SUPPLEMENTAL INFORMATION

For Planning Commission Agenda of:
April 4, 2019

☒ Public Hearing Item #G-1

Re: Zoning Text Amendments and Zone Reclassifications
to Implement the General Plan

Attached for the Planning Commission's review is the following supplementary information item(s): The proposed amendments to the Streamside Management Area Regulations to be consistent with General Plan Standard BR-S5, Streamside Management Area Defined and other policies of the of the Conservation and Open Space Elements, did not include changes relating to Biological Resources Section Policy BR-S10, Development Standards for Wetlands. The Planning and Building Department is recommending that the Planning Commission consider changes, specified in BR-S10, Development Standards for Wetlands, to specify applicable widths of wetland buffers (Attachment 1).

Comments received:

- From Joyce King regarding the text amendments recommended for the TPZ-Timberland Production Zone and the proposed new TE-Timberland Exclusive Zone are included as Attachment 2.

Proposed Amendment to Streamside Management Area Regulations (modified text)

314-61.1 STREAMSIDE MANAGEMENT AREAS AND WETLANDS ORDINANCE

61.1.1 Short Title

This section shall be known and cited as the "Streamside Management Areas and Wetlands Ordinance of the County of Humboldt" (SMAWO). In any administrative action taken by any public official under the authority of this code, the use of the term "Streamside Management Areas and Wetlands Ordinance" or "SMAWO", unless further modified, shall also refer to and mean this section.

61.1.2 Purpose

The purpose of this section is to provide minimum standards pertaining to the use and development of land located within Streamside Management Areas (SMAs), wetlands and other wet areas such as: natural ponds, springs, vernal pools, marshes, and wet meadows ~~(exhibiting standing water year-long or riparian vegetation)~~.

The purpose of establishing the standards are to:

- Create a Streamside Management Areas and Wetlands ordinance within the zoning regulations of the County of Humboldt pursuant to the mandates of state law.

- Implement portions of the County's General Plan policies and standards pertaining to open space, conservation, housing, water resources, biological resources, and public facilities.

61.1.3 Relationship to Other Regulations

These regulations shall be in addition to regulations imposed by the principal zone, combining zone, development regulations, and other open space or resource protection regulations. Wherever the provisions of these regulations conflict with or are inconsistent in application with any other regulation, the most protective of natural resources shall apply.

61.1.4 Scope of Application

This section shall be applicable to all development within or affecting SMAs, wetlands or other wet areas within the unincorporated areas of the County and outside the Coastal Zone.

The provisions of this section shall be applicable to all development permits issued by the County pursuant to:

(1) Title III, Land Use and Development, Division 1, Planning.

(2) Title III, Land Use and Development, Division 2, Subdivision Regulations.

(3) Title III, Land Use and Development, Division 3, Building Regulations.

(4) Title IV, Streets and Highways, Division 1, Protection and Control of County Roads and Permits.

These regulations shall not apply to:

61.1.4.1 Routine maintenance activities associated with existing public or private facilities, defined as "activities to support, keep and continue in an existing state or condition without decline." Routine activities include the replacement of culverts and related structures when conducted pursuant to a Department of Fish and ~~Game~~Wildlife Lake or Streambed Alteration Agreement (LSAA).

For the purpose of these regulations, routine maintenance activities do not include:

- removal of trees with a diameter of 12 inches or greater (38-inch circumference), or
- removal of trees from within a contiguous or non-contiguous area of more than 6,000 square feet as measured under the tree canopy, or
- activities that could result in significant environmental impacts where the removal will:

– be located within a streamside management area, wetland, or other wet area as defined in County regulations, or
– occur on slopes greater than 15%, or
– will expose more than 2,000 square feet of soil to erosion.

A site evaluation shall be made where necessary to determine if a project meets the exemption standards of these regulations or if the proposed development requires a special permit.

61.1.4.2 Grading and construction activities associated with onsite wells and sewage disposal systems for single-family dwellings which have received all required County and State permits; or

61.1.4.3 Any project where a complete application for grading or construction was accepted by the Planning and Building~~Community Development Services~~ Department prior to April 25, 1995; or

61.1.4.4 To any construction or grading on property which was subdivided and subject to discretionary and environmental review by the County after the effective date of the 1984 General Plan, January 2, 1985, and any subsequent and applicable Community Plans, if the Responsible Department has determined that all conditions of approval and specific mitigation requirements have been fully met; or

61.1.4.5 Development activities proposed and carried out under the provisions of the County Code Title III, Land Use and Development, Division 9, Mining Operations.

61.1.4.6 Timber harvest and management activities when approved and carried out consistent with the California Forest Practices Act. Activities which are not exempt from the local regulation pursuant to Public Resources Code Section 4516.5(f) are subject to these regulations. Permits are required for private roads within timber harvest areas where the proposed improvements are in excess of the minimum road standards required by the California Department of Forestry for timber harvesting activities.

The exemptions contained in Section 331-14.D.2., Grading, Excavation, Erosion and Sedimentation Control do not apply in SMAs, wetlands or other wet areas.

61.1.5 **Permit Required and Processing**

All development as defined in the ~~Framework~~General Plan within or affecting SMAs, wetlands or other wet areas not exempted under subsection 314-61.1.4 above shall require a permit pursuant to an application for development within SMAs, wetlands or other wet areas and processed as a Special Permit pursuant to the Humboldt County Zoning Regulations (Section 312-3.1.1 et seq).

For those activities subject to these regulations and conducted by the County Department of Public Works, the Director of the Department (of Public Works) shall be responsible for the environmental review and public notice requirement, be empowered to approve and issue a special permit following the making of findings, be empowered to meet with and work out solutions with impacted parties, and be required to provide notice and staff support to the Planning Commission when a hearing is requested. The impacted parties shall have a mandatory meeting with the Department of Public Works in an attempt to work out any issues before a hearing is requested or an appeal to the Planning Commission is filed.

61.1.6 **Findings of Exception - Written Report**

Where there is disputed evidence, or controversy, regarding a finding of exception, the Administrative Official shall issue a written report containing the evidence, or referencing the evidence, upon which a finding of exemption is made. Copies of the report shall be sent to CDF~~G~~W or any person or group requesting such report in writing. Any person dissatisfied with the finding of exemption may request a formal review pursuant to Section 314-61.1.8.

61.1.7 **Definitions**

Whenever the words listed below are used in the Zoning Regulations or other regulations related to the Streamside Management Areas and Wetlands Ordinance, they shall have the following meaning:

61.1.7.1 "Grading" means all grading, filling, land contouring, clearing and grubbing, drainage activities, site preparation, and road building.

61.1.7.2 "CDF~~G~~W" means the California Department of Fish and ~~Game~~Wildlife.

61.1.7.3 "Construction" means the erection or construction of, or addition to, any building or structure but shall not include the structural alteration, repair, remodeling, or demolition and reconstruction of and additions to any building or structure where the work would not increase the "footprint" of the building or structure. "Construction" does not include "minor additions" as defined in this section.

61.1.7.4 "Minor Additions" means an exception to these standards for additions to buildings or structures existing on April 25, 1995, of up to 500 square feet of floor area. From this date forward, any number of individual additions to an existing building or structure may be permitted provided the aggregated total increase in square footage for all changes does not exceed 500 square feet of floor area. A "minor addition" is not "construction" as defined in these standards. Note: Physical additions to a building or structure where a condition or a prior discretionary permit or subdivision approval indicated that any future additions would be prohibited are not minor additions as defined in these Implementation Standards.

61.1.7.5 "Project" means any "grading" or "construction" activities subject to the provisions of these standards.

61.1.7.6 "Streamside Management Areas" (SMAs) [~~section 3432(5) of the Humboldt County 1984 Policy BR-S5. Streamside Management Areas Defined of the 2017~~ General Plan] shall be as defined in the Humboldt County General Plan (Page ~~G-8~~ Section 10.3 Biological Resources of Chapter 10, Conservation and Open Space Elements of the Humboldt County General Plan~~)~~ and includes, a natural resource area along both sides of streams containing the channel and adjacent land. SMAs do not include watercourses consisting entirely of a man-made drainage ditch, or other man-made drainage device, construction, or system. Streamside Management Areas (SMA) are identified and modified as follows:

61.1.7.6.1 Areas specifically mapped as SMA and Wetland (WR) Combining Zones, subject to verification and adjustment pursuant to site-specific biological reporting and review procedures ~~In areas outside of Urban Development and Expansion Areas (as defined in the Humboldt County General Plan Page G-9), the outer boundaries for streams (which do not consist entirely of drainage ditch or other manmade drainage device, construction or system) shall be defined as:~~

~~61.1.7.6.1.1 100 feet, measured as the horizontal distance from the stream transition line (as defined in the Humboldt County General Plan Page G-8), on either side of perennial streams.~~

~~61.1.7.6.1.2 50 feet, measured as the horizontal distance from the stream transition line on either side of intermittent streams.~~

61.1.7.6.2 For areas along streams not specifically mapped as SMA and Wetland (WR) Combining Zones, the outer boundaries of the SMA ~~In areas inside of Urban Development and Expansion Areas, the outer boundaries for streams (which do not consist entirely of a drainage ditch or other manmade drainage device, construction or system)~~ shall be defined as:

61.1.7.6.2.1 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater ~~50 feet, measured as the horizontal distance from the stream transition line~~ on either side of perennial streams.

61.1.7.6.2.2 50 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater ~~25 feet, measured as the horizontal distance from the stream transition line~~ on either side of intermittent streams.

Where necessary, as determined by the responsible department, the width of SMAs shall be expanded to include significant areas of riparian vegetation adjacent to the buffer area, slides and areas with visible evidence of slope instability, not to exceed 200 feet measured as a horizontal distance from the top of bank as necessary to include slides, or areas with visible evidence of slope instability ~~as a horizontal distance, as measured pursuant to subsection 314-61.1.7.6.1 or 314-61.1.7.6.2 above, as applicable~~.

61.1.7.6.3 The Streamside Management Area may be reduced or eliminated where the County determines, based on specific factual findings, that:

61.1.7.6.3.1 The ~~USGS mapping of the stream as perennial or intermittent is not accurate, and typical stream flow can be shown to be less than that required to be classified as either~~

~~perennial or intermittent~~ mapping of the SMA is not accurate, there are no in-channel wetland characteristics or off-channel riparian vegetation, the reduction will not significantly affect the biological resources of the SMA on the property.~~, or,~~

61.1.7.6.3.2 For projects subject to ministerial review, reductions may be allowed without a special permit in consultation with California Department of Fish and Wildlife~~It will not result in a significant adverse impact to fish, wildlife, riparian habitat, or soil stability.~~

When the prescribed buffer would prohibit development of the site for the principal use for which it is designated, measures shall be applied that result in the least environmentally damaging feasible project.

Such ~~a~~ determinations ~~will shall~~ require ~~a permit to be processed as~~ a Special Permit pursuant to Section 312-3.1.1 et seq of the Zoning Regulations.

61.1.7.6.~~4~~7 "Other Wet Areas" ~~[section 3432(10) of the 1984 General Plan]~~, i.e., natural ponds, springs, vernal pools, marshes and wet meadows ~~which exhibit standing water year-long or riparian vegetation~~. The existence of possible Other Wet Areas shall be identified by the responsible department using normal soils investigation criteria. These criteria indicate the presence of any of the following: standing water, evidencing a natural pond or poor drainage conditions, ~~marshy~~ wetland soils, or ~~hydrophilic~~ hydrophytic vegetation (e.g., swamp grass).

61.1.7.6. 5~~8~~ "Wetlands" - as defined in the ~~California Department of Fish and Game Code Section 2785, Subdivision (g)~~ the US Army Corps of Engineers Wetland Delineation manual in the identification and classification of wetlands which considers wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

61.1.7.6. 6 Development standards for wetlands shall be consistent with the standards for Streamside Management Areas, as applicable except that the widths of the SMA for wetlands are as follows:

seasonal wetlands = 50 ft.
perennial wetlands = 150 ft.

and the setback begins at the edge of the delineated wetland. Buffers may be reduced based on site specific information and consultation with the California Department of Fish and Wildlife. No buffer shall be required for man-made wetlands except wetlands created for mitigation purposes.

61.1.8 **Administration and Enforcement**

The regulations of this section are to be administered and enforced by the respective Administrative or Enforcement Official designated by the Code for each section cited in subsection 314-61.1.4 above and hereinafter referred to as "Responsible Department." In case of disagreement in the application of the regulations, the Director of the ~~Community Development Services~~Planning and Building Department shall decide, subject to appeal to the Board of Supervisors pursuant to Section 312-13.

61.1.9 **Development Allowed**

61.1.9.1 Development within stream channels is limited to the following projects:

61.1.9.1.1 Fishery, wildlife, and aquaculture enhancement and restoration projects.

61.1.9.1.2 Road crossings consistent with subsection (j) below.

61.1.9.1.3 Flood control and drainage channels, levees, dikes and floodgates.

61.1.9.1.4 Mineral extraction consistent with other County regulations.

61.1.9.1.5 Small-scale hydroelectric power plants in compliance with applicable County regulations and those of other agencies.

61.1.9.1.6 Wells and spring boxes, and a~~A~~gricultura~~l~~ diversions ~~and wells~~.

61.1.9.1.7 New fencing, so long as it would not impede the natural drainage or wildlife movement and ~~or~~ would not adversely ~~effect~~ affect the stream environment or wildlife.

61.1.9.1.8 Bank protection, provided it is the least environmentally damaging alternative.

61.1.9.1.9 Other essential public projects, including municipal groundwater pumping stations, provided they are the least environmentally damaging alternative, or necessary for the protection of the public's health and safety.

61.1.9.1.10 Improvements to non-conforming uses and structures when consistent with Section 314-131 - 314-132 of the County Code and these regulations.

61.1.9.2 Development within Streamside Management Areas shall be limited to the following:

61.1.9.2.1 Development permitted within stream channels.

61.1.9.2.2 Timber management and harvests activities under a timber harvesting plan or non-industrial timber management plan, or activities exempt from local regulation as per California Public Resources Code 4516.5(d) ~~not otherwise excluded by the Applicability Section~~ as well as noncommercial cutting of firewood and clearing for pasturage, provided:

61.1.9.2.2.1 Cottonwoods are retained.

61.1.9.2.2.2 Remaining willows and alders, as well as other unmerchantable hardwoods or shrubs, are to be protected from unreasonable damage.

61.1.9.2.3 Road and bridge replacement or construction, where the length of the road within the SMA shall be minimized, and when it can be demonstrated that it would not degrade fish and wildlife resources or water quality, and that vegetative clearing is kept to a minimum.

61.1.9.2.4 Removal of vegetation for disease control or public safety purposes.

61.1.9.2.5 Normal, usual and historical agricultural and surface mining practices and uses which are principally permitted within the SMA shall not be considered development for the purposes of this standard.

61.1.9.3 Bank Protection

61.1.9.3.1 Protection measures for County river and stream banks may be permitted for the following purposes:

61.1.9.3.1.1 Maintenance, replacement, or construction of necessary public or private roads;

61.1.9.3.1.2 Maintenance, replacement, or construction of levees and dikes;

61.1.9.3.1.3 Protection of principal structures in danger due to erosion;

61.1.9.3.1.4 Protection of lands zoned AE, Agricultural Exclusive, from erosion.

61.1.9.3.2 The bank protection measures which may be permitted are listed below in order of preference. The measures chosen for any bank protection project shall employ the highest ranking protection measure wherever feasible. The preference ranking for permitted protection measures shall be as follows:

(1) Piling fence;

(2) Rock hard points;

(3) Continuous revetment.

61.1.10 **Mitigation Measures**

61.1.10.1 Mitigation measures for development within Streamside Management Areas shall, at a minimum, include:

61.1.10.1.1 Retaining snags unless felling is required by CAL-OSHA, or by California Department of Forestry forest and fire protection regulations, or for public health and safety reasons, approved by the Planning and Building Director~~appropriate County department~~. Felled snags shall be left on the ground if consistent with fire protection regulations and the required treatment of slash or fuels ~~as they have no economic value~~.

61.1.10.1.2 Retain live trees with visible evidence of current or historical use as nesting sites by hawks, owls, eagles, osprey, herons, kites or egrets.

61.1.10.1.3 Replanting of disturbed areas with riparian vegetation (including such species as alders, cottonwoods, willows, sitka spruce, etc.) shall be required unless natural regeneration does not occur within two years of the completion of the development project. The mitigation and monitoring report adopted as a part of project approval shall include an alternative regeneration plan in case natural regeneration is not successful.

61.1.10.1.4 Revegetation along channelized streams and other wet areas shall be required

where the habitat has been converted to other uses. For development allowed within a Streamside Management or Other Wet Areas where the riparian habitat has been converted to other uses, the project shall be conditioned to require the development of new riparian or wetland habitat of an area equal to the area in which the development is to occur or, the area of an existing or proposed easement or right-of-way, whichever is larger.

61.1.10.1.5 Erosion control measures: As found within the Building Regulations, Section 331-14, Grading, Excavating, Erosion, and Sedimentation Control~~.~~ and the following:

61.1.10.1.5.1 During construction, land clearing and vegetation removal will be minimized, following the provisions of the Water Resources Element and the standards listed here;

61.1.10.1.5.2 Construction sites with at least 100 square feet of exposed soil will be planted or seeded as appropriate per mitigations as recommended in writing by the lead agency with native or non-invasive vegetation and mulched with natural or chemical stabilizers to aid in erosion control and ensure revegetation;

61.1.10.1.5.3 Long slopes will be minimized to increase infiltration and reduce water velocities down cut slopes by such techniques as soil roughing, serrated cuts, selective grading, shaping, benching, and berm construction

61.1.10.1.5. Concentrated runoff will be controlled by the construction and continued maintenance of culverts, conduits, non-erodible channels, diversion dikes, interceptor ditches, slope drains, or appropriate mechanisms. Concentrated runoff will be carried to the nearest drainage course. Energy dissipaters may be installed to prevent erosion at the point of discharge, where discharge is to natural ground or channels;

61.1.10.1.6. Runoff shall be controlled to prevent erosion by on-site or off- site methods. On-site methods include, but are not limited to, the use of infiltration basins, percolation pits, or trenches. On-site methods are not suitable where high groundwater or slope stability problems would inhibit or be aggravated by on-site retention or where retention will provide no benefits for groundwater recharge or erosion control. Off-site methods include detention or dispersal of runoff over non-erodible vegetated surfaces where it would not contribute to downstream erosion or flooding;

61.1.10.1.7. Disposal of silt, organic, and earthen material from sediment basins and excess material from construction will be disposed of out of the Streamside Management Area to comply with California Department of Fish and Wildlife and the North Coast Regional Water Quality Control Board requirements;

61.1.10.1.8. Winter operations (generally October 15 thru April 15) shall employ the following special considerations:

(1) Slopes will be temporarily stabilized by stage seeding and/or planting of fast germinating seeds, such as barley or rye grass, and mulched with protective coverings such as natural or chemical stabilizations, and;

(2) Runoff from the site will be temporarily detained or filtered by berms, vegetated filter strips, and/or catch basins to prevent the escape of sediment from the site. Drainage controls are to be maintained as long as necessary to prevent erosion throughout construction.

61.1.11 **Prohibited Activities**

61.1.11.1 The following prohibitions pertain to all development and related activities within Streamside Management Areas Wetlands and Other Wet Areas within the County:

61.1.11.1.1 The discharge of soil, vegetation, or other organic or inorganic material from any development activity, except those authorized pursuant to the County's Streamside Management Area Ordinance, onsite or offsite, into any Streamside Management or Other Wet Area in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.

61.1.11.1.2 The placement of soil, vegetation, or other organic or inorganic material from any development activity, except those authorized pursuant to the County's Streamside Management Area Ordinance, onsite or offsite, where such material could pass into any Streamside Management or Other Wet Area in quantities which could be deleterious to fish, wildlife, or other beneficial uses.

61.1.12 **Confirmation of Development Within SMAs and Wetlands**

As a part of a development application review, the Responsible Department shall check USGS maps, or other information available to the department, to determine if grading, construction, or other activity is proposed to be located within a SMA or other wet area.

A preliminary onsite inspection shall be performed prior to any grading, construction, or other development permit issuance to determine if the project area contains SMAs or other wet areas.

Where there is disputed evidence or controversy regarding the confirmation of development within SMAs or other wet areas, the Administrative Official shall issue a written report containing the evidence, or referencing the evidence, upon which the confirmation is made.

Copies of the report shall be sent to CDF~~G~~W and to any person or group requesting such report in writing.

61.1.13 **Biological Report Required**

An application proposing development activities within a SMA or Other Wet Area shall include a site-specific biological report prepared consistent with these regulations.

The written report prepared by a qualified biologist shall be referred to CDF~~G~~W for review and comment. If no reply is received from CDF~~G~~W within ~~ten (10)~~ twenty working days of the date of the referral, ~~it shall be assumed that the report satisfies CDFG requirements~~ the County may complete review of the project.

61.1.14 **Incorporation of Recommendations as Conditions**

The recommendations contained within the written report shall be incorporated into any development permit as

conditions of approval by the Responsible Department.

61.1.15 **Project Monitoring, Security, and Certificate of Completion**

The monitoring of mitigation measures and reporting of monitoring activities made as conditions to any permit issued pursuant to this section shall be performed as specified in the project's adopted mitigation and monitoring plan.

No development permit final acceptance, certificate of compliance or certificate of occupancy, nor any further development permits shall be issued unless and until all initial mitigation measures are completed and accepted by the County.

Where a project is phased or where mitigation measures are to be monitored beyond an initial building, grading, or construction period, or where mitigation measures are required beyond this initial period, as described within the development permit, the permittee shall post a bond or equal security with the Responsible Department prior to commencing any grading or construction activities. The amount of the bond or security is to be based upon the cost of performing the required mitigation measures, the related monitoring and report activities, and the County's administrative and processing costs.

Following a written notice to the permittee of a failure to complete or fully implement mitigation or monitoring measures within the time period specified within the permit conditions, the bond or other security may be forfeited and applied to the incomplete mitigation or monitoring measures at the discretion of the Responsible Department.

61.1.16 **Waiver of Procedures for Emergencies**

The provisions of Section 312-15, Subsections 1-5, of the County Zoning regulations shall be followed in cases of emergencies. Following the issuance of an emergency development permit or variance, application shall be made and processed for the required development permit or variance in accordance with the applicable provisions of the County Code.

61.1.17 **Biological Report**

Where a Biological Report is required by these regulations, the report shall be prepared by a qualified professional educated, trained, and experienced in the subject matter, and the report shall contain the following:

- Section I Summary of Findings and Conclusions
- Section II Introduction, Background, and Project Understanding
- Section III Methods
  - A. Field Observation and Studies
  - B. Trustee and Other Agency Consultation
  - C. Document and Report Review
  - D. Cumulative Biological and Watershed Effects
- Section IV Results and Discussion
  - A. Existing Site Conditions
    1. Terrestrial
    2. Hydrologic and Aquatic
    3. Sensitive Species or Habitats
  - B. Offsite Conditions

1. Terrestrial
2. Hydrologic and Aquatic
3. Sensitive Species or Habitats

C. Development Effects
1. Direct
2. Indirect
3. Cumulative

D. Recommended Mitigation and Monitoring Measures

Section V References
A. Plant Species Observed
B. Other Species Observed directly or indirectly (e.g. nests, scats, tracks, etc.)
C. Sensitive Species or Habitats in the Project Vicinity (listing)

61.1.18 **Mitigation and Monitoring Plan**

61.1.18.1 When a mitigation or monitoring plan is required, information sufficient to answer all of the following is required:

61.1.18.1.1 Statement of project/mitigation goals – what do you want to create?

61.1.18.1.1.1 Map and/or description of existing site conditions.

61.1.18.1.2 Schedule for implementation, inspection, and maintenance.

61.1.18.1.3 Description of site preparation; i.e., excavation, grading, stockpile of topsoil, etc.

61.1.18.1.4 Identify the planting material; i.e., cuttings, seedlings, seed, plugs, container size (source if not obtained from commercial nursery).

61.1.18.1.4.1 Use of mulch and/or fertilizers.

61.1.18.1.4.2 Description of plant preparation, if necessary; i.e., how cuttings were obtained, size, treatment with rooting hormone.

61.1.18.1.4.3 Necessity for irrigation and/or fencing.

61.1.18.1.5 Performance Standards – how to measure success through <u>defined</u> criteria; i.e., number of viable species, cover values, height, growth, etc. For example:

61.1.18.1.5.1 Year one – 80% tree species viable and achieving at least 4 inches of growth from initiation of planting.

61.1.18.1.5.2 Year three – plugs of silverweed shall cover at least 30% of project site.

61.1.18.1.6 Monitoring Requirements – (standard is five years of monitoring).

61.1.18.1.6.1 Conduct during June each year; however, may be modified if specific species are involved (i.e., annual that blooms in April).

61.1.18.1.6.2 Photos.

61.1.18.1.7 Reporting – listing of appropriate agencies to receive copies of monitoring report.

61.1.18.1.8 Remedial Measures – plan shall include measures for mitigation not achieving specified performance criteria; i.e., replanting, irrigation, fencing, etc. (Added by Ord. 2275 Sec. D; 5/28/02)

ATTACHMENT 2

Comment from Joyce King

NORTHERN REGION
601 Locust Street
Redding, CA 96001
(530) 225-2300

January 18, 2008

Humboldt County Planning Commission
825 Fifth Street
Eureka, California 95501

Dear Planning Commissioners:

Revisions to the Humboldt County Timberland Production Zone Regulations

The Department of Fish and Game (DFG) has reviewed the proposed revisions to the Humboldt County Timberland Production Zone (TPZ) Regulations described in Staff Report #10 for the November 15, 2007, Humboldt County Planning Commission meeting. These TPZ revisions, undertaken within the framework of the Humboldt County General Plan Update (Update), are intended to make the County forest resources regulations consistent with State statutes for residential development in TPZ. These revisions are also intended to maintain working timberlands by minimizing conversion and fragmentation from rural residential development.

As a trustee for the State's fish and wildlife resources, DFG has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary to sustain their populations. As a responsible agency, DFG administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code to conserve the State's fish and wildlife public trust resources.

DFG submitted a July 17, 2007, letter to the County with comments and recommendations on the Update Notice of Preparation for a Draft Environmental Impact Report (DEIR). In this letter, DFG: 1) recommended adoption of Sketch Plan A as the environmentally superior project alternative, 2) listed significant fish and wildlife resources occurring on County agricultural and forest lands, and 3) identified potentially significant impacts from urban and rural residential development on these resources and mitigations to avoid them.

The County recognizes the threat and significance of conversion, fragmentation, and degradation of forestland by its inclusion of the following guiding principle in the current Update:

> "The plan must contain long-term agricultural and timberland protections such as increased restrictions on resource land subdivisions and patent parcel development."

For reasons included in our July 17, 2007, letter, and explained below, DFG supports County TPZ revisions that:

1) best maintain TPZ's principal use for timber production, watershed protection, and fish and wildlife habitat;
2) minimize conversion of TPZ to other uses, such as low-density rural residential development;
3) minimize fragmentation, parcelization, and habitat degradation of TPZ lands.

DFG finds that fragmentation and conversion of forest and agricultural lands by urban and rural development has substantial effects on fish and wildlife habitat. These effects can diminish the long-term sustainability of fish and wildlife populations, including State- and federally-listed species, e.g., northern spotted owl, marbled murrelet, coho salmon, and important commercial and recreational species, e.g., black-tailed deer, Roosevelt elk and steelhead trout. Consequently, DFG supports the Update's intent to focus future County growth and development into areas with existing infrastructure, such as roads, domestic water and sewer, and services such as schools, retail shopping, police and fire protection. By encouraging future development where urban services already exit, the Update would guide future County growth in ways that minimize fragmentation and loss of agricultural and forest lands, which are important fish and wildlife habitat.

Scale and Significance of County TPZ

According to the Update Natural Resources and Hazards Report, forested lands (including State and federal lands) account for 1.9 million acres, or more than 80% of the County. TPZ covers 0.9 million acres, or more than 40% of the County. Humboldt County accounts for approximately 17% of California's TPZ acreage.

County timberlands provide extensive and critical habitat for numerous State- and federally-listed or otherwise sensitive species. A partial list of these species and their status includes:

- Coho salmon (*Oncorhynchus kisutch*), State- and federally-threatened;
- Chinook salmon (*Oncorhynchus tshawytscha*), federally-threatened;
- Coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), State species of special concern;
- Steelhead trout (*Oncorhynchus mykiss*), federally-threatened;
- Willow flycatcher (*Empidonax traillii*), State-endangered;
- Marbled murrelet (*Brachyramphus marmoratus*), State-endangered and federally-threatened;

- Northern spotted owl (*Strix occidentalis caurina*), federally-threatened;
- Pacific fisher (*Martes pennanti*, West Coast Distinct Population Segment), federal candidate for listing, and
- Humboldt marten (*Martes americana humboldtensis*), State species of special concern.

Urban and Exurban Development and Conversion of Timberlands

Between 1984 and 1994, approximately 76,000 acres of California's private timberlands were converted to non-timber uses such as housing, roads, and agriculture, "but many more acres were effectively removed from timber production due to fragmentation of ownerships and growing residential uses" (CAL FIRE 2003). For instance, CAL FIRE (2003) found that whereas only 4% of natural habitat in El Dorado County was converted by development, nearly 40% had greatly reduced habitat quality. CAL FIRE (2003) projects that in the next 40 years approximately 10% of California's current forest and rangeland will be impacted by development. Combined with the 15% of California's presettlement-era native landscape already converted by urbanization and agriculture (CAL FIRE 2003), this antipicated 10% increase is cumulatively significant. Parcelization of timberlands (the dividing up of large parcels into many smaller ones) for low-density rural residential development is an indicator of probable future urbanization (CAL FIRE 2003) and often results in conversion of timberlands to primarily residential use.

Low-density rural home development, approximately 6-25 homes/km^2, or 16-64 homes/square mile, in areas dominated by native vegetation is known as "exurban development" (Hansen et al. 2005). Exurban development is the fastest-growing form of land use in the United States at least since the 1970s (Odell et al., 2003; Brown et al., 2005; Hansen et al., 2005). The area occupied by exurban development densities in the conterminous United States has increased five-fold since 1950 (Brown et al., 2005).

Exurban development has important economic and social implications as well as ecological consequenses. It affects large areas of California well beyond the immediate boundaries of developed areas. It affects downstream watershed processes including stormwater run-off regimes and water quality and availability, alters regional ecosystem functions, limits the potential for listed species recovery and reduces traditional forest and ranchlands management options. Over the coming decades, exurban development has the potential to dramatically alter Humboldt County's landscape and diminish the ability of forestlands to produce forest products, provide wildlife habitat, protect vital watershed functions and provide quality of life ammenities such as recreational oportunities, open space and viewsheds.

Exurban Development Effects on Forest Habitat

Timber production has well-documented impacts on forest ecosystems, including fish and wildlife habitat fragmentation or loss. With time, as forests mature after harvest and with application of conservation principles and wise use, these impacts may be ameliorated. However, residential development results in direct permanent conversion of habitat and has its own distinct and significant suite of effects on forest habitat quality and use by fish and wildlife. Exurban development has three principal effects on forest habitat: 1) structures, roads, driveways, yards and associated facilities convert and degrade natural wildlife habitat and fragment what forest remains into smaller, less contiguous areas of functional habitat; 2) results in the introduction or increased prevalence of exotic species or species that are habitat generalists, termed "human adapted" or "urban exploiters", and 3) decreases native species abundance and biodiversity and results in the loss of "human-sensitive" species that require natural habitats. In general, these effects occur because development tends to favor species well-adapted to human habitation with subsequent negative effects on sensitive species and those species best adapted to natural habitats (Marzluff and Neatherlin 2006).

The impacts of urban and rural development on fish and wildlife habitat in adjacent natural areas are well documented. The development-related loss of native species abundance and diversity or the increase in exotic and native generalist species has been shown for bird assemblages (Beissinger and Osborne 1982; Wilcove 1985; Luginbuhl et al., 2001; Odell et al., 2003), mammals (Maestas et al., 2001), fish (Paul and Meyer 2001), amphibians (Davidson et al., 2001; Ridley et al., 2005), terrestrial and freshwater invertebrates (Miyashita et al., 1998; Paul and Meyer 2001; Ridley et al., 2004), and plants (Galatowitsch et al., 1999; Mack and Lonsdale 2001; Reichard and White 2001).

Additionally, human development negatively impacts wildlife through increased road-kill (Trombulak and Frissell 2000; Malo et al., 2004), light pollution (Rich and Longcore 2006), the killing of and disturbance to wildlife by domestic animals such as house cats, and increased human conflict with wildlife such as black bear, mountain lion, and fox, which often results in killing (depredation) of these animals.

When residential development occurs dispersed across rural settings, these effects are magnified because: 1) structures require 100-foot-wide defensible space fire-safe buffers around them (Public Resources Code §4291), 2) local wildlife population's response to exurban development can continue several decades after initiation (Hansen et al., 2005), and 3) in addition to local effects, exurban development has been shown to alter the ecological processes and biodiversity of distant public lands, including parks, preserves and national forests (Hansen et al., 2005).

Exurban development also profoundly affects wildfire management options and has ramifications for public safely, fire-fighting costs, and the decision-making process and policies regarding wildfire suppression, controlled burning, fuels management, and let-burn policies. All this can have significant effects on TPZ fish and wildlife habitat.

Exurban Development Effects on Water Quality and Aquatic Habitat

DFG is concerned that exurban development in TPZ will result in year-round use of native-soil ("dirt") roads designed only for the summer dry season. Wet-weather road use on poorly-maintained native-soil roads previously established and used for forest management can be a significant source of sediment input to Humboldt County streams. Exurban development often converts logging roads and even skid trails, whose wet-weather use and maintenance are subject to the California Forest Practice Rules, to driveways and private residential road systems subject to little or no regulatory oversight. These roads often become chronic sediment sources to nearby streams with significant impacts to the County's salmon and steelhead resources.

Streams are the principal water source for many rural residences on timberlands in the County. DFG finds stream water diversions can result in significantly decreased flows, higher water temperatures, diminished aquatic habitat values, and in extreme cases, dewatering of stream reaches. Although water diversions are subject to the authorities of the Fish and Game Code and require the issuance of lake or streambed alteration agreements with DFG, most diversions for new rural residential use appear unregulated, which combined with existing diversions, can have significant impacts to the County's salmon and steelhead resources. Residences and other structures proposed for TPZ which intend to divert water from streams for domestic or agricultural water supplies cannot be considered ministerial projects and will be subject to the requirements of CEQA pursuant to CEQA §15268(d). DFG believes water diversions are likely to become an increasingly significant issue for fish, wildlife, and rural residents during the life of the Update, as water diversions from exurban development increase.

To maintain adequate stream and river flows for fish and wildlife species and for management of timberlands during the Update period, DFG recommends the County develop a water budget for each of the County's 12 planning watersheds. DFG recommends the County develop enforceable regulations that condition the approval of proposed TPZ residences on demonstrate of adequate long-term water availability and summer storage capacity. Proof of adequate long-term water availability and summer storage capacity must be required in all watersheds and not only for temperature impaired watersheds. DFG supports the development of a County policy that ensures stream diversions for rural residences and agriculture maintain sufficient stream flows for fish and wildlife species consistent with Fish and Game Code §5901 and §5937.

Water quality impairment to streams from onsite wastewater treatment systems (OWTS) effluent inputs from rural residences is another potentially significant consequence of residential conversion of TPZ. Both OWTS and sediment inputs from the use of residential dirt roads have been identified by the Trinidad and Westhaven Integrated Coastal Watershed Management Plan as priority issues in need of solutions because they are the principal pollution sources to the Trinidad Area of Special Biological Significance. Due to a lack of regulatory oversight, rectifying the water quality impacts from OWTS and sediment-delivery from private roads and driveways of dispersed rural residences is a difficult problem to rectify. Pursuant to CEQA §15065(a)(3), these effects can be cumulatively considerable within a watershed.

Exurban Development Effects on Sensitive Species

The marbled murrelet is one example of a species that likely would be adversely affected by exurban development in TPZ. Old-growth redwood forests in California are essential nesting habitat for the marbled murrelet (Hamer and Nelson 1995; Cooperrider et al., 2000). Humboldt County had approximately 50,000 acres of old-growth redwood forests representing approximately 60% of the state's total (Fox 1989). Many of the County's largest old-growth redwood stands are bordered by TPZ and occur near populated areas susceptible to exurban development. These stands include those in the Headwaters Forest Reserve; The Pacific Lumber Company's marbled murrelet conservation areas near Eureka, Fortuna, and Hydesville; Grizzly Creek Redwoods State Park along the Van Duzen River; Humboldt Redwoods State Park near Redcrest, Miranda and Redwood National, and State Park near the communities of Orick and Big Lagoon.

Human-adapted corvids (ravens, crows, and jays) are effective nest predators whose abundance has increased dramatically in western North America and urbanized areas worldwide in the last century (Luginbuhl et al., 2001). Increased nest predation by corvids and other human-adapted species has a significant effect on bird populations adjacent to urbanized areas (Wilcove 1985; Marzluff 2001; Odell et al., 2003; Hansen 2005). Corvid predation on eggs and nestlings is also a major cause of marbled murrelet nest failure (Nelson and Hamer 1995).

The placement of residences in TPZ in close proximity to old-growth forest stands would degrade habitat for the marbled murrelet and would likely result in higher rates of nest failure due to increased corvid predation (see Marzluff and Neatherlin 2006). Exurban development in TPZ near old-growth stands may result in jeopardy (local extinction) of the marbled murrelet. Given the marbled murrelet's State-endangered and federally-threatened status, DFG recommends the Update DEIR thoroughly evaluate how revisions to the TPZ regulations could result in exurban development near old-growth forest stands and how this development could affect the marbled murrelet's persistence in the County.

Other listed and sensitive forest-associated animals may also be affected by exurban development for similar reasons as described for the marbled murrelet. For example, the Pacific fisher (a federal candidate for listing as threatened) may be more susceptible to predation, disease, or vehicle collision in areas where human development or loss of forest canopy has occurred (Higley and Matthews 2006). Residential development of forests has many other potentially significant impacts to forest-associated species. The effects of exurban development on water quality and quantity mentioned earlier could have significant effects on coho salmon, steelhead trout, and other listed salmonids. These impacts should be assessed and disclosed in the Update DEIR.

Non-Regulatory Approaches to Maintaining TPZ

To supplement regulatory approaches to conserve timberlands, DFG recommends the County work collaboratively with willing landowners, local governments and other stakeholders to promote non-regulatory approaches to prevent conversion or fragmentation of TPZ. Utilizing conservation easements, for instance, and perhaps resources available from the Headwaters Fund and local land trusts, may be one effective means to promote TPZ conservation.

Another approach to conserving TPZ is the creation of municipal or county "community forests," which would serve the multiple purposes of providing wildlife habitat and watershed protection, conveniently accessible open space and recreational opportunities, aesthetic values, and sustainable timber production with its related economic benefits. The City of Arcata's Community Forest is a successful local example of how TPZ on the urban fringe can be conserved in this manner while providing numerous benefits to the community. DFG recommends the Update and TPZ revisions include policies to collaborate with municipalities, community services districts, and other stakeholders to promote community forests, especially in areas adjacent to rapidly urbanizing communities.

Oak Woodlands Conservation

As mentioned in DFG's July 17, 2007, Update comment letter, oak woodlands are a diverse, ecologically important and widely distributed habitat type in Humboldt County. According to the Biological Resources Report, oak woodlands comprise at least 20% of seven of the County's twelve planning watersheds. Oak woodlands provide habitat for numerous game and non-game species such as black-tailed deer, Roosevelt elk, black bear, squirrels, quail, turkey, band-tailed pigeons and a diversity of other migratory bird species. However, the distribution, acreage, and quality of the County's oak woodlands, like much for the rest of California, have declined considerably over the past 150-years.

The reasons for this decline include fire suppression and encroachment by conifers, wood cutting, and conversion to industrial timberlands, other agricultural uses and residential and commercial development. Statewide more than a third of all oak woodlands have been lost since the settlement of California by non-indigenous people; of an estimated 10-12 million original acres, seven million remain. Of the remaining oak woodlands, most have been modified or degraded, and only about four percent are formally protected.

Based upon recent trends in Sonoma and Mendocino counties, vineyard conversions of southern Humboldt County's oak woodlands and associated coastal prairies appears likely to accelerate during the Update time period. Sudden Oak Death, detected in 2002, in the Redway-Garberville area, is another potentially serious threat to County oak woodlands.

DFG recognizes that only a portion of the County's oak woodlands are on TPZ, however, revisions to County TPZ regulations can have a significant effect on this habitat type. In recognizing both the importance of oak woodlands and their continuing statewide loss, the California Legislature in 2002, passed the Oak Woodlands Conservation Act (Oak Act) Fish and Game Code §1360-1375. The legislative intent of this act is to support and encourage the voluntary, long-term, private stewardship and conservation of California's oak woodlands. The Oak Act encourages local land use planning that is consistent with the preservation of oak woodlands and provides incentives to protect and encourage farming and ranching that promotes healthy oak woodlands.

As part of the Oak Act, the Oak Woodlands Conservation Fund was established to provide grant funds for: 1) public education and outreach, 2) the purchase of oak woodland conservation easements, 3) land improvement, and 4) for cost-sharing incentive payments to private landowners who enter into long-term conservation agreements. To qualify for this grant funding, the County needs to meet the conditions set forth in Fish and Game Code §1366. DFG finds the County, in developing the Update and related environmental reports, may have already met, or will meet, some of these conditions. DFG encourages the County to satisfy the requirements of Fish and Game Code §1366 to allow participation in the Oak Woodlands Conservation Fund and to facilitate coordination with local organizations such as the Buckeye Conservancy, land trusts, and the Humboldt County Resource Conservation District to promote the conservation of this valuable and dwindling resource.

DFG finds the most effective means to manage and conserve State fish and wildlife resources is to utilize regional landscape-level or ecosystem-based approaches. The parcelization of large tracts of TPZ and ranch lands into smaller residential "ranchettes" will degrade the wildlife habitat values of these lands and diminish the ability of local government and state agencies to regulate and help sustainably manage TPZ.

The effects of exurban development on TPZ will also affect wildlife populations, biodiversity patterns, and habitat quality on adjacent State and federal lands, including parks, preserves, refuges and wildlife areas. For these reasons DFG supports the County's efforts to maintain long-term timberland protections by approving TPZ revisions and other Update polices and standards that minimize conversion, fragmentation, and exurban development on TPZ.

Recommendations

1) Require TPZ revisions best maintain TPZ's principal use for timber production, watershed protection, and fish and wildlife habitat.

2) Require TPZ revisions minimize fragmentation, parcelization, and habitat degradation.

3) Require TPZ revisions minimize conversion of TPZ to other uses such as urban and exurban development.

4) The Update DEIR must thoroughly evaluate how revisions to TPZ regulations and related Update provisions could impact State- and federally-listed species.

5) The Update DEIR must thoroughly evaluate how revisions to TPZ regulations, and related Update provisions, could influence exurban development in TPZ and how such development could affect forest ecosystem function, including effects on forest plant and animal communities.

6) The Update DEIR must thoroughly evaluate how revisions to TPZ regulations could result in exurban development near old-growth forest stands and how this development could affect the marbled murrelet's persistence in the County.

7) The Update DEIR must thoroughly evaluate how exurban development resulting from revisions to TPZ regulations could affect wildfire suppression, forest fuels management, and let-burn policies both on TPZ and on adjacent federal lands.

8) Require proof of adequate water supply and summer storage capacity in all watersheds if riparian and other water rights are to be utilized to divert water from streams for domestic and agricultural purposes.

9) Where residences or structures are approved on TPZ, require a means to ensure that forest roads and driveways are constructed and maintained to prevent sediment discharge to streams.

10) The Update and TPZ revisions should include policies to collaborate with local governments, willing landowners, and other stakeholders to promote forest conservation easements and community forests, especially in areas adjacent to rapidly urbanizing communities.

11) Satisfy the requirements of the Oak Woodlands Conservation Fund to allow for grant funding that encourages the voluntary, long-term, private stewardship and conservation of the County's oak woodlands.

If you have any questions or comments regarding this matter, please contact Staff Environmental Scientist Gordon Leppig at 619 Second Street, Eureka, California, 95501 or telephone (707) 441-2062.

Sincerely,

GARY B. STACEY
Regional Manager

cc: See Page Thirteen and Fourteen

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Public comment from Joyce King, 685 School Rd, McKinleyville, prepared but not delivered at 3/21/19 Planning Commission meeting

Today is International Day of Forests. Paraphrasing City of Arcata's article in the news : *Forests are the most biologically-diverse ecosystems on land, contributing food, medicines, materials, and most important - protecting our watersheds, soil, and climate* …and…it should have included – biodiversity.

It's debatable how much of the world's tree cover has been lost or gained, but it is clear that the earth's healthiest and most resilient forests are its old growth forests, the complex and biodiverse ecosystems which take many centuries to evolve . Today, it is estimated that only 20% remain…and in the US we have less than 10%

New studies show the percent of wild mammals left on the earth to be in startling decline – possibly as little as 4%*…and insects, among the hardiest of life forms , dying off at a rate of 45% in just the last 40 years**. Because they shelter over 80% of all biodiversity on land, loss of healthy forest habitats is a big contributor to this species cataclysm.

Humboldt County has plenty of trees. But what about the condition of our forests? Important indicators would be our salmon runs and the quality of our redwood lumber – not good.

But re-zoning for residences and agriculture in timberlands continues to chip away at the contiguous forest cover and native understory necessary for ecosystem health - bringing roads, forest clearings, pollution, disease, invasive species, wildlife harassment, etc***.

Are greater limits on principal permitting of residences in TE and TPZ no longer possible? Is it the same for livestock and farming in those zones? How about more comprehensive and effective mitigation language such as recently contributed to the Streamside Management Area text?

I'd like to request a task force of representatives from natural resource and wildlife agencies, Forestry Review Committee, experts from environmental organizations and consulting groups to advise on mitigation text for TE and TPZ, especially in light of recent substantial increases to cumulative impacts on our forests such as climate change and MJ farming.

*****https://www.theguardian.com/environment/2018/may/21/human-race-just-001-of-all-life-but-has-destroyed-over-80-of-wild-mammals-study

****Long but stunning article: https://www.nytimes.com/2018/11/27/magazine/insect-apocalypse.html?emc=edit_th_181202&nl=todaysheadlines&nlid=613683191202**

*****Effects of Exurban Development in timberlands in attached comment to GPU from (then) California Department of Fish & Game**