manner that they do not prevent the enjoyment of co-existing rights held by others, as, for example the development of mineral resources by one person and the enjoyment of recreational uses by others;
(b) Concurrent use when the extent of each party's use is limited by the other party's right to use the property at the same time, as, for example, when two or more parties each have the independent right to grace cattle on the same land;
(c) Alternating use when the duration of each party's use is limited, as, for example, the use of premises by a professional basketball team on certain days of the week and by a professional hockey team on certain other days."

In 1990, the California Supreme Court in Hubbard v. Brown (785 P. 2d, 1183) rejected an argument that federal regulations denied by any interest in federal lands to grazing permit holders.

40. Stockmen continued to buy, sell, table, inherit and mortgage range rights as part and parcel of the ranch unit. Banks and lending institutions continued to view range rights as real property and collateralized those range rights for loan purposes. Private investment in range improvements by the ranchers in fencing, water facilities, livestock handling facilities, roads, etc., increased the rancher's private property rights claims.

In Schufflebarger v. Commissioner of Internal Revenue (24 TC 980-1955) the court upheld the Internal Revenue Service's consideration of grazing rights as part of a stockman's estate for tax purposes. The IRS taxes the value of grazing rights on federal lands as part of the rancher's real property. For tax, ranch sale and collateral definition for bank financing purposes, the value of the grazing rights are capitalized into the value of the ranch unit. Typical grant bargains and sale deeds sell "certain real and personal property, water rights and privileges, grazing leases, rights and privileges…"

A letter from Attorney Richard P. Chamberlain, Internal Revenue Service, to R.B. Tippeconnic, Forest Supervisor, Coronado National Forest, Tucson, Ariz., dated August 25, 1988, IRS correspondence code no. 1235-4208PX, now located in the files of the Coronado National Forest states: "We are aware of the Forest Service policy that National Forest Service grazing permits have no value. However, the Federal tax statutes require us to value the assets of a decedent or donor based on their 'fair market value.' Even though you do not place value on leases, the ranchers do whenever they buy or sell a ranch. Every ranch with substantial leases sells on an animal unit basis considering the grazing leases, and every reputable fee appraiser places a value on them despite your regulations.

"For the Internal Revenue Service to value the leases does place government agencies in an inconsistent position. But the greatest inconsistency is for the taxpayers to rely upon your regulations to claim the grazing rights have no value for tax purposes, and then to universally place a value on them when they sell or mortgage their ranches.

"It would appear that the market place is the best indication of whether or not there is a market value for the leases. As long as the market place says there is a value, a fair evaluation of a ranch cannot be made without considering the price a willing buyer would pay for the grazing leases."

41. H.M. Taylor, head of the Bureau of Animal Husbandry, in an 1886 report entitled Importance of the Range Cattle Industry, pg. 316, stated: "It will be seen that the ownership of the watering places gives tenure to contiguous range. The fact is recognized by the Western Cattlemen, and the question as to the number of cattle individual owners are permitted to hold, under regulations of the various local associations, it is determined by the question of water frontage.

42. First clause of Act reads; "…in order to promote the highest use of public lands pending its final disposal, the Secretary of the Interior is authorized…"

Section I includes language to the effect that: "Nothing in this sub-chapter shall be construed in any way…as limiting or restricting the power or authority of any State as to matters within its jurisdiction."

43. House hearing record p. 126 as cited in Frederick W. Obermiller, "Did Congress Intend to Recognize Grazing Rights? An Alternative Perspective on the Taylor Grazing Act," The Grazer, No. 185, December, 1995, Extension Service, Corvallis, Oregon.

44. Chief F.A. Silcox testified before the Senate Committee on Public Lands and Surveys on April 26, 1934, stating:

"The real purpose of this language is, I fear, to grant to the stockmen who are grazing lands on the public domain an estate or property interest in the particular lands which they have been accustomed to use, and that the fee simple title now possessed by the Federal Government will be terminated and the Government's interest thereafter limited by a part interest granted to the particular stockmen who chanced to be using the lands at the present time, and confirmed to them as a property right.

"[Many westerners] have been demanding that such preferences should be recognized as constituting 'rights' in and to the use of Government property, but is some instances have gone so far as to contend that by reason of the preference granted in the past a State of facts exists which results in already conferring upon the users legal rights in fact. In short, they contend that the national forest permittee whose lands have been recognized as depending upon national forest range holds the range not merely by license from the Government, but by reason of an actual property interest in the Government land itself. They claim, in short that the stockman has estate in the national forest range lands used by him and his estate is dominant and the Government's estate servient. I am advised by our legal officers that this position is not legally sound; that such a property interest cannot be established over lands which are the property of the Federal Government by prescription of adverse user and can only be established by actual grant; also the authority to grant public lands or easements therein rests exclusively in Congress.

"If the language of the amendment quoted above, referring to grazing preferences specifically as grazing 'rights' rather than leases or privileges, is not subject to construction as thereby constituting the grant of an easement in the public domain lands, it at least comes perilously near it…If anyone doubts that this is the ultimate purpose of this amendment, his doubt will be removed if his attention is called to the intimate connection in the language used in confirmation of grazing rights and that of water rights.

[T]he amendment grants…what certain stockmen have been consistently contending was already the actual status of the Government's property – in short, that the stockmen already held the dominant estate in the Government lands which they have grazed, and that there remains to the Government only a servient estate…it opens the door to endless controversies, misunderstandings, and footless litigation.

"If Congress wants to establish these vested rights, it is up to Congress. But we know from our experience in handling the question on the western range that you get into all sorts of complications and speculations with those grazing preferences on the assertion of a property interest. If that is what is intended, then we ought to have it clearly understood…It is my opinion alleged vested rights are going to be asserted."

Assistant Solicitor Poole testified on April 27, 1934:

"The danger of this [Scugham] provision is obvious. It would, perhaps forever cloud the fee simple title of the Federal Government, and, in turn, the title of the transferee. Like other property it would be transferable and inheritable. If this provision…operates as a federal grant, the Department of the Interior cannot subscribe to it, and the Secretary has instructed me to inform the committee that he would prefer to have the bill defeated if this provision is not removed"

Senate hearing record pp. 56-59 and p. 70 as cited in Frederick W. Obermiller, "Did Congress Intend to Recognize Grazing Rights? An Alternative Perspective on the Taylor Grazing Act," The Grazer, No. 185, December, 1995, Extension Service, Corvallis, Oregon.

45. According to *Legislative History*, Secretary of the Interior, Harold Ickes, during the Taylor Grazing Act Senate Hearings had stated; "We have no intention to…drive stockmen off their ranges or deprive them of rights to which they are entitled either under State laws or by customary usage."

46. In a colloquy on the Senate floor to clarify the intent of the McCarran provision on June 12, 1934, it was stated:

Mr. McCarran: "[O]ne holding a farm or a homestead who has heretofore depended upon the public range as a part of an integral unit of which his homestead may have been a minor part, shall have the privilege of going to a loaning agency and asking permission to borrow, and having recognition of the fact that he has certain rights open the public domain which shall not be interfered with during the terms of the loan."

Mr. Mahoney: "If I understand the Senator correctly, his purpose is merely to guarantee that the rights to grazing privileges which are conveyed by the bill shall be so definite that they may be recognized as security when the holder seeks a loan."

Mr. McCarran: "That is exactly correct."

From page 11153of the June 12, 1934 *Congressional Record – Senate* as cited in Frederick W. Obermiller, "Did Congress Intend to Recognize Grazing Rights? An Alternative Perspective on the Taylor Grazing Act," The Grazer, No. 185, December, 1995, Extension Service, Corvallis, Oregon.

47. By the turn of the century, a complex system of ditches and flumes served many of the water needs of the people of the county. According to Gold Mining in Siskiyou County 1850-1900, Occasional Paper #2, page 75-76; by Gary Stumpf;

published by the Siskiyou County Historical Society in 1979, the building of these structures was an engineering feat:

"Flumes were a source of continuous expense. They were subject to destruction by fire, wind, ice and snow and they seldom lasted more than 10 or 12 years. However, when it was necessary to bring water across open spaces, along vertical cliff faces, or through terrain where soil of other conditions prohibited the use of ditches, flumes were constructed. They were built of planks 1 ½ - 2" thick, 12-24" wide, and 12-16 feet long. Where the boards joined, wood battens 3-4" wide and ½" thick covered the seams to minimize leakage. Sills, posts, and caps, with dimensions varying according to the size of the flume, were added for strength every 4 feet. The entire flume, thus constructed, was supported by wooden trestles set to provide the desired grade of 25-35 feet per mile."

"In the construction of very long flumes and trestles, where a great deal of wood was needed, it was often most economical for the builders to cut their own lumber. In this case, a cheap sawmill could be set up at the head of the flume, supplied by trees in the vicinity. As the work progressed and the flume was filled with water, the lumber could be floated down to the point where it was needed."

"Ditches were cheaper to construct and required less maintenance than flumes and were therefore used whenever possible. A well-constructed ditch, running a large amount of water on a fairly steep grade, would keep itself relatively well cleaned out and would enlarge slightly from erosion as its banks solidified. It was estimated in 1900 that the capacity of such a ditch, well maintained, would actually increase by about 10% in eight years."

"In cross section, ditches were commonly trapezoidal – the relative dimensions of top, bottom, and depth varied widely according to the volume and velocity of the water the ditch was designed to carry. A fall of between 10-20 feet was generally considered desirable for a ditch, although the grade might be more or less, depending upon soil conditions. If the grade was too steep, excessive erosion would occur, and if the grade was too shallow the ditch would fill in with sediment. To build a good ditch, from source to claim, within such a narrow range of tolerance, in the rugged terrain of Siskiyou County, was a job that required considerable skill, and as one mining engineer put it in 1894: "'Through faulty engineering, some of our pioneer ditches, when finished, demonstrated the soundness of the hydraulic theorem that water cannot be made to run uphill."

According to A Textbook on Metal Mining, (Copywritten in 1899 by the Colliery Engineering Co. under the title A Treatise on Metal Mining) pgs. 76-80:

"Locating and engineering a ditch involved laying out the general elevations at intervals by means of compared aneroid barometers, then surveying. Leveling was done, keeping all turning points on grade. A series of stations were set, numbered and staked with pegs driven to grade. Bench marks were placed at ¼ - ½ mile intervals for reference. Trapezoidal forms or half a regular hexagon form was used for ditches. The banks were at least three feet wide on top. The material excavated from the ditch was piled on the lower side and ultimately consolidated into firm ground, raising the sides of the ditch and increasing its capacity. In mountainous

areas, narrow and deep ditches with grades from 16-20 feet per mile were common. If ditches were not so steep as to scour their bottoms, they would ultimately become lined with scum or silt of fine clay which closed up pores and openings in the soil. This stopped leakage and increased the carrying capacity of the ditch. Flumes were usually used when the grade was as much as 25-30 feet to the mile. Flumes were more costly to build and maintain and were subject to fire, rot and other natural destruction.

48. The Klamath River Basin Fisheries Task Force 1991 Long Range Plan For The Klamath River Basin Conservation Area Fishery Restoration Program lists the adjudication decree for the Shasta River as 1932. The adjudication, including Willow Creek (1972) and Cold Creek (1978) lists 212 decreed users and a total of 68.82 total decreed water rights.

49. Two articles described the effects of the flood of 1890.

(Taken from The Scott Valley News, February 8, 1890) Sunday: rain added to swelling waters of Moffet Creek and a torrent rushing down the mountain through Sterling Street. Monday: The stream began to encroach on buildings near the stream, then between houses. “snow covered the water like giant fleeces of wool.” The west side was evacuated and household goods taken to safety. At the Davidson farm, the dwelling was surrounded by water – a new channel having been cut on the west side by the overflow. Tuesday: The waters now threatened to undermine buildings all along the stream that had withstood the first shock, but there was a slight decrease in water volume. Wednesday: The channel of the stream was shifting toward the east. Men hauled trees to try to turn the current to the west. The rain stopped and the dam was partly successful in changing the course of the current. Thursday: As the waters receded, losses could be seen – fences torn down, mines flooded, bridges swept away.

Damage: Barns, buildings and fences on the west side from Isaac Hamilton’s to Newton street were damaged. T.C. Jones’ barn lay between the creek and firm ground. All along the Scott River from some distance from the banks, fences had been swept away and buildings damaged. The Ohio House Bridge, slough bridge, Goodale bridge and new bridge at the mouth of the Scott were gone. (Fort Jones bridge stood.) Main Street at Sterling was cut away by a mountain stream. Nearly all the bridges but the railroad bridge on the Shasta was gone.

“The Flood of 1890” by J..B.. Grider, D.M.D. Emeritus: “February 1-4. It began raining in the evening about 6 p.m., February 1st and continued without stopping until 1:30 a.m., February 4th. There was about five feet of settled snow on the ground and the warm, steady rain made quite a volume of water to be carried off by the many streams and rivers. The temperature registered 42 degrees F. I measured the rainfall at Seiad and found that it was 13 inches deep. The flood of 1861-1862 was just 14 inches, one inch higher than 1890 measured, by an old blaze or scalp on a black oak tree near the river bank. The river at Seiad measured 37 ½ feet above low water mark, about the same

as ’61-62. Many deer died from deep snow and high water by starvation and exposure to climatic conditions.

In the winter of 1938-1939, heavy loss in property, livestock and soil occurred in flood waters that crested over the Fort Jones Bridge.

Following major floods of the 1930’s that took as much as 40 acres of land on the Young Ranch and 20 acres on the Hammond Ranch, the
After the floods of the winter of 1948-1949, the Scott River channel had widened to over 1,000 feet in areas, where the original span had been about 100.

The 1955 “Christmas Flood” washed out 30 bridges, houses, outbuildings and livestock in Scott Valley. The East Fork of the Scott River flooded throughout the valley. At the same time, the water system for the town was full of debris. There were many landslides, with bridges washed out to the Klamath River. All the summer homes and water systems washed out on Kelsey Creek. The water in Yreka was running down the street sidewalk to sidewalk. There were numerous slides on Yreka Mountain.

Kidder Creek drainage had suffered a major fire prior to the 1955 flood. Sediment and debris washed from the watershed by flood and formed a major delta where Kidder Creek canyon emptied into the Scott River Valley. The steam still flows underground for much of the year as a result of massive aggradation.

The Scott River remained at or near flood stage from October 1957 to June 1958 with tremendous loss from soil erosion. Following the flood, a Aerial photos from 1958 of Scott Valley show 20-25 miles of bare eroding bank with little vegetation when the Siskiyou Resource Conservation District was first formed.

The 1964-1965 flood brought excessive amounts of logging debris into local stream channels and blocked access.

The Salmon River area was completely isolated for several weeks. The heavy snow on Salmon Mountain closed the Etna-Sawyers Bar Road for several months. A helicopter base was established on Mathews Creek near the Forks of he Salmon. For copters distributed 10,000 pounds of food and supplies to people from Forks to Sayers impacted by the flood.

An April 12, 1965 article in the Siskiyou Daily News reported damage from the December 1964 storm which was followed by a snow storm (as much as five feet in Etna.) From the period December 22, 1964 to January 4, 1965, $1,726,463 in damage was done as reported by Frank J. Jackson of the Soil Conservation Service. 80 Scott Valley farms lost an estimated 730 acres. Another area on 106 farms was covered by debris, silt and gravel – taking an additional $313,570 of farmland out of production. Seventeen homes and 16 farm buildings were demolished. In addition to farm machinery and equipment lost, more than 100 miles of fending must be replaced. Etna Creek changed its course and flooded an entire section, leaving it covered with debris and silt.

50. Past studies dealing with water in the Scott Valley include:

USGS Water Study Paper 1462, “Geology and Ground Water Features of Scott Valley” 1958.

DWR Bulletin No. 83, “Klamath Basin Investigation”, July 1964.

DWR Bulletin No. 94-5, “Land and Water Use in the Shasta-Scott Valleys Hydrographic Unit”, July 1965

MCCreary-Koretsky Engineers, “Siskiyou Soil Conservation District Report on Comprehensive Planning Study,” March 1967.

Hahn, Wise, and Associates, “General Plan Siskiyou County”, May 1969

DWR Memorandum Report, “Water Supply and Demand in the North Coastal Area”, September 1969.

DWR Memorandum Report, “Water Supply and Demand in the North Coastal Area”, December 1969

51. A Scott Valley Irrigation District proposal conducted in the early 1990s for installing piping on that major ditch indicated a cost of about five million dollars. Attempts are being made to assess areas of the greatest seepage where rocks are larger and it is more difficult to seal. Then to obtain grant funding for spot lining and ATV access for weed control to improve flow and reduce seepage. (Similar spot lining is currently underway by one irrigation district in the Shasta Valley. The projects works on a few sections each year.)

Funding for such projects is a major obstacle to seepage control. It should be noted that early in the 1990s, the State of California claimed a portion of many irrigation district’ self-assessment funding collected through the tax rolls, leaving the districts poor in financial resources to implement any efficiency measures.

Currently, many farmers along the ditches benefit indirectly from seepage and tailwater, through sub-irrigation and aquifer recharge. There is a reluctance to embrace possible changes under federal or state funding that require dedication of “water savings” to instream fisheries needs when water supply is insufficient to meet the irrigation water use rights of senior appropriators.

[Note: There is much case law to support current diversion practices although they may have substantial water loss through soil:

See 1893 Barros v. Fox 98 Calif. 63, 64-67, 32 Pac. 811 – The court stated that the appropriator in conveying water to the place of use is required to keep his flumes and ditches in good repair in order to prevent unnecessary waste. However, in regions in which ditches and flumes are the usual and ordinary means of conveying water, parties who have made their appropriations y such means cannot be compelled to substitute pipes.

See 1912 Thayer v. California Development Co. 164 Calif 117, 125, 128, 137, 128 Pac 1 – the court recognized that there is always and inevitably a difference between the quantity of waste diverted and the quantity that reaches the place of use through open ditches and flumes, so that some loss by absorption and evaporation necessarily takes place even in conduits well-constructed and maintained. The court stated: "So much of the water as may be unavoidably wasted is to be deemed a part of what is appropriated to beneficial use."

See 1925 Witherill v. Brehm 74 Calif. App. 286, 295-296, 240 Pac. 529 and 1929 207 Calif. 574, 579-580, 279 Pac. 432 – the court ruled that methods of water conveyance that have been used for long periods of time and that conform to the custom of the country are not to be held unreasonable, even though they result in losses of water in transit amounting in some areas of 30-50%.

See 1929 Joerger v. Pacific Gas & Electric Co. 207 Calif. 8, 23, 24, 276 Pac. 1017 – the court ruled that the irrigator was entitled to make reasonable use of the water according to the custom of the locality. The amount of water required to irrigate lands should be determined in reference to the system used (in this case flood irrigation,) although it may result in some waste which might be avoided by the adoption of another or more elaborate and extensive distribution system. The court stated there is no authority which requires an appropriator of water to change his system or irrigation so that others may perhaps be benefitted thereby.

See 1930 Mt. Shasta Power Corp. v. McArthur 109 Calif. App. 171, 181, 292 Pac. 549 – the court ruled that if an irrigation system conforms to the standards of the community, even though it may be primitive and wasteful as compared with more modern methods of irrigating, its use may not be disturbed on that account.

See 1935 Tular Irrigation District v. Lindsay – Strathmore Irrigation District 3 Calif. 2d, 489, 525-526, 547, 567-568 45 Pac. 2d 972 – The appropriator is entitled to the quantity of water needed for reasonable beneficial use at the place of use, plus reasonable conveyance loss under reasonable method of diversion. Appropriators in this case had been conveying water in earthen ditches for long periods of time – some of them for more than 50 years – and it appeared the conveyance losses amounted from 40-45%. The court ruled that the appropriators had the right, as a matter of law, to transport the water in that way and could not be compelled, at their own expense, to construct impervious conduits to save water.

52. Lux v. Haggin, 69 Calif. 255, 390, 4 Pac. 919 (1884), 10 Pac. 674 (1886).

53. In Eddy v. Simpson, 3 Calif. 249, 252, (1853), the court stated: "It is laid down by our law writers, that the right of property in water is usufructuary, and consists not so much of the fluid itself as the advantage of its use. The owner of land through which a stream flows, merely transmits the water over its surface, having the right to its reasonable use during its passage. The right is not in the corpus of the water, and only continues with its possession."

Vernon Irr. Co. v. Los Angeles, 106 Calif. 237, 257, 39 Pac. 762, (1895) established that riparian water rights were usufructuary in nature. (See also Hargrave v. Cook

(1895); Gould v. Eaton 117 Calif. 539, 542, 49 Pac. 577 (1897); Duckworth v. Watsonville Water & Light Co. (1907).

In 1914, the Water Code provided under division 2 water, sec. 1001: "Nothing in this division shall be construed as giving or confirming any right, title or interest to or in the corpus of any water."

54. *PRE-1928 RIPARIAN –*

In Miller & v. Madera Canal & Irrig. Co., 155 Calif. 59, 76, 77, 99 Pac. 502; (1907 & 1909) the Court rules that, as against an appropriator, the riparian owner was not held to any measure of reasonableness. (This was reversed by the Calif. Constitutional Amendment of 1928.)

In 1926, the California Supreme Court in Herminghaus v. Southern California Edison, 200 Cal. 81, 88, 92, 103, 252 Pac. 607, ruled that a downstream riparian may command the entire flow of a river to flood irrigate.

1928 CONSTITUTIONAL AMENDMENT –

On November 6, 1928, in response to public protest on the Herminghaus decision, the California Constitution (Article X, Section 2,) was amended to require all water uses, not just appropriative, to be both reasonable and beneficial. The amendment was drawn after a long series of legislative hearings and other conferences and discussions extending over many parts of the state.

"It is hereby declared that because of the conditions prevailing in the State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or use or flow of water in or from any natural stream or water course in the State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which his land is riparian under reasonable methods of diversion and use, or of depriving any appropriator to water to which he is lawfully entitled."

In Peabody v. Vallejo, 2 Calif.-2d-351, 368, 372, 374-375, 40 Pac.-2d -486; (1935,) the Calif., in interpreting the 1928 amendment, the court stated; "distinctions heretofore made between the usual or extraordinary and the usual or ordinary flood and freshet of waters of a stream are no longer applicable."

The 1928 amendments were epitomized as follows: 1) The right to the use of water is limited to such water as shall be reasonably required for the beneficial use to be served; 2) Such right does not extend to the waste of water; 3) Such right does not extend to unreasonable use or unreasonable method of use or unreasonable method of diversion of water; 4) Riparian rights attach to, but to no more than so much of the flow as may be required or used consistently with this section of the Constitution.

In Tulare Irrigation District v. Lindsay-Strathmore Irrigation District, 3 Calif.-2d-489, 525-526, 547, 567-568 45 Pac.-2d- 972; (1935,) the court stated; "It is to be noted that the new doctrine embodied in the constitutional amendment, as interpreted in Peabody case, not only applies the doctrine of reasonable use as between riparian and appropriator, but also between an overlying owner and an appropriator. The overlying owner in this state has been held to have analogous rights to those of a riparian…Such overlying owner is now subject to the same restrictions as those applicable to riparian owners.

The court also stated; "What is beneficial use at one time may, because of changed conditions, become a waste of water at a later time." It qualified that in an area of great need for water, the use of an appreciable quantity of water for the purpose of exterminating gophers and squirrels during the winter is not considered a reasonable and beneficial use.

The appropriator is entitled to the quantity of water needed for reasonable beneficial use at the place of use, plus a reasonable conveyance loss under a reasonable method of diversion.

Appropriators in this case had been conveying water in earth ditches for long periods of time – some of them for more than 50 years – and it appeared that conveyance losses amounted from 40-45%. The court ruled that the appropriators had the right, as a matter of law, to transport the water in that way and could not be compelled, at their own expense, to construct impervious conduits to save water.

The court stated at 3 Calif. (2d) 547: "In determining what is a reasonable quantity for beneficial uses, it is the policy of the state to require within reasonable limits the highest and greatest duty from the waters of the state…However, an appropriator cannot be compelled to divert according to the most scientific method known. He is entitled to make a reasonable use of the water according the general custom of the locality, so long as the custom does not involve unnecessary waste."

In Meridian v. San Francisco, 13 Calif.-2d-424, 445, 447, 449, 90 Pac.-2d- 537; (1939,) The Calif. Supreme Court stated: "It was undoubtedly the purposes of the proponents of the amendment of 1928 to make it possible to marshal the water resources of the state and make them available for the constantly increasing needs of all of its people."

The amendment means: "that when the law has guaranteed to the riparian owner the use of the waters of the stream to the full extent to which he may put the same for all present and prospective beneficial purposes and has made available to him the means of protecting the rights so guaranteed, he has received the full measure of his benefit and protection to which he is entitled, and can claim no more."

The amendment limits the riparian owner to a reasonable beneficial use of water, but likewise safeguards his right to whatever part of the natural flow of the stream is necessary to yield him such reasonable beneficial use. The riparian owner is not entitled to an injunction to control the use of the water by an appropriator who is exercising a subordinate right that is in no way injurious to the riparian right.

When a riparian or overlying water owner brings an action against an appropriator, it is now necessary for the trial court to determine whether such owners, considering the needs of those in a particular area are putting the waters to a reasonable beneficial use under reasonable methods if diversion and use.

The Calif. Supreme Court stated concerning "waste". The term is necessarily relative. As denounced by the amendment of 1928, it was the use of water by riparian owner under an asserted, and therefore protected right to compel the waters of the stream, without any benefit to himself, to flow to a lower level and onto the sea when otherwise beneficial use could be made of the same."

The court also stated: "It was undoubtedly the purpose of the proponents of the amendment of 1928 to make it possible to marshal the water resources of the state and make them available for the constantly increasing needs of all its people. In according to that great purpose its proper significance it is necessary and appropriate to declare, as inherent in the plan, that the storage of water for the purposes of flood control, equalization and stabilization of the flow and future use, it is included in the beneficial uses to which the waters of the rivers and the streams of the state may be out within the intent of the constitutional amendment. But such right of storage must necessarily be subordinate to all beneficial uses of the stream made in the exercise of riparian and prior appropriative rights. And the right of storage may be exercised only pursuant to appropriations lawfully made."

APPROPRIATIVE –

In Barrows v. Fox 98 Calif. 63, 64-67, 32 Pac. 811 (1893), the court stated that the appropriator in conveying water to the place of use is required to keep his flumes and ditches in good repair in order to prevent unnecessary waste. However, in regions in which ditches and flumes are the usual and ordinary means of conveying water, parties who have made their appropriations by such means cannot be compelled to substitute pipes.

In Thayer v. California Development Co. 164 Calif 117, 125, 128, 137, 128 Pac 21 (1912), the court recognized that there is always and inevitably a difference between the quantity of water diverted and the quantity that reaches the place of use through open ditches and flumes, so that some loss by absorption and evaporation necessarily takes place even in conduits well-constructed and maintained. The court stated: "So much of the water as may be avoidably wasted is to be deemed a part of what is appropriated to beneficial use."

In Hufford v. Dye, 162 Calif. 147, 159, 121 Pac. 400; (1912,) the court stated; "The use of water in tis state is of such great necessity as to preclude its being allowed to run to waste and its full beneficial and economical use requires, that when the wants

of one appropriator are supplied another may be permitted to use the flow for his benefit."

In Dannenbrink v. Burger 23 Calif. App. 587, 593-595, 138 Pac. 751 (1913); hearing denied by the Calif. Supreme Court – court ruled that while an appropriator may at all times keep his ditch and essential equipment in such repair as will preserve to him all waters he has rightfully appropriated and which are required for the purposes he lawfully applies the, nevertheless, he may not construct his flumes and dam as to prevent waters that have been seeping there from for many years, and have been applied to beneficial use by other appropriators during all such time, from continuing to escape into the stream from which originally diverted, to the injury of other appropriators. Those who for long periods of time (in the cited case about 25 years,) have appropriated and continuously used the waters thus seeping back into the stream were entitled to continue to use as against the appropriator of the original flow.

In California Pastoral & Agricultural Co. v. Madera Canal & Irr. Co., 167 Calif. 78 84-86, 88-89, 138 Pac. 718; (1914,) the Court stated: "It is further substantially declared that wherever the question has been considered that beneficial use is not what is actually consumed, but what is reasonably necessary for the purpose to which the water is devoted, and that an excessive diversion of water for any purpose cannot be regarded as a diversion for beneficial use, in so far as it is in excess of any reasonable requirement for that purpose."

"The effect of the decisions clearly appears to be that one actually diverting water under a claim of appropriation for a useful or beneficial purpose, cannot by such diversion acquire any right to divert more water than is reasonably necessary for such use or purpose, no matter how long a diversion in excess thereof has continued."

In Felsenthal v. Warring, 40 Calif. App. 119, 127, 133, 180 Pac. 67; (1919,) the Court stated; "The extent of an appropriator's or adverse user's right is limited, not by the quantity of water actually diverted, nor by the capacity of his ditch, but by the quantity which is, or may be, applied by him to his beneficial uses…An appropriator's right is limited to such quantity, not exceeding the capacity of his ditch, as he may put to a useful purpose upon his land within a reasonable time, by use of reasonable diligence…A diversion over and above what is reasonably necessary for the uses to which he devotes the water cannot be regarded as a diversion for beneficial use. He cannot waste."

In Witherill v. Brehm 74 Calif. App. 286, 295-296, 240 Pac. 529 (1925) and 207 Calif. 574, 579-580, 279 Pac. 432 (1929), the court ruled that methods of water conveyance that have been used for long periods of time and that conform to the custom of the country are not to be held reasonable, even though they result in losses of water in transit amounting in some areas of 30-50%.

In Joerger v. Pacific Gas & Electric Co., 207 Calif. 8, 23, 24, 276 Pac. 1017; (1929,) the court stated; "While an appropriator can claim only the amount (of water) which is necessary to properly supply his needs, and can permit no water to go to waste, he is not bound, as here claimed, to adopt the best method for utilizing the water or take

extraordinary precautions to prevent waste. He is entitled to make a reasonable use of the water according to the custom of the locality and as long as he does so, other persons cannot complain of his acts. The amount of water required to irrigate his lands should, therefore, be determined by reference to the system used, although it may result in some waste which might be avoided by the adoption of another or more elaborate and extensive distribution system…"

"The lands of the plaintiff, as above pointed out, constitute a contiguous area along the knolls and sloping hillsides adjacent to Hat Creek. The ground is hilly and porous, marked by numerous depressions, and is irrigated by turning the water upon the ground and permitting it to run over the slopes. This is the character of system commonly used in the vicinity. There is no authority which requires an appropriator of water to change his system of irrigation so that others may perhaps be benefitted thereby, assuming that the method may produce some waste."

In the Joerger case, an allowance had been made for 2 1.2 miners inches per acre for the irrigation season and 1 ¼ m.i. during the nonirrigation season for preservation of the ditch and other purposes. The argument that this was excessive was overruled with consideration of the particular conditions.

The determination of the duty of water in a particular controversy is a judicial function with consideration of the facts and circumstances of each particular case. The court stated: "In this state there is no statute which definitely regulates the duty or amount of water reasonably necessary for irrigation. This being so, the question becomes one of fact for the court, in a given case, to determine upon the evidence presented to it. The question of what quantum of water is reasonable required for irrigation is necessarily a complicated one, depending, as it does upon many different conditions. The character of the soil, the area sought to be irrigated, the climatic conditions, the location, quality and altitude of the lands, the kinds of crops to be raised and the length of the irrigation season must all be taken into consideration and weighed as well with other conditions as may be peculiar to each particular case…Under such circumstances it is apparent there can be no exact uniform rule for computing the duty or reasonable quantity of water for irrigation to be applied to all cases alike."

In Mt. Shasta Power Corp. v. McArthur 109 Calif. App. 171, 181, 292 Pac. 549 (1930), the court rules that if an irrigation system conforms to the standards of the community, even though it may be primitive and wasteful as compared with more modern methods of irrigating, its use may not be disturbed on that account.

GENERAL –

In Lodi v. East Bay Municipal Utility Dist., (7 Calif.-2d-316, 339-340, 60 Pac.-2d-439, (1936), the court ruled that before issuing a decree entailing a great waste of water in order to safeguard a prior right to a small quantity of water, the Amendment of 1928 compels trial courts to ascertain whether a physical solution to the problem exists that will avoid the waste and at the same time not unreasonably or adversely affect the vested right of the paramount holder. The court stated that the release of a large quantity of water which, after having served the purpose of forcing a relatively small quantity of water into adjacent land, flows for the most part unused to the sea, is clearly a waste of water.

The court marked the 1928 California Constitutional amendment as a turning point to the requirement that a physical remedy be sought to avoid Waste. Prior to the amendment, a prior appropriator to ground (well) water fed by a stream was entitled to an injunction against subsequent appropriators of surface water (stream) that lowered the water table in injury of the prior well water user.

In Rancho Santa Margarita v. Vail, (11 Calif.-2d-501, 554-555, 559, 81 Pac.-2d- 533, (1938), the court stated that if no physical solution to the problem of wasting water to protect a prior right to a small quantity of water is suggested by the parties, it is the duty of the trial court to work one out independent of them.

55. Alta Land & Water Co. v. Hancock, 85 Calif. 219, 229, 24 Pac. 645 (1890).

56. Ranch Santa Margarita v. Vail, 11 Calif. (2d) 501, 528, 533 81 Pac. (2d) 533 (1938.) Title Insurance & Trust Co. v. Miller & Lux, 183 Calif. 71, 85, 190 Pac. 433 (1920) Omnes v. Crawford, 202 Calif. 766, 768, 262 Pac. 722 (1927), Joerger v. Pacific Gas & Electric Co., 207 Calif. 8, 30-33, 276 Pac. 1017 (1929); Joerger v. Mt. Shasta Power Corpn., 214 Calif. 630, 635, 7 Pac. (2d) 706 (1932).

57. Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 328-329, 88 Pac. 978 (1907).

58. Boehmer v. Big Rock Irr. Dist., 117 Calif. 19, 26-27, 48 Pac. 908 (1897). Lux v. Haggin, 69 Calif. 255, 424-428, 4 Pac. 919 (1884), 10 Pac. 674 (1886).

59. Title Insurance & Trust Co. v. Miller & Lux, 183 Calif. 71, 82, 190 Pac. 433 (1920).

60. California Pastoral & Agriculture Co. v. Enterprise Canal & Land Co., 127 Fed. 741, 742 (S.D. Calif., 1903). United States v. Central Stockholders' Corporation of Vallejo, 43 Fed. (2d) 977, 981 (S.D. Calif. 1930. Lux v. Haggin, 69 Calif. 255, 340-341, 368-376, 4 Pac. 919 (1884), 10 Pac. 674 (1886). Modoc Land & Live Stock Co. v. Booth, 102 Calif. 151, 152-154, 156-158, 36 Pac. 431 (1894).

61. In Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 330, 88 Pac. 978 (1907), the court stated; "Land which is not within the watershed of the river is not riparian thereto, and is not entitled, as riparian land, to the use or benefit of the water from the river, although it may be part of an entire tract which does extend to the river."

The "rules" regarding watershed of a main stream and those of its tributaries are that each tributary is considered a separate stream with regard to lands contiguous thereto above the junction, so that land lying within the watershed of one tributary above that joint is not riparian to the other stream. As against lower reparians located below the confluence of a main stream and tributary, the watersheds of the main stream and the tributary constitute parts of a single watershed. American Union Water Co. v. Fuller, 150 Calif. 327, 330-331, 88 Pac. 978 (1907). Holmes v. Nay, 186 Calif. 231, 240-241, 199 Pac. 325 (1921). Crane v. Stevinson, 5 Calif. (2d) 387, 399-400, 54 Pac. (2d) 1100 (1936).

62. Rancho Santa Margarita v. Vail, 11 Calif. (2d) 501, 561, 81 Pac. (2d) 533 (1938), Bathgate v. Irvine, 126 Calif. 135, 142, 58 Pac. 442 (1899). Ferrera v. Knipe, 28 Calif. 340, 343-344 (1865). Hale v. Mclea, 53 Calif. 578, 584 (1879). Smith v. Corbitt, 116 Calif. 587, 592, 48 Pac. 725 (1897). Cowell v. Armstrong, 210 Calif. 218, 224-225, 290 Pac. 1036 (1930). Lux v Haggin, 69 Calif. 255, 395, 4 Pac. 919 (1884), 10 Pac. 674 (1886). Stanford v. Felt, 71 Calif. 249, 250, 16 Pac. 900 (1886). Drake v. Tucker, 43 Calif. App. 53, 58, 184 Pac. 502 (1919).

63. Cowell v. Armstrong, 210 Calif. 218, 224-226, 290 Pac. 1036 (1930), the court stated; "In none of the cases relied upon do the facts disclose that any more than the ordinary number of domestic animals are involved; and the statements of the court in those cases in recognizing the distinction made by the common law between the right to the ordinary use of the water for man's natural wants, i.e., for domestic uses and for cattle, and the right to its use for his extraordinary or artificial wants…among which is its use for irrigation…in the absence of authority directly in point, must apply to the factors to which they were obviously intended to apply, vis., for the use of stock and animals ordinarily kept to sustain the domestic needs of man. There is no indication in the cases relied upon that if the stock exceeded those necessary for the ordinary domestic uses, and increased to the proportions of an industry so that the primary object of the owner was to raise stock in large herds for the market, the common-law rule of preference would still apply."

64. In Ellis v. Tone, 58 Calif. 289, 300 (1881), the court instructed the jury; "Every riparian owner upon a stream has the right to use in a reasonable way, the water of said stream for domestic purposes, for irrigation of his land, or for propelling machinery, if the quantity of water will warrant such use above the amount required for domestic purposes.

In Mentone Irr. Co. v. Redlands Electric Light & Power Co., 155 Calif. 323, 327, 100 Pac 1082 (1909), the court held that the use of water by a riparian owner in its passage through his land to operate a power plant thereon "is clearly within his rights as is his right to operate a mill thereon with which to grind grain or to operate any other machinery, than which there is no more ancient or well-established feature of riparian rights." (See Herminghaus v. Southern California Edison Co., 200 Calif. 81, 109, 252 Pac. 607 (1926). Fall River Irr. Dist. V. Mt. Shasta Power Corpn., 202 Calif. 56, 71-72, 259 Pac. 444 (1927), Miller & Lux v. San Joaquin Light & power Corpn., 120 Calif. App. 589, 609, S. ac. (2d) 560 (1932). Crum v. Mt. Shasta Power Corpn., 124 Calif. App. 90, 94, 12 Pac. (2d) 134 (1832). Moore v. California Oregon Power Co., 22 Calif (2d) 725, 730, 140 Pac. (2d) 798 (1943). Seneca Consolidated Gold Mines Co. v. Great Western Power Co., 209 Calif. 206, 215, 219, 287 Pac. 93 (1930).

The court held in Callison v. Mt. Shasta Power Corpn., 123 Calif. App. 247, 252, 11 Pac. (2d) 60 (1932), that the generation of hydroelectric energy is not a "natural" use of the water, such as domestic use and the watering of farm animals; it is an "artificial" use. Hence, for such purpose, the right of the landowner is limited to use of his reasonable proportion of the water of the stream. (See also Joeger v. Mt. Shasta Power Corpn., 214 Calif. 630, 636-637, 7 Pac. (2d) 706 (1932). Crum v. Mt. Shasta Power Corpn., 220 Calif. 295, 306-307, 30 Pac. (2d) 30 (1934.)

65. The use of a stream by a riparian owner for recovery of rock, sand and gravel deposited by the stream on his land for sale as building material is a beneficial use within the riparian right.

Los Angeles County Flood Control District v. Abbot, 24 Calif. App. (2d) 728, 734, 76 Pac. (2d) 188 (1938).

66. Hilbert v. Vallejo, 19 Fed (2d) 510, 513 (C.C.A. 9th, 1927): "The rule [right to full flow] is evidently not suited to the conditions of a dry climate such as we have in this state. It is accordingly well settled here that each riparian owner has a right to a reasonable use of the water on his riparian land for the irrigation thereof, and that the so-called common-law right of each to have the stream flow by his land without diminution is subject to the common right to all to a reasonable share of the water."

In Harris v. Harrison, 93 Calif. 676, 683, 29 Pac. 325 (1892), the court stated, "the doctrine of riparian ownership has by judicial decision been modified, or rather enlarged, so as to include the reasonable use of natural water for irrigating the riparian land, although such may appreciably diminish the flow down to the lower riparian proprietor. And must be taken to be the established rule in California, at least, where irrigation is thus necessary." (See also, Bathgate v. Irvine, 126 Calif. 135, 142, 58 Pac. 442 (1899).

67. In Alta Land & Water Co. v. Hancock, 85 Calif. 219, 230, 24 Pac. 645 (1890), the court stated that irrigation had never been held to be a natural use of water in California and was subordinate to the use of water for domestic uses and the watering of farm livestock. The right of irrigation applies only to the surplus waters over and above those needed for natural uses. (see also Drake v. Tucker, 43 Calif. App. 53, 58, 184 Pac. 502 (1919).)

In Gould v. Stafford, 77 Calif. 66, 67-68, 18 Pac. 870 (1888), the court held that it is after the natural wants of the riparian owners for strictly domestic purposes and watering of domestic animals that the several riparian owners are entitled to a reasonable use of the remaining water for irrigation. It was determined in Lux v. Haggin, 69 Calif. 255, 408-409, 4 Pac. 919 (1884), 10 Pac. 674 (1886) that the riparian owner is entitled to a reasonable use of the water of a stream for the purposes of irrigation.

68. The riparian user does not have the right to insist upon full flow for aesthetic reasons. The court in Rose v. Mesmer, 142 Calif. 322, 330, 75 Pac. 905 (1904) stated; "A riparian owner, under the circumstances of scarcity such as here existed, and in view of the prevailing understanding and custom, would have no right, as against other owners in common of the same land and of a part of the same water-right, to insist on the full flow of the stream over his land for the mere pleasure of looking at it as a feature of the landscape." His right would be limited to so much of the water as should be reasonably necessary for use on his riparian land.

69. It was held in Modoc Land & Stock Co. v. Booth, 102 Calif.. 151, 156-157, 36 Pac. 431 (1894) that in no case should a riparian owner be allowed, as of right, to restrain nonriparian owners from diverting any water upstream simply because he wishes the stream to flow by or through his land undiminished.

The court stated in Crum v. Mt. Shasta Power Corpn., 117 Calif. App. 586, 601, 4 Pac. 92d) 564 (1931), "It is incompatible with the interests of modern agricultural and industrial conditions in this state that a riparian land owner be permitted to watch a stream flow uselessly past his premises to the sea while upper riparian owners are deprived of their reasonable share of the water for beneficial purposes." (See also Lux v. Haggin, 69 Calif. 255, 396, 4 Pac. 919 (1884), 10 Pac. 674 (1886). Rose v. Mesmer, 142 Calif. 322, 330, 75 Pac. 905 91904). San Joaquin & Kings River Canal & Irr. Co. v. Fresno Flume & Irr. Co., 158 Calif. 626, 629, 112 Pac. 182 (1910).

70. A "nuisance" use is defined as posing a real and substantial injury to the property (or beneficial use) of the lower user. The upstream user cannot be prevented from use because of the fact that necessarily some such use may somewhat impair the quality of the water, but he cannot exercise his right in such a manner as to injure those below him maliciously and unnecessarily. Whether or not the upstream use substantially injures the downstream right of use is the essential consideration. Rose v. Mesmer, 142 Calif. 322, 330, 75 Pac. 905 (1904) and Homes v. Nay, 180 Calif. 231, 241, 199 Pac. 325 (1921).

In Wright v. Best, 19 Calif. (2d) 368, 382, 121 Pac. (2d) 702 (1942), the court stated in regards to an upstream mining operation; "A prescriptive right to pollute a watercourse may be acquired as against lower riparian users and their successors in interest provided the deterioration in quality is not so great as to constitute a public nuisance."

In San Joaquin & Kings River Canal & Irr. Co. v. James J. Stevenson, 164 Calif. 221, 241,128 Pac. 924 (1912), the court stated; "The riparian right is parcel of the land to which it attaches. It is local in nature. It enables the owner to enjoin an injurious interference with the stream, but it does so only when such interference affects the river where it passes by his land. If he cannot show this, he cannot complain of the interference. A use of the stream above, if it does not affect it where it passes his land, is no violation of his right."

71. The right of the riparian owners to have the stream flow to his land is obviously necessary to the enjoyment of its benefits, but his right of possession and use of the water does not begin until it actually reaches the riparian land.

As a result of natural flow conditions, a riparian right may be in suspense during certain periods. Duckworth v. Watsonville Water & Light Co., 150 Calif. 520, 526, 89 Pac. 338 (1907). Drake v. Tucker, 43 Calif. App. 53, 58, 184 Pac. 502 (1919). Crum v. Mt. Shasta Power Corpn., 117 Calif. App. 586, 591 (1931), Crum v. Mt. Shasta Power Corpn., 220 Calif. 295, 299-302, 30 Pac. (2d) 30 (1934). McArthur v. Mt. Shasta Power Corpn., 3 Calif. (2d) 702, 711-712, 45 Pac. (2d) 807 (1935).

In Miller & Lux v. Enterprise Canal & Land Co., 169 Calif. 415, 441, 147 Pac. 567 (1915), the court stated "it is to be remembered that a riparian proprietor's title to the water begins only when it reaches his land and less only so long as it is flowing past his land. Until it reaches his land he has no title whatsoever and no right other than the protective right to see that the full flow past his land to which he is entitled is not illegally diminished."

The riparian user also has no right to the water once it has left his premises and is powerless to prevent downstream use. Hargrave v. Cook, 108 Calif. 72, 77-79, 41 Pac. 18 (1895). Holmes v. Nay, 186 Calif. 231, 234, 235-237, 242, 199 Pac. 325 (1921). United States v. Central Stockholder's Corporation of Vallejo, 52 Fed. (2d) 322, 339 (C.C.A. 9th 1931). Akin v. Spencer, 21 Calif. App. (2d) 325, 327-328, 69 Pac. (2d) 430 (1937).

72. Mentone Irr. Co. v. Redlands Electric Light & Power Co., 155 Calif. 323, 328, 100 Pac. 1082 (1909). Joerger v. Mt. Shasta Power Corpn., 214 Calif. 630, 638, 7 Pac. (2d) 706 (1932.)

73. The California Supreme Court in Vernon Ir. Co. v. Los Angeles, 106 Calif. 237, 256, 39 Pac. 762 (1895), stated that the riparian owner may exercise his usufructuary right in the water of the stream "provided he returns it to the stream above his lower boundary." This was further clarified in Bathgate v. Irvine, 126 Calif. 135, 144, 58 Pac. 442 (1899) that the riparian owner could not divert the water to a point where it would not flow back into the channel at a point above his lower boundary line.

74. Pabst v. Fimmand, 190 Calif. 124, 137, 138, 211 Pac. 11 (1922). Holmes v. Nay, 186 Calif. 231, 240, 199 Pac. 325 (1921). Turner v. James Canal Co., 155 Calif. 82, 92, 99 Pac. 520 (1909). Rose v. Mesmer, 142 Calif. 322, 329, 75 Pac. 905 Turner v. Eastside Canal & Irr. Co., 168 Calif. 103, 108, 142 Pac. 69 (194). Miller & Lux v. Enterprise Canal & Land Co., 169 Calif. 103, 108, 142 Pqc. 69 (1914). Miller & Lux v. Enterprise Canal & Land Co., 169 Calif. 415, 440, 444-445, 147 Pac. 567 (1915). Drake v. Tucker, 43 Calif. App 53, 58, 184 Pac. 502 (1919). Smith v. Corbit, 116 Calif. 587, 591-592, 48 Pac. 725 (1897).

75. Charnock v. Higuerra, 111 Calif. 473, 480-481, 44 Pac. 171 (1896). Walker v. Lillingston, 137 Calif. 401, 403, 70 Pac. 282 (1902). Turner v. James Canal Co., 155 Calif. 82, 92, 99 Pac. 520 91909). Rose v. Mesmer, 142 Calif. 322, 329, 75 PAC. 905 (1904).

76. In Heilbron v. The 76 Land & Water Co., 80 Calif. 189, 194, 22 Pac. 62 (1880), the court held that the riparian owner has no right to convey the waters elsewhere to the detriment of the lower riparian owner. (See also Gutierrez v. Wege, 145 Calif. 730, 733, 79 Pac. 449 (1905). In Miller v. Bay Cities Water Co., 157 Calif. 256, 278, 107 Pac. 115 (1910), the court held that the riparian owner could not divert waters to nonriparian lands in such a manner, "so as to prevent another riparian owner to who they would otherwise be available, from using them on his lands."

In Gould v. Stafford, 77 Calif. 66, 68, 18 Pac. 879 (1888), it was held that the riparian right does not entitle the proprietor to take any water away to other lands not riparian to the stream.

See also, Holmes v. Nay, 150 Calif 231, 285, 199 Pac. 325 (1921). Senior v. Anderson, 130 Calif. 290, 296, 62 Pac. 563, (1900). Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 335, 88 Pac. 978 (1907). Turner v. James Canal co., 155 Calif. 82, 91-92, 99 Pac. 520 (1909). Mentone Irr. Co. v. Redlands Electric Light & Power Co., 155 Calif. 323, 327, 100 Pac. 1082 (1909). Turner v. Eastside Canal &

Irr. Co., 168 Calif. 103, 108, 142 Pac. 69 (1914). Joerger v. Mt. Shasta Power Corpn., 214 Calif. 630, 637-638, 7 Pac. (2d) 706 (1932). Morgan v. Walter, 217 Calif. 607, 615, 20 Pac. 92d) 660 (1933). Parker v. Swett, 188 Calif. 474, 485-486, 205 Pac. 1065 (1922). Alta Land and Water Co. v. Hancock, 85 Calif. 219, 229-230, 24 Pac. 645 (1890). Duckworth v. Watsonville Water & Light Co., 250 Calif. 520, 526, 89 Pac. 338 (1907). Antioch v. Williams Irr. Dist., 188 Calif. 451, 456, 205 Pac. 688 (1922). Moore v. California Oregon power Co., 22 Calif. (2d) 725, 734, 140 Pac. (2d) 798 (1943). Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 334-335, 88 Pac. 978 (1907). Pabst v. Finmand, 10 Calif. 124, 137, 211 Pac. 11 (1922). Gould v. Eaton, 117 Calif. 539, 543, 49 Pac. 577 (1897).

77. Hill v. Newman, 5 Calif. 445, 446 (1855).

78. St. Helena Water Co. vs. Forbes, 62 Calif. 182, 183, 184 (1882). Lux v. Haggin, 69 Calif. 255, 391, 4 Pac. 919 (1884), 10 Pac. 674 (1886). Heilbron v. Last Chance Water Ditch Co., 75 Calif. 117, 123-4, 17 Pac. 65 (1888). Shurtleff v. Bracken, 163 Calif. 24, 26, 124 Pac 724 (1912). Palmer v. Railroad Commission, 167 Calif. 163, 173, 138 Pac. 997 (1914).

79. The riparian right passes with a grant of the land, not as an easement or appurtenance, but as a parcel of the land – St. Helena Water Co. v. Forbes, 62 Calif. 182, 184 (1882) [See also, Lux v. Haggin, 69 Calif. 225, 391, 4 Pac. 919 (1884), 10 Pac. 674 (1886); Stanford v. Felt, 71 Calif. 249, 16 Pac 900 (1886); Hargrave v. Cook, 108 Calif. 72, 77, 41 Pac. 18 (1895); San Francisco v. Alameda County, 5 Calif. (2d) 243, 246, 54 Pac. (2d) 462 (1936); Copeland v. Fairview Land & Water Co.,, 165 Calif. 148, 161, 131 Pac. 119 (1913)]…provided that the deed to the land does not reserve from its operation any riparian rights incident thereto – Holmes v. Nay, 186 Calif. 231, 236, 1099 pac. 325 (1921).

The grantor of the right in conveyance of the land through which a stream of water flows may reserve the riparian right from conveyance – Doyle v. San Diego Land & Town Co., 46 Fed. 709, 711 (S.D. Calif 1891). Walker v. Lillingston, 137 Calif. 401, 402-404, 70 Pac. 282 (1902). If the deed of conveyance does not reserve from its operation any riparian rights incident to the land conveyed, “on the face of the deed” such rights are conveyed as a part of the land – Holmes v. Nay, 186 Calif. 231, 236, 199 Pac. 325 (1921). However, “severed” riparian rights may not be used on non-riparian lands or convey the right to another to the detriment of a downstream user – Anaheim Water Co. v. Semi-Tropic Water Co., 64 Calif. 185, 189, 30 Pac. 623 (1993). Duckworth v. Watsonville Water & Light Co., 150 Calif. 520, 526, 89 Pac. 338 (1907). Gould v. Eaton, 117 Calif. 539, 543, 49 Pac. 577 (1897).

Where the owner of a riparian tract conveys away a noncontiguous portion of the tract by a deed that is silent as to riparian rights, the conveyed parcel is forever deprived of its riparian status. Ranch Santa Margarita v. Vail, 11 Calif. (2d) 501, 538, 81 Pac. (2d) 533 (1938). In Anaheim Union Water co. v. Fuller, 150 Calif. 327, 331-332, 88 Pac. 978 (1907) the court further stated:

“If the owner of a tract abutting on a stream conveys to another a part of the land not contiguous to the stream, he hereby cuts off the part so conveyed from all participation in the use of the stream and riparian rights therein, unless the

conveyance declares the contrary. Land thus conveyed and severed from the stream can never regain the riparian right, although it may be thereafter be reconveyed to the person who owns the part abutting on the stream, so that the two tracts are again held in one ownership."

In the subdivision of tracts of riparian land, parcels are often so located as to be left without physical continuity with the stream. Nevertheless, the original riparian right can be preserved in the detached parcels so severed from the stream if the parties to the conveyance so intend. In Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 331, 88 pac. 978 (1907) it was said that the conveyance of part of a riparian tract not contiguous to the stream deprives the part so conveyed of riparian rights to the stream "unless the conveyance declares the contrary." (See also Strong v. Baldwin, 154 Calif. 150, 156-157, 97 Pac. 178 (1908). Miller & Lux v. J.G. James Co., 179 Calif. 689, 690-692, 178 Pac. 716 (1919).

80. In Gould v. Stafford, 91 Calif. 146, 155, 27 Pac. 543 (1891), it was aid that the riparian right, while part and parcel of the land, may be severed or aggregated from it by grant, condemnation or prescription. In Lux v. Haggin, 69 Calif. 255, 392, 4 Pac. 919 (1884), 10 Pac. 674 (1886), the court stated; "We need not add that rights to the use of water may be acquired by grant, under some circumstances by assent, and by adverse user and possession."

81. Lux v. Haggin, 69 Calif. 255, 391, 4 Pac. 919 (1884), 10 Pac. 674 (1886). Stafford v. Felt, 71 Calif. 249, 16 Pac. 900 (1886). Half Moon Bay Land Co. v. Cowell, 173 Calif 543, 551, 160 Pac. 675 (1916). Fall River Valley Irr. Dist. V. Mt. Shasta Power Corpn., 202 Calif. 56, 65, 259 Pac. 444 (1927). Hargrave v. Cook, 108 Calif. 72, 77, 41 Pac. 18 (1895). Bathgate v. Irvine, 126 Calif. 135, 141, 58 Pac. 442 (1899).

69. *OBTAINING A WATER USE RIGHT BY "PRESCRIPTION" (ADVERSE POSSESSION OF ANOTHER'S PROPERTY)*

In order to establish a "prescriptive right" (adverse possession) to the use of water in California, the use must have been actual, open and notorious on the part of the adverse claimant; adverse and hostile to the claim of the rightful owner; exclusive, continuous and uninterrupted; under a claim of right; and must have been made throughout the period prescribed by the statute of limitations of actions to recover real property.

Alta Land & Water Co. v. Hancock, 85 Calif. 219, 223, 228-230, 24 Pac. 645 (1890).

"Title by prescription in California is not based upon a fictious lost grant but rests upon the more realistic statutes of limitation." (Gavin M. Craig, "Prescriptive Water Rights in California and the Necessity for a Valid Statutory Appropriation," 42 Calif. Law Review 219-220, May 1954.)

"Lapse of time not only applies as a defense to an action, but it forms the basis of a new title acquired by prescription which is founded upon the statute" – Grattan v. Wiggins, 23 Calif. 16, 36 (1863). Not only does the statute take away the remedy of the party whose right is invaded, but title is extinguished as to him and acquired by

the adverse party, who is entitled to all the remedies to quiet his own possession that are incident to possession under written title – Arrington v. Liscom, 34 Calif. 380-386 (1868). The disseizor "is vested with a new title and estate, founded on and springing from the disseizin" – Williams v. Sutton, 43 Calif. 65, 73 (1872).

In various cases the court has used the term "knowledge and acquiescence" in designating the failure of the rightful (riparian) owner to object by word or deed to the use of water adverse to him that he knows about or is presumed to know about. In Silva v. Hawn, 10 Calif. App. 544, 552, 102 Pac. 952 (1909), the Court stated: "…If the owner has the knowledge which the law requires shall be imputed to him, and takes no steps to prevent the adverse claimant from his continuous enjoyment of the right claimed by him, such owner will be deemed to have acquiesced in such use."

In Morgan v. Walker, 217 Calif. 607, 616-617, 20 Pac. (2d) 660 (1933), an upstream diverter had diverted and used substantially all the water of a stream under a claim of right, openly, notoriously, an adversely to all downstream riparian claims for more than 34 years. The lower Riparian latently attempted to assert riparian rights. The Court stated; "Having stood by for all these years and without protest or objection having acquiesced in the use of practically the entire flow of the stream by respondents during the irrigating season, the defendant must be held to have lost any right to the waters of said stream, inconsistent with the beneficial use to which said waters were put by the plaintiff during said period of time." *PROTECTING PROPERTY FROM ADVERSE POSSESSION.*

The riparian owner is entitled to judgment against acts of others that will deprive him of a right of property, a valuable part of his estate – Southern California Investment Co. v. Wilkshire, 144 Calif. 68, 74, 77 Pac. 767 (1904). As the riparian right in a legal sense is an inherent part of the land, the deprivation of the water, by such as an upstream appropriator, is a detriment to the real property as distinguished from a mere trespass – Martin v. Western States Gas and Electric Co., 8 Calif. App (2d) 226, 230, 47 Pac. (2d) 522 (1935). However it is a usufructuary and intangible right, so that neither a partial nor complete taking produces a disfigurement of the physical property. "The only way to measure the injury done by an invasion of the right is to ascertain the depreciation in market value of the physical property" – Collier v. Merced Irr. Dist., 213 Calif. 554, 571, 2 Pac. (2d) 790 (1931). Action to quiet title to the riparian right must be commenced in the county in which the land or some part of it is situated. – Miller & Lux v. Madera Canal & Irr Co., 155 Calif. 59, 73, 99 Pac. 502 (1907, 1909.)

83. McKinley Bros. v. McCauley, 215 Calif. 229, 231, 9 Pac. (2d) 298 (1932). It is settled, said the Supreme Court, "that riparian rights do not attach to lands held by the government until such land has been transmitted to Private ownership. Rindge v. Crags Land Co., 56 Calif. App 247, 252, 205 Pac. 36 (1922)

84. (Federal) Peck v. Howard, 73 Calif. App. (2d) 308, 318, 167 Pac. (2d) 753 (1946). Haight v. Constanich, 184 Calif. 426, 430, 194 Pac. 26 (1926).

(State) Shenandoah Min. & Miller Co. v. Morgan, 106 Calif. 409, 416, 39 Pac. 802 (1895).

85. *INDIAN RESERVATIONS –*

In Winters v. U.S., 207 U.S. 564, (1908), the court held that all federal Indian Reservations carry an implied right to water sufficient for the purpose that the reservation was created. The priority of right dates back to the date that the reservation was created and is not subject to requirements of beneficial use or "due diligence" in developing the water source.

NATIONAL FORESTS –

In the case of Kansas v. Colorado, (1902 – 185 U.S. 143, 1907 – 206 U.S. 46), the federal government argued that the amount of the flow of an interstate river was "subject to the superior authority and supervisory control of the United States" by virtue of its ownership of substantial national "territories" through which the river passed, and its powers under: (1) Article IV, Section 3 – "…the power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States," and (2) the power vested in the national government to acquire territory by treaty.

The Court agreed that the federal government did have full power of legislation in respect to all Territories, subject to no restrictions other than those expressly named in the Constitution. The right to dispose of and make all necessary rules and regulations on federal "properties" located within the States were, however, severely circumscribed.

The Court found that the powers of the national government within the geographical limits of the states was the same as those within the limits of the original thirteen states. Absent a definite power enumerated in the Constitution, the federal government could not legislate in respect to lands within state borders. The Court concluded "…It is enough for the purpose of this case that each state has full jurisdiction over the lands within its borders, including the beds of streams and other waters."

In 1978, the U.S. Supreme Court rules in U.S. v. New Mexico, 438 U.S. 696, that state law applies to the right to use of water in national forests unless the right to use the water was reserved to the United States at the time of withdrawal of the federal lands from the public domain. The court ruled that such implied water rights attaching to federal reservations extends only to such water necessary to accomplish the primary purpose of that reservation – which in the case of forest reserves were limited to: 1) insuring "a continuous supply of timber for the use and necessities of United States citizens"; and 2) securing favorable conditions of water flows." The court rejected assertions that the Act established a third purpose for which forests could be created – "to improve and protect the forest within the boundaries."

The Supreme Court, however, made it clear that the existence of implied federal water rights depends on a finding of congressional intent to reserve such rights, either expressly or by necessary implication. The Court declared that "the reserved rights doctrine" is a doctrine built on implication and is an exception to Congress' explicit deference to state water law in other areas." Id., at 715.

This presumption of deference to state water law may be overcome by a finding of congressional intent to impliedly reserve water rights only after a "careful examination" of "both the assorted water right and the specific purposes for which the land was reserved" – and then only if it can be concluded that "without the water the purposes of the reservation would be entirely defeated." Id., at 700-702

When the assessed water right is necessary only to fulfill purposes other than the primary purposes for which the land was reserved, the contrary inference arises that Congress intended federal agencies to acquire water for such secondary purposes in accordance with state law. Id., at 702.

The 1988 determination in Re Waters of Hallet Creek System, 44 Cal. 3d 424, affirmed that the U.S. may assert riparian rights for California lands held in federal reservations, subject to the laws and jurisdiction of the State.

BUREAU OF LAND MANAGEMENT ADMINISTERED LANDS –

Under Sierra Club v. Watt, 659 F.2d 203, the District of Columbia Circuit rejected an argument in 1981 by the Sierra Club that the management objectives set out in the Federal Land Policy and Management Act at 43 U.S.C. 1701(a)(8) effected a reservation of land that conferred by implication federal reserved water rights in waters appurtenant to BLM lands. Specifically, the Circuit Court found that FLPMA, set forth the "purposes, goals and authority for the use of public domain," and did not establish a reservation from the public domain that brought with it reserved water rights, Id., at 206.

WILDERNESS AREAS –

Congress's intent not to create federally reserved water rights by wilderness designation is evidenced by the Wilderness Act's express disclaimer of any intent to preempt state water laws. Section 4(d)(7), 16U.S.C. 1133(d)(6), provides:

"Nothing in this chapter shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws."

The intent of Congress is further illustrated in the specific language used in establishing the Mon Basin National Forest Scenic Area under Title III, Paragraph (bx1) under the California Wilderness Act of 1984 to confirm that it is also subject to State water law.

"Paragraph (bx1) provides that, in a manner consistent with the protection of the water rights of the State of California, the Secretary will manage the scenic area to protect its geologic, ecologic, and cultural resources and will provide for recreational and interpretive use and for scientific research…"

"The Secretary is directed to manage the scenic area in a manner consistent with the protection of water rights of the State of California or any political subdivision thereof including the City of Los Angeles and that such management, under provisions of this Act, shall not affect or impair the operation of any water diversion activity in the Mono Basin or the scenic area granted under the laws of the State of California. Mono

Lake is within the scenic area. The rights to use water tributary to Mono Lake, and the manner of exercise of such rights is a matter to be administered by the State of California pursuant to State law."

GENERAL –

In United States v. General Stockholders' Corporation of Vallejo, 43 Fed (2d) 977, 980 (S.D. Calif. 1930) the court stated: "Plainly, the United States can have no different nor superior right as a riparian proprietor to that assigned to private ownership."

In the appeal, United States v. Central Stockholders' Corporation of Vallejo, 52 Fed. (2d) 322, 329 (C.C.A. 9th, 1931), the court stated: "…the federal government cannot maintain an action to quiet title to its riparian rights in the public domain as against lower land owners of the stream and claimants of water flowing therein merely because under the laws of the state they may claim, and they do claim, rights inconsistent with the rights claimed by the federal government in and to the waters of such stream as a part and parcel of its public land…"

86. In 1921, San Bernardino v. Riverside (186 Calif. 7, 29-30, 198 Pac. 784,) the court again clarified the 1911 amendment stating: "Taken literally, this would include all the water in the state privately owned and that pertaining to the lands of the United States, as well as that owned by the state. It should not require discussion or authority to demonstrate that the state cannot in this manner take private property for public use…The constitution expressly forbids it…"

In 1914 Palmer v. Railroad Commission, 167 Calif. 138, 163, 168, 170-173, 138 Pac. 997, the Court ruled that this Amendment was not and could not be retroactive and could not operate to divest private property rights already vested at the time it was enacted. The only effect it could have would be as a dedication to the general public use of any riparian rights which the State at the time it was enacted might still have retained by virtue of its ownership of lands bordering upon a stream.

87. In 1939 Meridian v. San Francisco (13 Calif.-2d-424, 445, 449, 90 Pac.-2d-537,) the court clarified the assertion of State control over allocation of surplus or public waters of the State under the 1914 Water Commissions Act stating: "There are waters in the rivers and the streams of the state to which the riparian right first attaches. The rights of other lawful users on the stream also rightfully attach. In addition there are in many of the rivers and the streams of the state great volumes of water which pass on unused to the sea or to an inland drainage basin. In a real sense, the excess water is a great natural resource available for the benefit of this and future generations, as the occasion for its use may arise. These excess waters constitute the public waters of the state to be used, regulated and controlled by the state or under its direction."

88. The California Court in Lux v. Haggin, 69 Calif. 225, 255, 338-339, 417-419, 4 Pac. 919, 1984; 10 Pac. 674, (1886), held that the water rights of the State of California as riparian owner of state lands were not reserved to it by Civil Code section 1422, stating: "Because the provisions of the code confer the state's right to the flow on those appropriating water in a manner prescribed by the code."

89. The court stated in Anaheim Union Water Co. v. Fuller, 150 Calif. 327, 335, 88 Pac. 978 (1907), "The theory of the law of riparian rights in the state is that the water of a stream belongs by a sort of common right to the several riparian owners along the stream, each being entitled to sever his share for use on his riparian land." (See also Carlsbad Mutual Water Co. v. San Luis Rey Development Co., 78 Calif. App. (2d) 900, 911, 178 Pac. (2d) 844 (1947).

90. In Seneca Consolidated Gold Mines Co. v. Great Western Power Co., 209 Calif. 206, 219-221, 287 Pac. 93 (1930) a riparian owner claimed 475 cfs. The court stated "No stream in a state of nature would yield any such uniformity. Indeed, the riparian right is in its nature a tenancy in common and not a separate severable estate. The moment the right in a natural stream is specifically defined in a concrete inflexible amount, at that moment the right becomes one of priority and not riparian." As a result the riparian right does not entitle the holder to the use of "a constant, invariable, specific quantity of water."

Gould v. Stafford, 91 Calif. 146, 152, 27 Pac. 543 (1891). Cowell v. Armstrong, 210 Calif. 218, 226, 290 Pac. 1036 (1930).

91. Pabst v. Finmand, 190 Calif. 124, 129, 211 Pac. 11 (1922). Lux v. Haggin, 69 Calif. 255, 408, 4 Pac. 919 (1884), 10 Pac. 674 (1880). Peake v. Harris, 48 Calif. App. 363, 381-382, 192 Pac. 310 (1920). Parker v. Swett, 188 Calif. 474, 485, 205 Pac. 1065 (1922).

92. Forest McDonald, Novus Ordo Seclorum, The Intellectual Origins of the Constitution, University Press of Kansas, c1985, pp. 34-35; citing – Blackstone, Commentaries, 2:18, 34, 39, 3:218, 219; Vattel, Law of Nations, bk. 1, chap. 22, secs. 266-278, pp. 124-125; Kent, Commentaries, 3:427-428; Sir Mathew Hale, A Treatise De Jure Maris (London, 1787), chaps. 4, 5; Anonymous, "The Law of Water Privilege," American Jurist and Law Magazine 2 (1829): 25-38; Joseph K. Angell, A Treatise on the Law of Watercourses (Boston, 1854); Charles Molloy, De Jure Maritimo et Navali…(London 1676.)

93. Forest McDonald, Novus Ordo Seclorum, The Intellectual Origins of the Constitution, University Press of Kansas, c1985, p.35; citing – Kent, Commentaries, 3:427-432; Weeden, Economic and Social History, 1:102-103, 110, 134; Nelson, Americanization of the Common Law, 122, 160. McDonald notes; "The extension of public rights regarding waterways is illustrated by the experience of Pennsylvania. In that colony's 1681 Concessions, landowners were given the sole and exclusive rights over rivers and waterways that crossed their land, but the legislature subsequently whittled away at those rights; by an act of 1771, for instance, the Delaware and Lehigh rivers and parts of the Susquehanna and Juniata rivers were made public highways (Thorpe, Constitutions, 5:3045, Dunaway, History of Pennsylvania, 292-295). Similarly, the Northwest Ordinance of 1787 specified that 'the navigable waters leading into the Mississippi and Saint Lawrence…shall be common highways and forever free."

94. Under colonial rule, land grants commonly included the ownership of streams and marshlands:

(The following information and excerpts were taken from an abstract by Neil Marion Nugent, Cavaliers and Pioneers: Abstracts of Virginal Land Patents and Grants, Vol. 3, 1695-1732. Virginia State library, c1979.)

Page 111 – Form used in granting new lands in Spotsylvania and Brunswick Counties:

"GEORGE by the Grace of God of Great Britain France and Ireland King Defender of the Faith & c. TO ALL TO WHOM These presents shall come Greeting. WHEREAS on the humble petition of the General Assembly of our Colony and Dominion of Virginia We have been graciously pleased to grant unto Each of our Subjects which shall go to settle in the County of Spotsylvania before the first day of May which shall be in the Year of Our Lord One thousand Seven hundred and Twenty Eight the Liberty of taking up any Quantity of Land not Exceeding One Thousand Acres free & discharged of the Duty of purchasing Rights for the same WE HAVE given granted and confirmed and by these presents for us our Heirs and Successors do give grant and confirm unto _____, one certain Tract or parcel of Land containing - _____ acres, &c. WITH ALL woods Underwoods Swamps Marshes Low grounds Meadows Feedings and his due share of all Veins Mines and Quarries as well discovered as not discovered within the bounds aforesaid and being part of the said Quantity of _____acres of land and the Rivers Waters and Water courses therein contained Together with the privileges of hunting hawking fishing and fowling and all other profits commodities and hereditaments whatsoever to the same or any part thereof belonging or in any wise appertaining. TO HAVE HOLD possess and enjoy the said tract or parcel of land and all other the before granted premises and every part thereof with their and every of their appurtenances unto the said _____ his heirs and assigns forever. TO BE HELD of us our Heirs and Successors as of our Manor of East Greenwich in the County of Kent in free and common soccage and not in Capite or by Knights Service YIELDING AND PAYING (after the first day of May One Thousand Seven Hundred and Twenty Eight) UNTO Us our Heirs and Successors for every fifty acres of land (and so proportionably for a lesser or greater quantity than fifty acres) the fee rent of One Shilling yearly to be paid upon the Feast of Saint Michael the Archangell and also Cultivating and Improving Three Acres part of every fifty of the tract abovementioned within Three Years after the date of these present."

[95.] Rubel v. Peckham, 94 Calif. App.-2d-834, 837, 211 Pac.-2d-883 (1949); (hearing denied by Supreme Ct. in 1950) referred to Lux v. Haggin (1886) that it had been held that a grant to a tract of land bounded by a nonnavigable river or creek conveyed the land to the thread of the stream. The appellate court stated: "It is sufficient to observe that a conveyance of land which refers to and uses a nonnavigable water course as one of its boundaries conveys the rights of the grantor to the center line of such water course unless such conveyance indicates a different intention by terms expressly limiting the grant."

The State of California is the owner of all land below the tidewater within the state; likewise, of all the land below the water of a **navigable** lake or stream; (Calif. Civil Code Sec 26 Calif. Jur 315-316, sec. 532.) (1) When the upland borders on **tidewater**, the owner takes to ordinary high-water mark; (2) when it borders on a

navigable lake or stream, at low-water mark; (3) when it borders on any other water, the owner takes to the middle of the lake or stream. (Calif. Civ. Code sec. 830)

The U.S. Army Corps of Engineers, the California Department of Fish and Game and the Siskiyou County Sheriff's Department consider the Scott and the Shasta rivers and their tributaries to be **nonnavigable**. There is no differentiation made between high and low water marks for the purpose of public easement; and the banks, as well as the bed of these rivers, are considered private property and subject to prohibitions from unauthorized trespass.

96. In National Audubon Society v. Superior Court of Alpine County, (1983), the California Supreme Court held that the public trust doctrine protects not only navigation, commerce, wildlife and fishing, but also "changing public needs of ecological preservation, open space maintenance and scenic and wildlife preservation."

97. Under Pollard's Lessee v. Hagan, 44 U.S. at 225 11 L. Ed at 572, the Court made it clear that the transfer of legal title from nation to nation did not supersede the essence and distinct forms of sovereignty as established by the people and their Constitutional form of government. In the United States, the individual is sovereign ("sovereign people") and delegates only that portion of his sovereignty as specified through the various constitutions of government. He retains all remaining sovereignty.

"It cannot be admitted that the King of Spain could, by treaty or otherwise, impact to the United States any of his royal prerogatives; and much less can it be admitted that they have capacity to receive or power to exercise them. Every nation acquiring territory, by treaty or otherwise, must hold it subject to the constitution and laws of its own government, and not according to those of the government ceding it. (Vat. Law of Nations. Bk. 1, ch. 19, sec. 210, 244, 245, and bk. 2, ch. 7, sec. 80.)

The sovereign prerogatives of the king included:

TIDELANDS & SUBMERGED LANDS – Under English admiralty law, the jurisdiction of "admiralty droits" was to protect certain prerogative rights of ownership in the crown in areas between the high tide mark and navigable water. All great fish found within the zone were the property of the Crown. All beach "deodands" went to the ruler, as did "wreck of the sea," "flotsam" (goods floating on the water,) "jetsam" (goods jettisoned by a crew) and "lagan" (jettisoned goods tied with buoys.)

WASTE OR VACANT LANDS, NAVIGABLE WATER AND THE SOIL BENEATH – "According to the theory of the British constitution all vacant lands are vested in the Crown as representing the nation, and the exclusive power is admitted to reside in the crown, as a branch of the royal prerogative. It has been already shown that this principle was as fully recognized in America as in the Island of Great Britain…[W]hen the Revolution took place the people of each State became themselves sovereign; and in that character hold the absolute right to all their navigable water and the soils under them for their own common use, subject only to the rights since surrendered by the Constitution to the general government." Martin v. Waddell's Lessee (also known as Martin v. Waddell), 41 U.S. (16 pet.) 367, 410, 10 L.Ed. 997, 1012-1013 (1842);

quoting Johnson and Graham's Lessee v. M'Intosh, (also known as Johnson v. M'Intosh), 21 U.S. (8 Wheat.) 543, 595, 5 L.Ed. 694 (1823).

98. In Lux v. Haggin, 69 Calif. 225, 255, 338-339, 417-419, 4 Pac. 919, 1984; 10 Pac 674, (1886), the court stated: "It has often been held by the court and its predecessors that a grant of a tract of land bounded by a river or creek not navigable conveys the land to the thread of the stream. And from a very early day the courts of this state have considered the United States government as the owner of such running waters on public lands of the United States and of their beds…It has never been hld that the right to appropriate waters on the public lands of the United States was derived directly from the State of California as the owner of innavigable streams and their beds…"

99. A patent to land is the judgment of the Land Department and the conveyance of the title in execution of it to the party adjudged entitled, and, when the land described was in the jurisdiction and subject to the disposition of the Land Department, it is impervious to collateral attack; Neff v. United States, 165 F. 273, 277, 91 C.C.A. 241.

A patent is recognized as the highest evidence of title, conclusive against the government and all claiming under junior patents or treaties until it set aside or annulled by some judicial tribunal; United States v. Mullan, 10 F. 785, 792; Bayner v. Stanly, 13 F. 217, 223.

After issuance of a patent, any subsequent claim of the United States to titles therein or other disputes between private claimants must be determined by the courts; U.S. v. McKenzie County, North Dakota, D.C.N.D., 187 F.Supp., 470 affirmed Murray v. U.S., 291 F.2d 161.

Suites to cancel a patent could only be brought within the statute of limitations, except for actions brought by the U.S. government (1) to recover the value of lands fraudulently obtained; (2) to construe and enforce a patent as construed; and (3) to impress a trust of the lands for the rightful owner – U.S. v. Whited, 38 S.Ct. 367, 246 U.S. 552, 62 L.Ed. 879; Issac Walton league of America v. St. Claire, D.C. Minn, 55 F.R.D. 139, affirmed 497 F 2d, 849, certiorari denied 95 S.Ct. 329, 419 U.S. 1009, 42 .Ed.2d 284.

The expression "patent," used in Act of March 3, 1891, Section 8, 43 U.S.C.A. Section 1166, requiring suits to annual patents to be brought within six years after issuance, means a grant of land from the government. (United States v. La Gogue, 198 F. 615, 648, 117 C.C.A. 349.)

A suite to cancel a patent must be brought by the United States, and, unless by virtue of an act of Congress, no one but the attorney general or someone authorized to use his name, can initiate the proceeding, (U.S. – U.S. v. Throckmorton, Cal. 98 U.S. 61, 25 L. Ed. 93.)

A patent conveying land which was a part of the public domain cannot be attached or impeached by a person having no interest in the land, (U.S. – Roberts v. Southern Pacific Co., 185 P. 934, affirmed 219 1022, 134 C.C.A. 685; see also Issac Walton

league v. St. Claire.) Such a patent is subject to impeachment only by the United States, or its grantee, (Idaho – Johnson v. Hurst, 77 P. 784, 10 Idaho 308,) or a person who has succeeded to its rights, (Utah – Ferry v. Street, 7 P. 712, 11, P. 571, 4 Utah 521,) or by a person who was defrauded or deprived of his rights by the issuance of a patent to another, (Cal. – Mery v. Brodt, 53 P. 818, 121 Cal. 332.).

In the 1984 case of Summa Corporation v. California ex. Rel. State Lands Commission and City of Los Angeles, 104 S.CT 1751, review of Cal.S. Ct. 31 Cal.3d 288, 182 Cal. Rptr, 599, 644 P.2d 792, vacating 117 Cal.App. 3d 385, 172 Cal. Rptr. 619 the California Supreme Court held that California could not, at this late date, assert public trust easement over property where the predecessors-in-interest had their interests confirmed without mention of such easement in federal patent proceedings. The court ruled that interest claimed by California was of such magnitude that regardless of the fact that the claim was asserted by the state under its claimed sovereign capacity, the interest must have been presented in the patent proceedings or be barred. –See also: Barker v. Harvey, 181 U.S. 481, 21 S.Ct. 690, 45 L.Ed. 963; United States v. Title Ins. & Trust Co., 265 U.S. 472, 44 S.Ct. 621, 68 l.Ed. 1110.

100. In Joerger v. Pacific Gas & Electric Co., 207 Calif. 8, 23, 24, 276 Pac. 1017; (1929,) the court stated that: "An enlargement of a water right may be made in the same manner as a new appropriation." An increase over the scope of the original appropriation as distinguished from progressive development originally contemplated and consummated with due diligence is subject to rights intervening between the making of the original appropriation and that of the enlargement.

The court stated: "One of the essential elements of a valid appropriation is that of priority over others. Under this doctrine he who is first in time is first in right, and so long as he continues to apply water to a beneficial use, subsequent appropriators may not deprive him of the rights his appropriation gives him by diminishing the quantity or deteriorating the quality of the water.

101. In Hill v. Newman, 5 Cal. 445, 446; (1855), the right to the use of running water on the public domain was held to exist "without private property ownership of the soil, upon the ground(s) of prior location upon the land or of prior appropriation and use of the water.

102. Rights based on appropriation of running water on public (unappropriated) lands are recognized by the state Supreme Court in Irwin v. Phillips, 5 Cal. 140, 146-147; (1855) and Tartar v. Spring Creek Water and Mining Co., 5 Calif. 395, 397-399; (1855.)

In Irwin, the court stated: "Courts are bound to take notice of the political and social condition of the country, which they judicially rule. In this State the larger part of the territory consists of mineral lands, nearly the whole of which are the property of the public. No right or intent of the disposition of these lands has been shown either by the United States or the State governments, and with the exception of certain State regulations, very limited in their character, a system has been permitted to grow up by voluntary action and assent of the population, whose free and unrestrained

occupation of the mineral region has been tacitly assented to by the one government, and heartily encouraged by the express legislative policy of the other."

Conflicting rights to the working of mines and to the diversions of streams from their natural channels were held to stand upon an equal footing, and hence "when they conflict, they must be decided by the fact of priority upon the maxim of equity, qui prior est in tempore potior est in jure."

In Tartar, the State conferred the privilege of mining gold on the public lands and equally the privilege of diverting streams from their natural channels for beneficial purposes, not only for working the mines but for other purposes as well. The decision stated that under state policy the prior appropriation of either land or water on the public domain entitled the holder to protection in its quiet enjoyment and that the prior appropriation of water "to steady individual purpose, establishes a quasi private proprietorship."

103. In Hill v. King, 8 Calif. 336, 338; (1857), the state Supreme Court recognized; "the right to appropriate the waters and streams of this state for mining and other purposes has been too long settled to admit any doubt or discussion at this time."

The court stated that, "the legislation of the State has given to every one, not only the privilege to work the 'gold placers,' but also to divert the streams for this and other purposes. The legislation of the State has been held to amount to a 'general license to all,'…and when these ditches have been constructed, they are regarded as a franchise or easement, belonging to the proprietors, and are entitled to protection as any other property."

104. An inchoate right on the public lands is good as against "all the world but the United States." This implies a possessory right to continue with diligence the prosecution of work to perfect the possessory right of claim, which will be protected from the acts of all except the United States. But until completion of the work no right vests which the United States is compelled to recognize – Silver Lake Power & Irr. Co. v. Los Angeles, 176 Calif. 96, 101-102, 167 Pac. 695 (1917.)0 The right of possession was a property right claimed under the color of title.

105. Palmer was also cited in the 1922 case Antioch v. Williams Irr. Dist., 188 Calif. 451, 462-463, 205 Pac. 688, where Chief Justice Shaw stated; "In the early history of our jurisprudence there was much doubt whether there were any principles of the common law whereby the relative rights of individuals who took water from the streams for the purpose of mining and who took up mining claims whereon to use the water and extract the gold thereby were to be defined and controlled. The early decisions display some confusion and conflict of ideas on the subject. It was doubted whether the law of riparian rights could be applied, since the use was generally on land not riparian, and it was finally held, as shown above [1914 Palmer v. Railroad Commission] that the rules as to riparian rights, modified to suit the new conditions, could be resorted to for a guide in determining such relative rights…There was dispute on the question whether the so-called rights of appropriators of water who took it without express leave of the paramount owner, or the rights of the miners to their mining claims, taken and held by mere prior occupancy, constituted property which the prior appropriator or occupant was entitled to call upon the courts to

protect. It was not until a number of years after the settlement of the state that the courts placed the doctrine that such rights were entitled to protection as property rights upon the true basis, that is to say, upon the doctrine of common law that where the true owner did not interfere between rival claimants there could be property rights in mere possession and use, good against every one not in privity with the true owner, and that the prior possessor had a right to maintain his possession against all intruders not claiming under the true owners."

106. A U.S. Supreme Court decision in 1879, Jennson v. Kirk, 98 U.S. 453, 457-459, held that the object of the Act of 1866 "is to give sanction of the United States to possessory rights which had previously rested solely on local customs, laws and decisions." In the same year under Broder v. Water Co., 101 U.S. 274, 276, the court ruled that the pre-existing possessory right dated back to the time of the formation of the state and were rights the government had, by its conduct, recognized and encouraged and was bound to protect before the passage of the Act of 1866."

In Jacob v. Lorenz, 33 P. 119, 98 Cal. 332, (1893), the court ruled that the Act of 1866 applies to water and ditch rights accrued since as well as before its passage. (Public Lands, Ch. 15, Appropriation of Waters, 43 Section 66a, pg. 722)

In Mohl v. Lamar Canal Co. (C.C. Colo. 128 F. 776 appeal dismissed 140 F. 988, (1904),the court ruled that the Act of 1866 does not create rights, but is a recognition by Congress of a preexisting right of possession, constituting a valid claim to its continuance. (Public Lands, Ch. 15 Appropriation of Waters 43 Section 661, pg. 722.)

In Utah Light & Traction Co. v. U.S., 230 Fed. 343, 345 C.C.A. 8th, (1915) the court held that although the Act of 1866 speaks only of "ditches and canals" the court considered the terms broad enough to include dams, flumes, pipes and tunnels as analogous or incidental to and discharging the functions of the statutory structures. (See also Peck v. Howard, (1946).

In Laurance v. Brown, 185 P. 761, 94 Or. 387, (1919), the court held that the Act of 1866 was not intended to grant from the federal government to the people of the state the waters on the public domain, but to confirm the rights of those who have acquired,, under certain conditions, the use of the water, and calls that right a vested once, even though the waters are taken from streams upon the public domain and without the assent of government. (Public Lands, Ch. 15 "Appropriation of Waters," 43 Section 661, pg. 717)

107. In Ely v. Ferguson, 91 Calif. 187, 190, 27 Pac. 587 (1891) the court stated the right to appropriate water on public lands, which had been customary from the earliest times in the State, was confirmed by Congress by the Acts of 1866, 1870 and 1877. The court stated: "the law is settled that the water flowing from springs on public lands may be diverted to other public lands and there used for irrigation or other necessary purposes, and a right to the same acquired as against anyone who subsequently obtains title to the land on which the springs are situated." (See also Cave v. Crafts (1878); 1901 Dave v. Tyler 133 Calif. 566, 568-569, 65 Pac. 1089 (1901); 1903 San Jose Land & Water Co. v. San Jose Ranch Co. 189 U.S. 177, 183

(1903); 1929 San Bernardino National Bank v. Jones 207 Calif. 613, 615-616, 279 Pac. 657, (1929.)

In Hargrave v. Cook, 108 Calif. 72, 78, 41 Pac. 18, (1895), the court stated that the rights of appropriator of water on public domain are retained when the land passes to private ownership. These rights are "the rights of the grantee of an easement." However, one who appropriates water on the public domain acquires no right superior to or in derogation of rights attaching to lands riparian to the same stream which at the time of appropriation were held in private ownership. (See also Bathgate v. Irvine, 126 Calif. 135, 140, 58 Pac. 44s, (1899)

In Felsenthal v. Warring, (40 Calif. App. 119, 127, 133, 180 Pac. 67; 1919,) the court stated: "The right of an appropriator of water upon government land that has since become private property to diver the water at any particular place of diversion, and conduct it to his own land over the land that has passed into private ownership, is the right of a grantee of an easement. As a primary easement it, of course, includes what is sometimes called 'secondary easements', or the right to do such things as are necessary for the full enjoyment of the easement itself, as, for example, the right to enter upon the servient tenement and make necessary repairs. But secondary easements do not give the owner of the primary easement the right to increase the burden upon the servient tenement."

108. In Hidreth v. Montecito Creek Water Co. (139 Calif. 22, 29, 72 Pac 395, (1903), the court clarified that notwithstanding this language, "it cannot be held that the constitutional provision should be broadened as to cover the proposition that all water which is distributed among a number of persons is, front that fact alone, to be considered as devoted to public use. Where a number of persons owning land are each entitled to take water from a common stream, or source, for use upon their respective tracts of land, either by virtue of an appropriation under the Civil Code or by prescription, or as riparian owners, the water right of each is individual and several, and must be considered as private property and not the subject of public use, although the persons so owning interests in the stream are very numerous and their lands include a large neighborhood."

Whether the owners of such water rights make a single diversion and use a common conduit made with common funds without formal organization, or whether they form a corporation for such purpose, their water rights remain several and remain private property.

In a "Mutual Water Co." where water rights are transferred for stock, the water remains the subject of individual ownership after the transaction as well as before. The corporation merely becomes the agent of its shareholders for the purpose of serving their several interests.

109. The California Water Code under Section 1202 defined "surplus" or unappropriated waters as:

(a) All water which has never been appropriated.

(b) All water appropriated prior to December 19, 1914, which has not been in process, from the date of the initial act of appropriation, of being put, with due diligence in proportion to the magnitude of the work necessary properly to utilize it for the purpose of the appropriation, or which has ceased to be put to some useful or beneficial purpose.

(c) All water appropriated pursuant to the Water Commission Act of this code which has ceased to be put to the useful or beneficial purpose for which it was appropriated, or which has been or may have been appropriated and is not or has not been in the process of being put, from the date of the initial act of appropriation, to the useful or beneficial purpose for which it was appropriated, with due diligence in proportion to the magnitude of the work necessary properly to utilize it for the purpose of the appropriation.

(d) Water which having been appropriated or used flows back into a stream, lake or other body of water.

110. The Court ruled in Acton v. United States, 401 F.2d 896 (9th Cir. 1968), cert. denied, 395 U.S. 945 (1969) that no property rights accrued to a licensee upon revocation which are compensable in condemnation.

111. The court stated: "It has often been held by the court and its predecessors that a grant of a tract of land bounded by a river or creek not navigable conveys the land to the thread of the stream. And from a very early day the courts of this state have considered the United States government as the owner of such running waters on the public lands of the United States, and of their beds. Recognizing the United States as the owner of the lands and waters, and as therefore authorized to permit the occupation or diversion of the waters as distinct from the lands, the state courts have treated the prior appropriator of water on the public lands of the United States as having a better right than a subsequent appropriator, on the theory that the appropriation was allowed or licensed by the United States. It has never been held that the right to appropriate waters on the public lands of the United States was derived directly from the State of California as the owner of innavigable streams and their beds. And since the act of Congress granting or recognizing a property in the waters actually diverted and usefully applied in the public lands of the United States, such rights have always been claimed to be deranged by private persons under the act of Congress, from the recognition accorded by the act, or from the acquiescence of the general government in previous appropriations made with its presumed sanction and approval."

112. In Duckworth v. Watsonville Water & Light Co., 170 Calif. 425, 432, 150 Pac., (1915), the court stated in reference to the necessity of diligence and good faith in completion of the appropriation and evoking the doctrine of relation back: "The principles established in the cases cited are founded in reason. The doctrine is that no man shall act upon the principle of the dog in the manger, by claiming water by certain preliminary acts, and from that moment prevent others from enjoying that which he is himself unable or unwilling to enjoy, and thereby prevent the development of the resources of the country by others."

113. Katz v. Walkinshaw, 141 Calif. 116, 135-136, 70 Pac. 663 (1902), 74 Pac. 766 (1903).

114. Burr v. Maclay Rancho Water Co., 160 Calif. 268, 273, 116 Pac. 715 (1911).

115. Cohen v. La Canada Land & Water Co., 142 Calif. 437, 439-440, 76 Pac. 47 (1904).

116. Burr v. Maclay Rancho Water Co., 154 Calif. 428, 434-435, 98 Pac. 260 (1908) and Corona Foothill Lemon Co. v. Lillibridge, 8 Calif. (2d) 522, 525, 66 Pac. (2d) 443 (1937).

117. Pasadena v. Alhambra, 33 Calif. (2d) 908, 925-926, 207 Pac. (2d) 17 (1949) and Orchard v. Cecil F. White Ranches, Inc., 97 Calif. App (2d) 35, 42, 217 Pac. (2d) 143 (1950) and Alpaugh Irr. Dist. v. County of Kern, 113 Calif. App. (2d) 286, 292, 248 Pac. (2d) 117 (1952).

118. Hudson v. Dailey, 156 Calif. 617, 625-626, 105 Pac. 748 (1909.

119. Pasadena v. Alhambra, 33 Calif. (2d) 908, 926, 207 Pac. (2d) 17 (1949) and O'Leary v. Herbert, 5 Calif. (2d) 416, 423, 55 Pac. (2d) 834 91936).

120. Ex Parte Elam, 6 Calif. App. 233, 236-241, 91 Pac. 811 (1907).

121. Allen v. California Water & Telephone Co., 29 Calif. (2d) 466, 484, 176 Pac. (2d) 8 (1946).

122. A Supreme Court decision of 1879, Jennison v. Kirk (98 U.S. 453, 457-459,) held that the object of the Act of 1866 "is to give sanction of the United States to possessory rights which had previously rested solely on local customs, laws and decisions." Because the statutes were silent, common law became the underpinning of the *doctrine of possessory rights.*
In the same year, the Court under Broder v. Water Co. (101 U.S. 274, 276,) the court ruled that the pre-existing possessory right dated back to the time of the formation of the state and were rights "the government had, by its conduct, recognized and encouraged and was bound to protect before the passage of the Act of 1866."

Later in 1881, 8 P.C.L.J. 455 Re: Lux v. Haggin affirmed that the court had held that the Act of 1866 did not create any new right, but merely recognized and sanctioned preexisting rights.

In Mohl v. Lamar Canal Co. (C.C. Colo. 128 F. 776 appeal dismissed 140 F. 988; 1904) the court affirmed that the Act of 1866 did not create rights, but is a recognition by Congress of a preexisting right of possession and asserted that such rights constituted a valid claim to their continuance.

123. The grant of a right of way is self-executing. An R.S. 2477 right of way comes into existence automatically when a public highway is established across public lands in accordance with the law of the state, [Standard Venture, Inc. v. Arizona, 499 F.2d, 9th Cir. (1974); Sierra Club v. Hodel, 848 F.2d, 10th Cir.; (1988.)]

Whether a right of way has been established is a question of state law [Standard Ventures, Inc. v. Arizona; Fisher v. Golden Valley Elec. Ass'n., Inc., 658 P.2d, Alaska; (1983) – citing United States v. Oklahoma Gas & Elec. Co. 328 U.S.; (1943.)]

That the character of the use of the right of way was such as to constitute acceptance of the public of the statutory grant. (Hamerly, 359 P.2d at 123.)

The standard for conditions that establish a right of way include whether a trail has been frequented by public users for such a period of time and under such conditions as to prove that a public right of way has come into existence, (Hamerly; Dillingham 705 P.2d; Alaska Land Title 667 P.2d; Girves 536 P.2d.)

Continuous use is not a requirement. "Infrequent and sporadic" use is insufficient. "Regular" and "common" use by the public is necessary, [McGill v. Wahl, 839 P.2d, Alaska (1992); Hamerly; Kirk v. Schultz, 110 P.2d, Idaho (1941.)]

The test is what is "substantial" use under the circumstances. Courts must look to the circumstances as they existed at the time of establishment. The court noted that travel over a claimed R.S. 2477 right of way was irregular, but that was the nature of the country and to the fact that only a limited number of people had occasion to go that way, [Ball v. Stephens, 258 P.2d, Cal. (1945.)]

The purpose of travel is irrelevant to R.S. 2477 (Ball; Dillingham.)

To assert a public easement by prescription, the public need only act as if it were claiming a permanent right to the easement, [Swift v. Kniffen, 706 P.2d 296, Alaska (1985.)]

Public prescriptive easements involve the public use, not possession of the land, [Jesse Dukeminier & James Krier, Property 850 2d ed. (1988); See also Dillingham for a discussion of the distinction between use and possession.)

The law recognizes that routes may evolve. There is no requirement that the historic route and its current location coincide exactly. Where parts of an historic road or trail are obliterated by another more modern highway, or are destroyed by natural forces, the right of way is not obliterated or destroyed, (Ball;)

124. (SEE also: McRose v. Bottyer, 22 P. 393, Cal. 1989; Bequette v. Patterson, 37 P.917, Cal. 1894; Schwerdtle v. Placer County, 41 P.448, Cal. 1895 – citing St 1870, p. 457; Sutton v. Nicholaisen, 44 P. 805, Cal. 1896 – citing Pol. Code Section 2619, enacted 1873, amended by Act of March 30, 1874, repealed 1883; Town of Red Bluff v. Walbridge, 116 P. 77, Cal. Ct. App. 1911; People v. Quong Sing, 127 P. 1052, Cal. Ct. App. 1912 – citing Pol. Code Section 2619; Central Pacific Ry, Co. v. Alameda, 299 P. 77, Cal. 1931; Ball v. Stephens, 158 P.2d 207, Cal. Ct. App. 1945 – citing Pol. Code Section 2618 as reenacted in 1883 and in force until 1935.)

125. Several cases have affirmed this transfer to the State of proprietary jurisdiction over rights-of-way: In Colorado v. Toll, 268 U.S. 278, (1925,) the Park Service tried

to assert exclusive control over the roads within the Park. The Supreme Court held that the creation of Rocky mountain National Park did not take jurisdiction away from the State of Colorado over existing roads within the Park. In Wilkinson v. Department of the Interior, 634 F. Supp. 1265, D. Colo. (1986) the case involved a road that entered and then exited the Colorado National Monument. The Court held that the Park Service could not charge an entrance fee for those using the road through the Monument because this was an invalid restriction on the right-of-way. An attempt to prohibit all commercial traffic was also determined to be contrary to the right-of-way. In U.S. v. Jenks, 804 F. Supp. 232 – D.N.M., (1992,) the court again found that the issue of whether an R.S. 2477 right-of-way has been established is a question of State law.

126. In 1891, a Congressional Act also separated the rights-of-way for canals and ditches from the mining law, establishing limits on reservoirs, ditches and canals over public land to the ground occupied by the water plus 50 feet on either side and establishes the right to take earth and stone for necessary construction from adjacent public land.

127. See Oklahoma v. Texas, 258 U.S. 574, 599-600; (1922)

128. The enabling Act for the National Forest System was passed in 1891. The Modoc National Forest was created in 1904, and the KNF, Shasta and Trinity in 1905. At that time no new rights-of-way could be created, but pre-existing ones remained under the jurisdiction of the counties, unless abandoned under state law provisions.

New, non-preexisting rights-of-way can be created under FLPMA and the Forest Road and Trail Act (16 U.S.C. Section 533). These new rights-of-way are conditional on need consistent with planned uses of the forest. After 1969, they are subject to NEPA and in 1976 - FLPMA.

129. As of this printing, special use permits are required by the U.S. Fish & Wildlife Service for continuation of uses that existed at creation of the refuge and these permits contain stipulations and conditions to protect refuge values. New rights of way may be created if they are certified as compatible with purposes for which refuge established (requires authorization by Congress.)

130. The National Park service recognizes pre-existing rights-of-way. NPS generally lacks authority to issue any new rights, with rare exceptions.

131. Pre-existing rights of way: Some claim the Taylor Grazing Act of 1934 should be the cut-off date for “reservation of public lands.” The Act at 43 U.S.C. Section 315f provides that affected lands “shall not be subject to disposition, settlement, or occupation until after the same have been classified and opened to entry”. Yet 43 U.S.C. Section 315e states that “nothing contained in this chapter shall restrict the acquisition, granting or use…rights-of-way within grazing districts under existing law…” Rights-of-way established in 1969-1976 would be subject to NEPA.

Thee BLM’s policy has been to recognize 1976 FLPMA as the cut-off date. FLPMA Title V. replaces R.S. 2477. It authorizes the granting of rights-of-way to any

qualified public land user, but subject to the NEPA process after 1969 requiring mitigation of impacts.

132. A book written by two school teachers in western Siskiyou County describes in great detail the journey by mule that they took up the Klamath River to the Salmon River along rugged forested trails. To their surprise, there was no other mode of access to the area. Mary Elliott Arnold and Mabel Reed, In the Land of the Grasshopper Song – Two Women in the Klamath Indian River Country in 1908-09, University of Nebraska Press.

133. According to Ernest Hayden, in 1933, he was working out of the CCC camps at Bear Creek in Trinity County on reconstruction of the road built in 1860 (Route 3). About 2 miles south of the summit of Scott Mountain there is an area known as “Devil’s Potato Patch” after the jumble of red serpentine boulders that litter the mountainside. From 1860-1833, the road had been maintained by hand, blasting and prying out rocks in the roadbed and stacking them alongside until the road resembled a huge ditch with the finer material continually washed away. The CCC crew put the ripper to work to remove the large rocks. They then found that the roadbed had been constructed by paving it with boulders covered by a layer of cedar bark and then dirt. Ripping it removed the bark & dirt and shifted the smaller material into the cracks. The CCC crew blasted the rocks into smaller ones, drilling (plugging) the large projecting rocks and blasting the tops off in order to prepare for surfacing. A portion of the old pioneer trail (probably originating about 1826) could be seen in this section about 60 feet up and parallel to the highway. (Ernest Hayden, Along Our History’s Trail, P.O. Box 1595, Callahan, CA 96014, c1984.)