
Excerpt From “High Conservation Values of the Swanton Pacific Ranch Forest”

**Assessment, management, and monitoring of high conservation
values of the Swanton Pacific Ranch Forest based on the Forest
Stewardship Council’s Principle 9 Pacific Coast Standards**

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EXECUTIVE SUMMARY

This report presents the assessment of High Conservation Value Forest (HCVF) undertaken as a requirement of a Corrective Action Requirement (CAR) issued at the time of the certification of the Swanton Pacific Ranch Forest (SPRF) under the Pacific Coast Standards (PCS) of the Forest Stewardship Council (FSC). This report is prepared in accordance with Principle 9 of the FSC principles and criteria. The result of the assessment is the following table of HCV designations.

Identified High Conservation Values on the Swanton Pacific Ranch Forest

Category 1: "...significant concentrations of biodiversity values."

1. **Coho Salmon Habitat**
Steelhead Trout Habitat
Red-Legged Frog Habitat
Monterey pine forests

2. None
3. None
4. None
5. None
6. None

Category 2: "...large landscape level forests..."

7. None

Category 3: "...rare threatened or endangered ecosystems."

8. **Burl forming manzanita stands**
9. **General Smith Stand (previously entered old-growth)**
Second Growth Reserve
Old redwood, Douglas-fir, and California nutmeg specimens

10. None
11. None

Category 4: "...basic services... watershed protection"

12. None
13. None
14. Inner gorge of Valencia Creek
15. None
16. Identified under Category 1

Category 5: "...meeting basic needs of local communities."

17. None

Category 6: "...communities' local cultural identity..."

18. None
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Overview of HCVF Assessment on the Swanton Pacific Ranch Forest

The Swanton Pacific Ranch Forest is owned by the California State University Foundation. This Foundation is a 501.c.3. not for profit Foundation established as an auxiliary foundation to California Polytechnic State University, San Luis Obispo. The mission of the Cal Poly Foundation is to provide self-supporting, responsible, diversified, creative, and high quality services, which complement the instructional program of the University and assist the institution in achieving its educational mission. The University strives to stimulate creativity and develop dynamic professionalism among its faculty, students, and staff. The Foundation will help support this objective with innovative services and programs sought by the University, which will enhance the educational and social environment of the institution. Swanton Pacific Ranch is managed by the College of Agriculture, California Polytechnic State University under a Memorandum of Understanding between Cal Poly State University and the Cal Poly State University Foundation.

The forest areas of Swanton Pacific Ranch along with the habitat and riparian areas are utilized by the Natural Resources Management (NRM) Department for its "School Forest". The forest is utilized extensively for field trips to support classroom instruction, applied research for senior projects and master's level research, and for internships. The forest area management is controlled through the NRM department faculty with Douglas Piirto as the project coordinator for the forestry project at SPR. Dr. Brian Dietterick of the NRM Department faculty is the executive faculty director of the ranch for the College of Agriculture.

The management of the ranch for timber resources is subject to all the applicable rules and regulations of the California Forest Practice Rules which result from the Z'Berg Nejedly Forest Practice Act of 1974. Included in these rules are rules specific to the commercial management of timber lands in Santa Cruz County. SPR also falls within the extended region of the California Coastal Commission.

The Cal Poly State University Foundation following the recommendation of the NRM Department faculty sought FSC certification for the forest lands of the SPR in 2004. This certification was recommended following a certification audit by Scientific Certification Systems. As part of the certification a CAR was issued which required the assessment of the Swanton Pacific Ranch Forest (SPRF) for HCVF values using the definition Forest Stewardship Council's Principle 9. According to the definition, High Conservation value Forests are those that possess one or more of the following attributes:

- Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).
- Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.
- Forest areas that are in or contain rare, threatened or endangered ecosystems.
- Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).
- Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).
- Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Virtually all of the SPR has conservation value. Most of the main unit of the ranch lies within an area of Santa Cruz County that is designated as Agricultural Resource under the County General Land Use Plan. The main unit also lies entirely within the expanded Coastal Zone of the County and therefore has special restrictions and regulations placed upon it. The Valencia Creek Unit by Aptos is not within the Coastal Management Zone. In assessing HCVF's for SPRF the NRM Department faculty has been inclusive in their approach with regard to the FSC P&C's and the precautionary principle. The faculty does not claim that the prescriptions and approaches are perfect, but they have been thoughtfully prepared and are based upon the best available scientific information. The monitoring plan is thought to be effective in determining the efficacy of the prescriptions without being overly cumbersome or time consuming. The plan for the HCVF approach will be continually reviewed to determine the completeness of the inclusions and the effectiveness of the prescriptions and monitoring.

Purpose

This report is provided to meet the requirements as outlined in the CAR assigned to the SPRF in the certification evaluation of Swanton Pacific Ranch for FSC Certification in 2004. The NRM Department faculty and the SPRF managers have collected the resource information required for HCVF planning and implementation. The plan included in this report is the first attempt to outline the steps for careful management of HCVF's. Comments and suggestions are welcome at any time and should be directed to Dr. Brian Dietterick, Director, Swanton Pacific Ranch, 125 Swanton Road, Davenport, CA 95017.

Methodology

All forests contain environmental and social values, such as wildlife habitat, watershed protection or archaeological sites. Where these values are considered to be of outstanding significance or critical importance, the forest can be defined as a High Conservation Value Forest (HCVF). The key to the concept of High Conservation Value Forests is the identification of High Conservation Values, because it is the presence of High Conservation Values that determines whether a forest is designated a High Conservation Value Forest.

High economic value (e.g., in coastal redwood and Douglas-fir forests) and high ecological values coincide in the Pacific Coast region (e.g., in the Santa Cruz Mountain ecoregion) and often lead to clashes between environmental and economic interests. The identification and development of special management guidelines for these types of resource values may help alleviate some of the potential conflicts in land use.

Monitoring of the HCVF areas to confirm that the resources are protected is an important aspect of the assurance that these resources are in fact protected by the special management guidelines.

Assessment for HCVF Attributes

The first phase of the determination of resource values that are to be considered HCVF's is to review the standard which defines HCVF's. This definition is contained in the FSC Pacific Coast Standard's Principle 9. Maintenance of High Conservation Value Forests.

“Management activities in high conservation value forests shall maintain or enhance the attributes that define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

High Conservation Value Forests are those that possess one or more of the following attributes:

a) forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance

b) forest areas that are in or contain rare, threatened or endangered ecosystems

c) forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control) subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Applicability note: Classification of a forest as a “high conservation value forest” (HCVF) does not automatically preclude active management. In addition to the forest types listed in sections (a) through (d) of the HCVF definition, HCVF's in the Pacific Coast region include:

- forest types listed in Appendix D (i.e., rare communities in the region), unless further refined by consultations with heritage programs, local native plant societies, local experts, and NGOs
- primary, late-successional, or old-growth forests (*see also criterion 6.3.*)
- roadless areas (areas that have never had logging roads, skid trails, etc.) larger than 500 acres or that have unique attributes
- habitats for rare species, and may include:
 - water catchments that provide water supplies to municipalities
 - buffers and corridors within landscape-level plans that are critical to the maintenance of processes and functions of high conservation value areas (see also criteria 6.3 - 6.5); and
 - native grasslands, wetlands, and other ecologically important non-forested sites within the forest.

Note: The status of HCVF's on American Indian lands requires special consultation between certifying teams and the affected tribe or nation.

FSC Pacific Coast Standard Principle 9 criteria and attributes are as follows:

9.1. Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.

9.1.a. Attributes and locations of High Conservation Value Forests are determined by the identification of globally, nationally, regionally, and locally unique HCV attributes (*see Appendix D*) that may be present in or adjacent to the forest, and their delineation by habitat descriptions and maps.

9.2. The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.

(*see also 9.1.a.*)

9.2.a. Consultations are held with stakeholders and scientists to confirm that proposed HCV locations and attributes have been accurately identified. On public forests, a transparent and accessible public review of proposed HCV attributes and areas is carried out. Information from stakeholder consultations and other public review is integrated into HCVF descriptions and delineations.

9.3. The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.

9.3.a. Where the identification of HCVF attributes and areas is incomplete at the time of certification, forest owners or managers identify HCVF attributes and areas, develop a plan to maintain and/or enhance them, and begin implementation of the plan within one year of certification.

9.3.c. Stands and forests designated as', which have been entered for timber harvest, are managed over the long term to assure that both the quality of their HCVF attributes and their area are maintained.

9.3.d. Forest owners and managers of HCVF's (forests and/or stands) coordinate conservation efforts with owners and managers of other HCVF's within their landscape.

9.4. Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.

Applicability note: Except where HCV attributes change rapidly or demonstrate ecological instability, annual monitoring may be informal and may be combined with other field activities. Attributes and locations that are highly vulnerable (e.g., small and/or unstable populations) and those that are intensively managed are monitored formally on an annual basis."

Identification of these key values is imperative to ensure that they are maintained or enhanced. After identification and designation, rational management decisions consistent with the protection of a forest area's important environmental and social values can be made. HCVF's are those areas of forest that need appropriate management in order to maintain or enhance the identified High Conservation Values.

FSC's definition of HCVF's encompasses exceptional or critical ecological attributes, ecosystem services and social functions. These definitions are listed below, with an example for each. The six types of High Conservation Values are listed below.

- HCV1. Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).
- HCV2. Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.
- HCV3. Forest areas that are in or contain rare, threatened or endangered ecosystems.
- HCV4. Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).
- HCV5. Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).
- HCV6. Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

The Forest Practice Rules for California for forest management contain requirements to protect important habitats for biodiversity, to assure that forest management does not degrade the watershed or erosion protection functions of forest and to ensure that forest users are treated in a fair and equitable way. The HCVF concept builds on these regulations to provide extra safeguards to ensure that the value is not being degraded or otherwise negatively affected by management. Designation as HCVF does not automatically preclude management operations such as timber harvesting. However, those management activities must be planned and implemented in a way that ensures that the values are maintained or enhanced.

Managing HCVF attributes

The overall goal of managing HCVF in keeping with the FSC criterion 9.3 is

“The management plan shall include specific and implemented measures that ensure the maintenance and or enhancement of the applicable conservation attributes consistent with the precautionary approach.”

Several points from this criterion have guided SPR’s approach to managing HCVF’s:

- The Swanton Pacific Ranch Management Plan, the Valencia NTMP and the Swanton Pacific Ranch Timber Management Plan provide the current direction for HCV management. A new NTMP for the SPR is under preparation at this time and that will include all the specific management prescriptions and objectives for the forests at SPR. There is no separate list of prescriptions or objectives for HCVF’s, rather these are incorporated into the management plans. This assures that the prescriptions and objectives are not lost by oversight, since the core guiding documents include these important resources.
- “Specific and implemented measures” – detailed prescriptions are written for the values during the planning process
- “Maintenance or enhancement” – based on the concept of no net loss, managers must aim at ensuring the value is sustained. This can only be assured by monitoring the values that have been identified to ascertain that they remain intact and functioning.
- “Precautionary approach” – the precautionary approach sets a high standard for management because it requires a demonstration that no impact is occurring.

It is worth repeating that the plan and the planning process drive SPR’s approach to HCVF’s. The planning process contains a significant amount of public consultation, which has also been verified to meet FSC standards through the certification assessment process.

The following table provides an overview of the HCV values that were identified in Phase 1 of this study. It also describes the responsibility for inventory and monitoring. SPR is responsible for implementation of the detailed management prescription and for some of the monitoring. There is a shared responsibility between CDF and other agencies and SPR for evaluating the effectiveness of management prescriptions. These prescriptions must be shown to be effective.

Overview of HCV identified on Swanton Pacific Ranch, responsibilities for inventory and monitoring, detailed management prescriptions and procedures for evaluating the effectiveness of management prescriptions.

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
Coho salmon habitat	Riparian communities, habitat, and stream conditions	<p>SPR and CDF jointly monitor the WLPZ's that are established during timber harvest to assure that they are properly established and maintained during harvest.</p> <p>NMFS has responsibility for the actual Coho salmon population monitoring.</p>	<p>1) WLPZ's are established and flagged as part of timber operations for all class I, II, and III streams.</p> <p>2) The Threatened and Impaired watershed guidelines from the California Forest Practice Rules are utilized for all streams in the SPR Forest.</p> <p>3) The location of roads, landings, and skid trails is also restricted as part of the T and I rules.</p>	<p>Compliance: CDF and SPR staff routinely ensure the WLPZ prescription is applied appropriately.</p> <p>The Regional Water Quality Control Board establishes monitoring requirements for each THP, based on resources and specific plan features. Monitoring efforts are conducted by SPR staff and reviewed by RWQCB staff at 24 hour notice and in an annual report.</p> <p>SPR is conducting a paired watershed study on Little Creek monitoring water quality and quantity.</p> <p>Effects & Effectiveness: NMFS monitors the Coho salmon population in Scotts Creek.</p> <p>California Department of Fish and Game does habitat evaluations of streams on a periodic basis to determine habitat condition.</p> <p>Status: appears stable</p>

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
Steelhead habitat	Riparian communities, habitat, and stream conditions	<p>SPR and CDF jointly monitor the WLPZ's that are established during timber harvest to assure that they are properly established and maintained during harvest.</p> <p>NMFS has responsibility for the actual Coho salmon population monitoring.</p>	<p>1) WLPZ's are established and flagged as part of timber operations for all class I, II, and III streams.</p> <p>2) The Threatened and Impaired watershed guidelines from the California Forest Practice Rules are utilized for all streams in the SPR Forest.</p> <p>3) The location of roads, landings, and skid trails is also restricted as part of the T and I rules.</p>	<p>Compliance: CDF and SPR staff routinely ensure the WLPZ prescription is applied appropriately.</p> <p>The Regional Water Quality Control Board establishes monitoring requirements for each THP, based on resources and specific plan features. Monitoring efforts are conducted by SPR staff and reviewed by RWQCB staff at 24 hour notice and in an annual report.</p> <p>SPR is conducting a paired watershed study on Little Creek monitoring water quality and quantity.</p> <p>Effects & Effectiveness: NMFS monitors the Coho salmon population in Scotts Creek.</p> <p>California Department of Fish and Game does habitat evaluations of streams on a periodic basis to determine habitat condition.</p> <p>Status: appears stable</p>

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
California Red-Legged Frog Habitat	Breeding ponds	<p>CDF and SPR staffs are responsible for establishing protection zones. The ponds are treated as lakes in the WLPZ guidelines. Seasonal restrictions are implemented.</p> <p>US Fish and Wildlife Service has responsibility for monitoring frog populations.</p>	<p>SPR staff establishes the WLPZ around all breeding ponds within the forest area and those that could be impacted by timber operations. Seasonal restrictions are placed on timber operations to prevent incidental take.</p> <p>An AOC extending 3 km from the nest is applied. Within that zone, MNR determines acceptable levels of disturbance, including timing and the amount and proximity of forest management activities.</p>	<p>Compliance: CDF and SPR staffs routinely ensure the prescription is applied appropriately.</p> <p>Effects & Effectiveness: US Fish and Wildlife Service is responsible for population studies.</p> <p>Status: appears to be stable. Habitat is from livestock program on ranch that established and maintains the stock ponds.</p>
Monterey pine forests	Stands that have a high proportion of native Monterey pine present	SPR staff is responsible in conjunction with the NRM Department faculty to develop research projects and monitor the stands.	<p>Stand management activities are appropriate for research and to maintain the genetic viability of the stands.</p> <p>Harvesting, in compliance with FPR, may take place as part of an approved research project through the NRM Department and the College of Agriculture.</p>	<p>Compliance, Effects, and Effectiveness Monitoring: occurs as part of the routine monitoring undertaken by SPR staff and NRM faculty. May also be checked by CDF if timber operations are conducted.</p> <p>Status: appears to be stable:</p>

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
Burl Forming Manzanita Stands	Unique vegetation component with taxonomic significance	SPR staff and NRM faculty are responsible for monitoring.	No timber activities are allowed in the communities. Recreational trails and fire breaks can be placed and maintained in the community. The community is at risk from wildfire, since it is adjacent to and mixed with knobcone pine stands. The burl forming characteristic is an adaptation to fire.	Monitoring: Is conducted periodically by SPR staff and NRM faculty, though not annually (depending on forest operations). Effects & Effectiveness: SPR staff and NRM faculty are responsible for determining that the community is present. Status: appears to be stable.

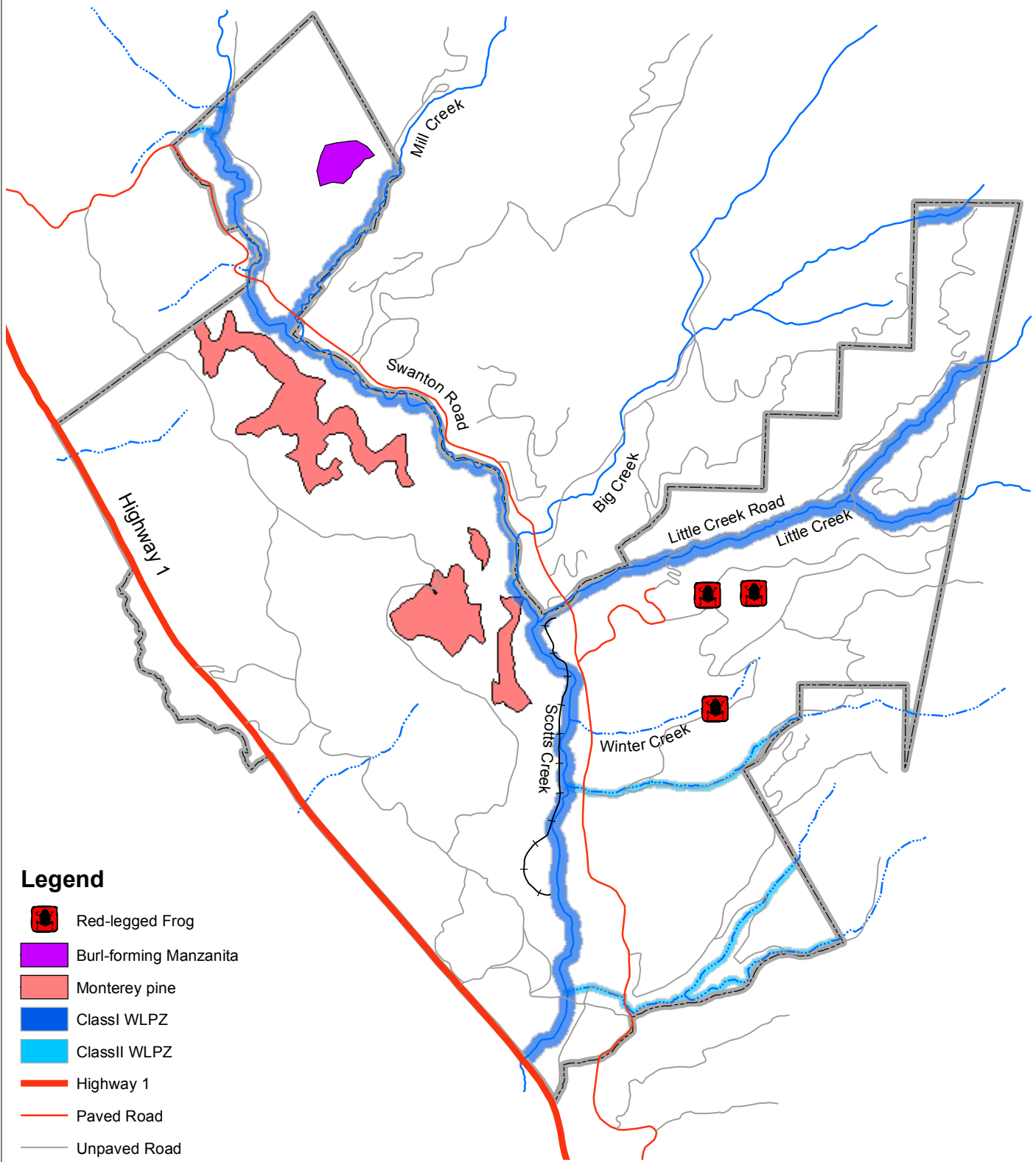
HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
General Smith Stand	Type II old-growth stand of redwood	SPR staff and NRM faculty are responsible for establishing area of special consideration and implementing the restrictions.	<p>Type II old growth redwood is previously entered stands of old-growth. These stands can have harvest in them; however, none of the old trees will be harvested or negatively impacted during operations. Thinning from below to reduce competition and to remove fuel ladders is permitted. Equipment should remain away from old growth trees to prevent root damage and soil compaction. Large downed woody debris and standing snags are left to provide diversity.</p> <p>Harvesting occurred in this stand in the early 1900's and again in the mid 1990's. In both cases old-growth redwood trees were left in the stand. Individual trees may fall or die in the stand. That is acceptable.</p>	<p>Compliance Monitoring: This will be done by SPR staff and NRM Faculty.</p> <p>Effects and Effectiveness: This will be determined by the retention of the Type II stand characteristics. No decrease in area. Permanent plots will be monitored as part of the SPR Forest CFI system.</p> <p>Status: appears to be stable.</p>

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
Second-Growth Reserve	A stand of unentered second-growth mixed conifer	SPR staff and NRM faculty are responsible for inventory and delineation of the stand boundaries. Protection from entry is the responsibility of the SPR staff.	No harvest activity is allowed in this stand. No road construction is allowed. Trails and recreational use is allowed.	<p>Compliance Monitoring: SPR staff will be charged with the protection of this stand from timber operations.</p> <p>Effects and Effectiveness: SPR staff will establish permanent plots and measure these as part of the CFI monitoring on SPR Forests.</p> <p>Status: appears to be stable.</p>
Old redwood, Douglas-fir, and California nutmeg specimens	Located throughout the forest at various locations. Many are located in the WLPZ areas along Scotts Creek. All trees will be located by gps when visited by SPR staff or NRM faculty. World record nutmeg is included in this resource.	SPR staff and NRM faculty are responsible for locating and monitoring these trees	These trees will all be protected by a buffer of no less than the drip line. No equipment will be operated in this zone, unless there is a pre-existing road or skid trail.	<p>Compliance Monitoring: SPR staff will establish the buffer zones around these specimen trees when operations include them in the boundaries.</p> <p>Effects and Effectiveness: Continued survival of the trees shows effectiveness. Blowdown or tree failure may occur due to natural causes; this does not indicate a failure of protection measures.</p> <p>Status: appear to be stable</p>

HCV	Attribute	Responsibility -- Inventory and Monitoring	Prescription (detailed management)	Current Monitoring for compliance, effects, effectiveness, status
Inner gorge of Valencia Creek	The inner gorge area is an area of Valencia Creek with extremely steep slopes leading without a break in slope directly to the stream. These areas are a potential threat to downstream attributes if failures occur do to timber activities.	SPR staff is responsible for establishing and flagging the inner gorge areas prior to timber operations. CDF and CGS review the THP to assure compliance with the conditions in the NTMP.	Harvesting of trees is allowed in the inner gorge areas. All trees proposed for harvest are to be marked prior to pre-harvest inspection. CGS staff will review all marked trees to determine if the trees can be cut without causing a threat to the stability of the inner gorge area of the stream. No trees can be cut without CGS approval	<p>Compliance monitoring: SPR staff, CDF and CGS monitor as part of the timber harvest sale preparation and inspection. Inspection by CDF and CGS prior to commencement of timber operations and CDF during and after operations.</p> <p>Effects & Effectiveness: Monitoring has occurred during past timber operations and full compliance was determined, since no trees in the inner gorge were proposed for harvest and none were cut.</p> <p>Status: appears to be stable.</p>

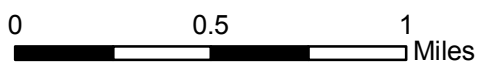
Swanton Pacific Ranch High Conservation Value Forest

Species of Concern



Legend

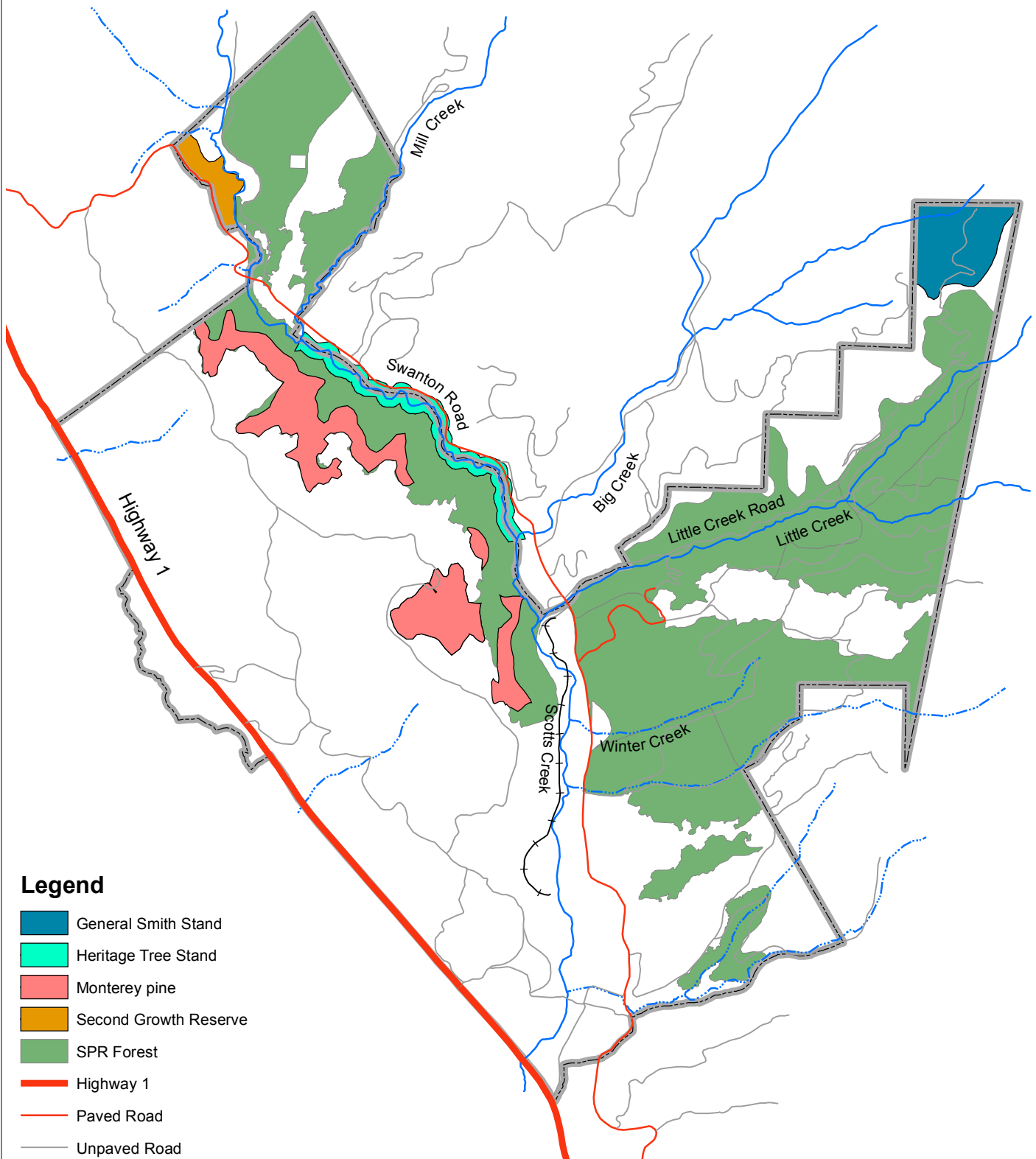
-  Red-legged Frog
-  Burl-forming Manzanita
-  Monterey pine
-  Class I WLPZ
-  Class II WLPZ
-  Highway 1
-  Paved Road
-  Unpaved Road
-  Railroad
-  Perennial Stream
-  Intermittent Stream
-  Ranch Boundary



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Forest Areas



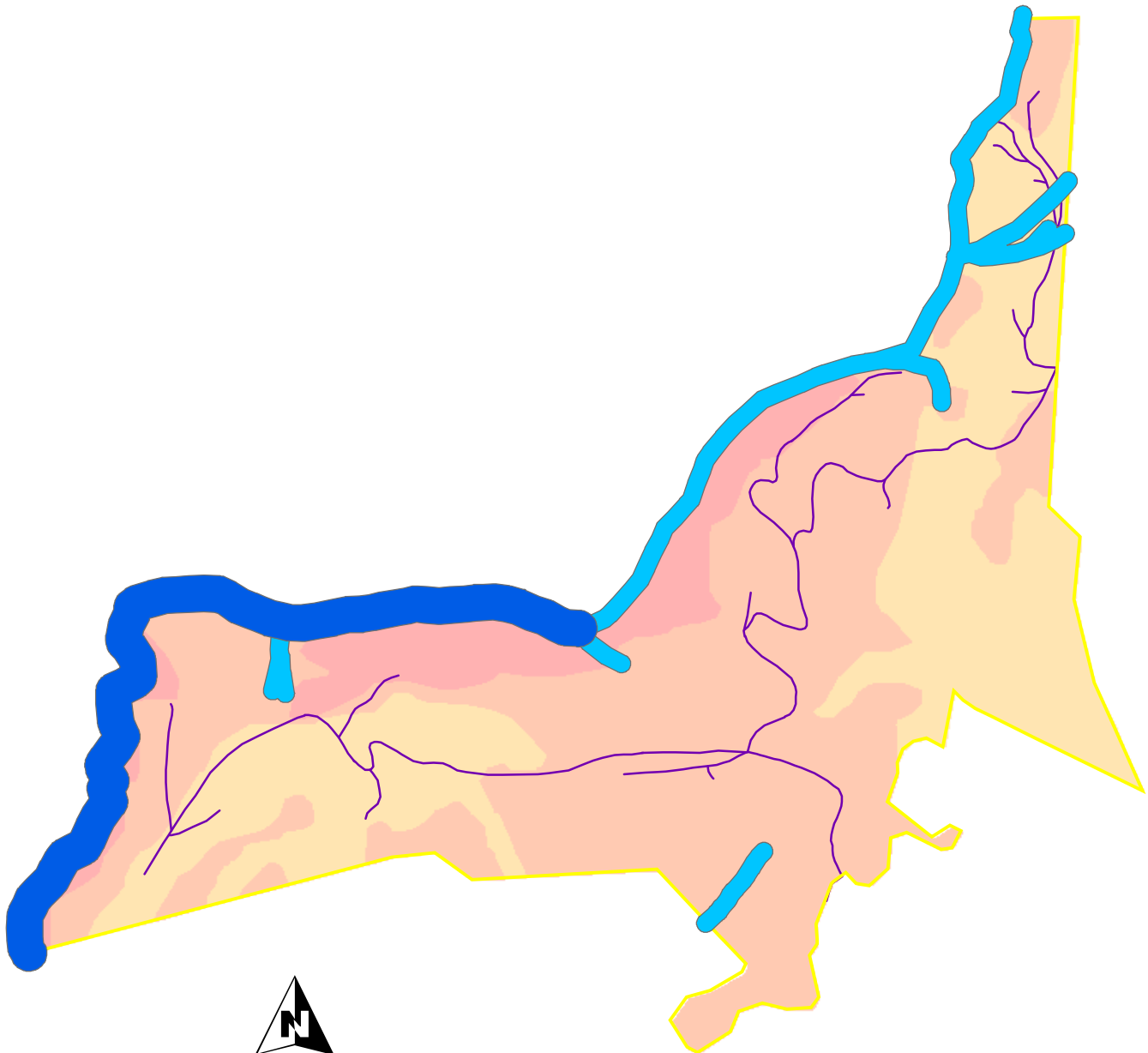
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- General Smith Stand
- Heritage Tree Stand
- Monterey pine
- Second Growth Reserve
- SPR Forest
- Highway 1
- Paved Road
- Unpaved Road
- Railroad
- Perennial Stream
- Intermittent Stream
- Ranch Boundary



0 0.5 1 Miles

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Valencia Creek HCVF



Key to Item on Map	Item	Total Valencia Acres
	Erosion Extreme Erosion	74.56
	Erosion High Erosion	317.15
	Erosion Moderate Erosion	205.37
<p>Erosion: Extreme erosion areas which overlap with the class I and class II WLPZ designation represent the inner gorge areas</p>		

Key to Item on Map	Item	Total Valencia Acres
	Class1_WLPZ Class I Watercourse	n/a
<p>Class I Watercourse: 150-foot buffers have been implemented around watercourses under this classification. Class I watercourses include water used for domestic water supply, streams inhabited by fish annually or seasonally, and habitat used for fish migration and spawning.</p>		
	Class2_WLPZ Class II Watercourse	n/a
<p>Class II Watercourse: 75-foot buffers have been implemented around watercourses under this classification. Class II watercourses include seasonal streams that have the potential to support aquatic life.</p>		

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