

Oroville Comprehensive Plan

DRAFT
December 27, 2007

AMENDMENTS

FOR THE
DESIGNATION, CLASSIFICATION AND
PROTECTION
OF
CRITICAL AREAS

GROWTH MANAGEMENT ACT: AN INTRODUCTION

NATURAL RESOURCE LANDS AND CRITICAL AREAS

In 1990, the Washington State Legislature passed the Growth Management Act (GMA) in response to rapid growth that was occurring in certain areas of the state. Counties that are either required to plan under the Act or have opted to plan under the Act have a wide array of planning issues to address. Jurisdictions in counties that aren't required to plan under the act or have not chosen to plan are still required to address certain issues. Classifying and designating "natural resource lands of long-term commercial significance" as well as "critical areas" is a required task for all cities and counties in the state. In regard to critical areas, an amendment to the Growth Management Act passed by the legislature in 1991 requires all cities and counties of the state to protect critical areas through regulation. Therefore, in response to this mandate the City of Oroville included its classification schemes and designations in the 1995⁵⁴ Comprehensive Plan with recommendations regarding the management of each area of concern. ~~Furthermore, the goals and policies for critical areas are intended to be implemented through existing regulatory land use ordinances.~~ **At Comprehensive Plan adoption in 1995, the policy of the City was to utilize existing land use regulations to regulate critical areas, wherever possible. Upon adoption of the new Plan provisions, the City's Shoreline Master Program, Subdivision Ordinance, Floodplain Ordinance and Building Code were reviewed and compared with other land use regulations implemented by Washington State, and the Federal government. It was determined that those areas designated as Critical Areas were amply protected by existing regulations. In fact, existing regulations were considered by the City as excessive and burdensome.**

In 2001, the legislature adopted new requirements for the consideration of "Best Available Science" in the classifying, designating, and regulating of Critical Areas. Again, some of the cities and towns of Okanogan County joined together to craft locally and regionally relevant policy for meeting GMA requirements. In an attempt to maintain consistency among the different municipalities and Okanogan County, information that was collected in these joint planning activities is used in this Plan to address the management of Critical Areas.

While it is still the desire of the City to resist adopting additional regulations, it is also realized that many of the regulations adopted by Federal and State governments were heavy in administration, but ineffective in practice. Additionally, without regulations that specifically address Critical Areas (i.e. Critical Areas Ordinances), it was more difficult for the State to monitor compliance; therefore, the City was occasionally called to task on compliance, and as a result, was nearly sanctioned from certain grant funding. Therefore, the direction in the 2003 update is to adopt a Critical Areas Ordinance that compliments existing regulations.

The goals, policies, classifications and designations contained in this Plan are intended to support the use of "Best Available Science" in regulating critical areas. Maps of critical areas within the City accompany the classifications and designations of this Plan. While they show known Critical areas, the classification and designation of new sites is also implicit in the goals and policies herein.

Natural Resource Lands include agricultural lands, forest lands, and mineral resource lands. Critical areas include wetlands, aquifer recharge areas, frequently flooded areas, geologically hazardous areas, erosion hazard areas, landslide hazard areas, seismic hazard

areas, volcanic hazard areas, fish and wildlife habitat areas, endangered and threatened species, naturally occurring ponds, waters of the state, lakes and rivers with game fish, state natural area preserves and other areas not applicable to Eastern Washington.

Certain resource lands and critical areas within the urban growth area may warrant special attention and are usually identified as "conservancy" in the land use plan designations as discussed earlier and should be protected as appropriate.

~~As this Comprehensive Plan was being drafted, the City of Oroville and other Okanogan County communities were participating in a coordinated planning effort to comply with the Growth Management Act. The information collected in this joint planning activity has been combined with data collected by the city in its attempt to comply with the GMA.~~

AGRICULTURAL LAND OF LONG-TERM COMMERCIAL SIGNIFICANCE

CLASSIFICATION

Agricultural lands within the existing city limits (1994) are not classified as Agricultural Lands of Long-Term Commercial Significance **since these areas have been dedicated to urban use by virtue of their inclusion within the incorporated boundaries.** ~~as these areas have been platted for future uses.~~ Six criteria are used to classify the long term value of agricultural lands OUTSIDE of the city limits of Oroville. Unplatted orchards that have been annexed can maintain Long-Term Commercial Significance at the discretion of the owner. These

The classification criteria are as follows:

1. Land is currently in agricultural use.
2. Land has one or more of the following improvements in place:
 - a. Irrigation facilities (public or private)
 - b. Drainage facilities (public or private)
 - c. Fencing, stock watering or other physical improvements that enhance the lands suitability for commercial agricultural production
3. Land is enrolled in Agricultural Open Space taxation program.
4. Land is surrounded by lands primarily in agricultural use with few non-farm commercial, industrial or residential uses and is not located in areas with clear potential for more intense uses of land.
5. Land is not located within areas identified for urban or suburban growth (or similar designation) in official city, town, or county comprehensive plans.
6. Land is not located within an area served by domestic sewer or domestic water service districts.

The classification criteria are applied in such a way that three levels of agricultural land of long-term commercial significance result. These levels, or classes as they are referred to from this point forward, are described below:

Class I - Parcels of agricultural land meeting all six of the classification criteria.

Class II - Lands meeting five of the six classification criteria.

Class III - Lands meeting four of the six classification criteria.

DESIGNATION (LAND OUTSIDE OF THE CITY LIMITS - 1994)

Designation of agricultural lands of long-term commercial significance is accomplished, on a case-by-case basis, in response to land use proposals that would have a likely impact on agricultural lands. As designations are completed, the land may be mapped for reference purposes. However, the designations are not static; forces that influence the criteria will change the classification of these lands on an ongoing basis.

The following are goals and policies regarding the future actions of city officials when considering annexation proposals on or near significant agricultural lands:

GOAL

Ø Respect and support existing agricultural operations, both within and surrounding the city and its projected urban growth area, while protecting the health, safety and welfare of those persons living, working or recreating within areas targeted for urban growth.

1 POLICIES

2

3 Ø Zoning within the city should always treat agricultural as a non-conforming use
4 that can continue but not expand or be substantially changed.

5

6 Ø The City of Oroville should encourage the establishment of sufficient buffers for
7 proposed non-agricultural activities that are adjacent to existing agricultural uses
8 so as to protect the health and safety and welfare of human use.

9

10 ^z ○ Existing or proposed urban uses within the incorporated boundaries of the city
11 should be given acknowledgement and priority consideration over agricultural
12 uses.

13
14 ^z ○ Appropriate and effective buffers should be encouraged between agricultural and
15 urban uses to protect the health, safety and welfare of citizens choosing to live,
16 work and play within the city.

17
18 ^z ○ Agricultural lands that are located immediately adjacent to the incorporated
19 boundaries of the city meeting class II criteria should be acknowledged and
20 respected as priority uses when urban uses are proposed next to such lands. In
21 these cases, the proposed urban use should bear the majority of the burden for
22 protecting the urban use from the effects of agricultural practices.

23
24 ^z ○ The city should encourage the use of "best management practices" (defined by the
25 particular agricultural industry) on all agricultural lands as a means to reduce
26 potential conflicts with adjoining landowners, particularly in those areas where
27 agricultural and non-agricultural uses are presently co-existing.

28
29 ^z ○ The city should support the development of a an agricultural products industry
30 that develops products that are normally shipped out of the county in a raw form
31 into more refined products to create jobs in the region. (e.g. lumber versus logs)

32
33 ^z ○ The city should recognize and support the multiple uses and beneficial role
34 agricultural resource lands play in the provision of open spaces, enhancement of
35 wildlife habitat and the rural qualities prized by the community.

36
37 ^z ○ The city should provide opportunities for affected citizens to be involved in the
38 preparation of plans and regulatory programs intended to protect natural
39 resources, including agriculture.

40
41 ^z ○ The City of Oroville should encourage and strictly enforce the control of noxious
42 weeds throughout its jurisdiction.

43

44 FOREST RESOURCE LAND OF LONG-TERM COMMERCIAL
45 SIGNIFICANCE

46

47 CLASSIFICATION

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49 For the initial purposes of classification of Forest Lands for timber production and
50 harvest, the City of Oroville intends to designate Land grades 1 through 5 pursuant to
51 WAC 458-40-535, as forest lands of long-term commercial significance.

52

53 DESIGNATION

54

55 The Washington State Department of Natural Resources Private Forest Land Grading
56 Productivity maps are used to designate Forest Resource Lands in Okanogan County. No
57 forest resource lands of long-term commercial significance have been identified within
58 the City of Oroville nor the associated urban growth area.

59

60 MINERAL RESOURCE LANDS OF LONG-TERM SIGNIFICANCE

61

62 CLASSIFICATION

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64 A four-tiered classification scheme presented in a report by Alan Robert Grant to the U.S.
65 Forest Service dated May 3, 1982 is the basis for the five-tiered system developed by the
66 Okanogan County GMA Mineral Resource Lands subcommittee to classify these
67 resource land within the county. The Okanogan County classification system is based on
68 the "likelihood of activity" includes the following categories:

69

70 **Area I** Very Good Potential for development of minerals of long term commercial
71 significance. These areas will see continued exploration, active and includes
72 areas which have historic mineral resources, which include some identified
73 and demonstrated reserves, with a very good potential for undiscovered
74 reserves.

75

76 **Area II** Good Potential and includes areas geologically favorable with some identified
77 reserves and good potential for undiscovered reserves.

78

79 **Area III** Moderate potential and includes areas geologically favorable with some
80 identified reserves and moderate potential for undiscovered reserves. Also
81 included are areas where rock units of poor potential obscure underlying areas
82 of good and very good potential.

83

84 **Area IV** Fair Potential and includes areas geologically unfavorable overall, but
85 includes certain areas that require additional geologic investigation. Also
86 included are areas where rock units of poor potential obscure underlying areas
87 of moderate, good and very good potential.

88

89 **Area V** Poor Potential and includes areas that are geologically unfavorable with poor
90 potential for undiscovered reserves.

91

92 DESIGNATION

93

94 In Okanogan County, mineral resource lands are mapped based on information from the
95 following sources: U.S. Forest Service, US Bureau of Mines, Landsat, Colville
96 Confederated Tribes Geology Department, Washington State Department of Natural
97 Resources, personal knowledge of the members of the Okanogan County GMA Mineral
98 Resources Subcommittee and others.

99

100 Mineral resource lands of long-term significance in Okanogan County, including the City
101 of Oroville and its urban growth area have been designated according to the above
102 classification criteria. The Mineral Resource Lands Designation Map for the Oroville
103 Area, 1994 is located in figure III-7 on the following page. A master of this map should
104 be kept at Oroville City Hall and updated as updated by Okanogan County.

105

106 GOAL

107

108 | Encourage mineral development in areas where it can be accommodated with
109 historic, present, and projected land use patterns for the area, while recognizing
110 that mineral development can only occur where economically viable deposits
111 exist.

112

113 POLICIES

114

115 | In the event that substantial mining development occurs, the city should consider
116 incorporating these goals and policy statements into regulations specific to mining
117 exploration, development and reclamation.

118

119 | As some mineral lands provide strategic minerals which are inseparably linked to
120 national security, economic security and other vital uses, the city supports

121 prospecting, as well as development of economically viable mineral resource
122 lands.

123
124 | The city should coordinate with relevant county, state, federal and tribal entities in
125 at least the three following areas:

- 126
127 a) Access to mineralized lands.
128
129 b) Opportunities for development of mineralized lands.
130
131 c) Reclamation of the land according to an approved site reclamation plan.

132
133 | Lands being considered for annexation that have known mineral development
134 sites should be include zoning designations that would allow the use or potential
135 use to take place while providing protection for urban uses (including gravel or
136 soil extraction).

137 | Since existing mining claims exist on lands within the city, it should be
138 recognized that, if economically feasible, mineral extraction may take place
139 within the city in the future.

140 Figure III-7 - Mineral Resource Lands Map

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CRITICAL AREAS

~~Critical areas should be regulated through existing regulatory programs. When mapping is feasible, overlays should be prepared that allow special requirements for particular areas within a zoning district.~~

CRITICAL AREAS

GOALS

The following are general goals the City intends to achieve in protecting Critical Areas.

- I. Achieve and maintain compliance with the Washington State Growth Management Act, as currently exists and as may be amended in the future.
- II. Avoid costly litigation that may occur as a result of non-compliance with state and federal laws.
- III. Plan for a healthy and safe community through the wise management of critical resources.
- IV. Increase and maintain awareness on the part of all participants in the community, of the roles and functions of various natural systems in sustaining the regional economy.

In pursuit of the above goals, general policies are listed below; however, additional more specific policies are included in this Plan under each category of critical area that serves as the guide for the development and implementation of regulations intended to protect critical areas.

175 **AQUIFER RECHARGE AREAS**

176

177 Defined -

178

179 Aquifer Recharge Areas - Areas which, due to the presence of certain soils, geology, and surface
180 water, act to recharge ground water by percolation.

181

182 ~~Critical Aquifer Recharge Areas - Areas with a critical recharging effect on aquifers used for~~
183 ~~potable water.~~ **Areas where there is an aquifer that is a source of drinking water**
184 **that is vulnerable to contamination that would affect the potability of the water.**

185

186 Aquifer Recharge Areas serve the vital function of replenishing groundwater resources which
187 provide potable water, an essential life sustaining element. Aquifers not only provide water for
188 domestic use but influence water availability for fish, wildlife, recreation and agriculture in
189 wetlands, lakes, rivers and streams. Groundwater contributes to these water bodies while they
190 return the favor when groundwater supplies become depressed. This, in turn, lowers surface
191 water levels, thus, risking the viability of those dependent on these water sources.

192

193 Water quantity, of course, is not the only concern. Once ground water is contaminated it is
194 difficult, costly, and sometimes impossible to clean up. Preventing contamination is necessary to
195 avoid potential physical harm to people, hardships, and exorbitant rehabilitation and clean-up
196 costs. Preserving aquifer recharge areas is also critical in the replenishing of the city's ground
197 water supply.

198

199 In urban areas, another benefit of maintaining aquifer recharging capability is related to
200 stormwater management. Soil and vegetation tend to reduce runoff by slowing the velocity of
201 water; thereby, reducing erosion and potential flooding. As water velocity is slowed by
202 vegetation and soil it is more easily absorbed by permeable soil, providing a filtering function for
203 various contaminants, e.g., heavy metals. This process serves to protect water quality of surface
204 waters. As the physical development of the city increases, the need to treat storm water before it
205 is discharged to surface water bodies also increases, a costly endeavor. Consequently, reducing
206 stormwater runoff by collecting it on-site, using any natural means available, is most desirable.

207

208 **CLASSIFICATION**

209

210 To date (**2004**), no specific aquifer recharge studies have been performed in the Oroville area.
211 **Data relative to subsurface geology has been collected over the years related to various**

212 undertakings in the Oroville area, mostly due to problems encountered with groundwater
213 wells, or the potential for problems.

214
215 **The Osoyoos Lake Wastewater Facilities Plan prepared by R.W. Beck in 1978 summarizes**
216 **that “...glacial drift soils are found in the uplands of the study area, especially those areas**
217 **adjacent to the Lake, consisting of coarse gravelly, out-wash soils with recent alluvial**
218 **deposits on the surface. The glacial-lake soils consist of clay layers interspersed with fine**
219 **sand.” Additionally, in their Osoyoos Lake Wastewater Facilities Pre-design Report (draft**
220 **on hand) it is stated that, “Definitive subsurface geological data is not available from any**
221 **source for the Lake Osoyoos area, and little is know about the composition, distribution or**
222 **continuity of formations.**

223
224 **The City of Oroville Comprehensive Water Plan first prepared in 1994 purports that the**
225 **“Oroville Aquifer...underlies approximately 600 acres within the City and adjacent areas.**
226 **The aquifer is recharged on an annual basis by the Similkameen River. The amount of**
227 **recharge is thought to be in large part dependent on the number of days during the freshet**
228 **that the Similkameen River flow is above 4,000 cfs. It is thought that there is very little**
229 **recharge of this aquifer from the Okanogan River because of the relatively impermeable**
230 **clay and silt bottom of these bodies in the Oroville Area.” However, no scientific evidence**
231 **is offered in the Plan to support this claim. (p. 31. City of Oroville Comprehensive Water**
232 **Plan)**

233
234 **The Water Plan statement was likely based on information compiled ten years earlier. In**
235 **1985, two specific studies were done that were significant in identifying characteristics of**
236 **aquifers in the area; one performed by Groundwater Geologist Gordon Haskett for the**
237 **Bureau of Reclamation, and another analysis done by Robert F. Barwin, Hydraulic**
238 **Engineer with the Dept. of Ecology. These studies were done in response to Oroville-area**
239 **well problems related to a Bureau of Reclamation (BoR) project where large volumes of**
240 **water were unintentionally pumped from the Oroville Aquifer. The studies required an**
241 **understanding of local geology to lead to any tangible conclusions; therefore, data collected**
242 **over the years was compiled and analyzed. The recharge of the aquifers described herein**
243 **is based on the conclusions of both of these studies, and are generally consistent in this**
244 **regard. However, the two studies reached different conclusions in regard to the Bureau of**
245 **Reclamation’s impact on local wells. Noteworthy is the fact that Barwin’s final conclusion**
246 **was substantially supported by the recovery of a number of Oroville Aquifer Wells when**
247 **the BoR pumping ceased. Haskett concluded his study earlier, so it did not include this**
248 **critical observation that may have caused a reassessment of his interpretation of data.**

249
250 **In terms of Critical Aquifer Recharge Areas (CARAs), the important discovery is that the**
251 **Similkameen Aquifer is a CARA, according to the definition provided. The conclusions of**
252 **the two 1985 studies reveal that the primary source of recharge for the Oroville Aquifer is**
253 **the Similkameen River with little influence from Lake Osoyoos, or the Okanogan River,**
254 **due to a layer of relatively impermeable sediment. It is quite possible that some of the**
255 **small tributaries that also create deltas onto the Okanogan Valley floor (like the**
256 **Similkameen) may provide recharge under an impermeable layer, as well. However, given**
257 **that the average annual rainfall in the Oroville area is approximately 13 inches it is not**
258 **likely that a significant amount of recharge exists through percolation. It is also important**
259 **to consider that the Oroville Aquifer is not very deep and may be susceptible to**
260 **groundwater contamination where overlying soils are very permeable. Responsible**
261 **measures should be taken to prevent the contamination of the ground and groundwater, but**
262 **outside of this, no extraordinary measures are necessary to assure the replenishment of the**
263 **aquifer unless high permeability is confirmed by site-specific studies, as is commonly done**
264 **when siting septic fields.**

265
266 **In summary, Oroville will continue to manage land use in such a way that all groundwater**
267 **is guarded from contamination as set forth in the policies herein.**

268
269 ~~However, it is assumed that the following areas have the potential to be aquifer recharge areas:~~
270 ~~rivers and creeks especially at their headwaters, wetlands, lakes and ponds, alluvial fans, areas~~
271 ~~within the 100 year flood plain. These areas are usually lower in elevation than their~~
272 ~~surrounding landscape. Therefore, coupled with certain porous soil types as identified by the~~
273 ~~Soil Conservation Service, 1980 Soil Survey of Okanogan County, Washington, these areas are~~
274 ~~considered to have high potential for aquifer recharge should be afforded a higher degree of~~
275 ~~protection than other areas. The following is a three level classification scheme that should be~~
276 ~~used to determine the level of protection necessary for land areas:~~

277
278 ~~Critical Potential — Rivers, creeks, wetlands, lakes and ponds; and, lands that have been~~
279 ~~specifically identified as critical recharge areas based on reliable scientific data.~~

280
281 ~~High Potential — Lands adjacent to rivers, creeks, wetlands, lakes and ponds that include soils that~~
282 ~~show permeability ratings in the county soil survey of more than 20 inches per hour within 60~~
283 ~~inches of the soil surface.~~

284

285 ~~Moderate Potential~~—Lands with soils that show permeability ratings in the county soil survey of
286 ~~more than 20 inches per hour within 60 inches of the soil surface.~~

287

288 DESIGNATION/MAPPING

289


290 **While it is generally known that the Similkameen Aquifer exists beneath the existing City,**
291 **there is not a map indicating its boundary. ~~No critical aquifer recharge areas are known to~~**
292 **~~have been mapped within the city or surrounding area.~~** In addition, the Okanogan County Soil
293 Survey does not include lands within the incorporated area. Given these limitations, the city
294 should offer a means of broad-based protection within the city that ensures at least some aquifer
295 recharge capability. Zoning, floodplain, subdivision and shoreline regulations all provide some
296 opportunity to include provisions that could protect a percentage of permeable lands.

297


298 POLICIES

299  **Learn more about the aquifer recharge of the Oroville area.**


300

301  **The City will pursue partnerships that manage the Similkameen River in such a**
302 **way that recharge of the Similkameen Aquifer (aka, Oroville Aquifer) is protected**
303 **and/or enhanced.**


304

305  **Any use and/or development proposals to the City will be reviewed for best**
306 **management practices for aquifer protection and should consider the Eastern**
307 **Washington Stormwater Manual as one source for such practices.**


308

309  **The City will venture to eliminate and/or assume ownership of private wells within**
310 **its urban growth area in order to better manage aquifer protection and utilization.**


311

312  **Maintain a high standard of quality for both groundwater and surface water resources.**

313


314  **Increase and maintain awareness, on the part of all participants in the community, of the**
315 **roles and functions of various natural systems in maintaining water quality and quantity.**


316


317  **Indiscriminate release of hazardous wastes or materials, regardless of their risk potential,**
318 **will be discouraged through both, examples set by the city and any educational**
319 **means available as set forth in the City's most recent Wellhead Protection Program**
320 **but to include all areas of the Urban Growth Area.**


321

322  The city should ~~immediately begin~~ **continue** planning for the extension of sewer to areas
323 ~~in the community~~ **within the Urban Growth Area** that lack these urban services

324
325  **The City will engage, whenever possible, with all levels of government to develop**
326 **strategies and policies for** Lake Osoyoos where residential densities are gradually
327 increasing, thereby increasing the risks to water quality and the need for a waste water
328 treatment system.

329
330  When the city is requested to comment on any land use applications or rezones outside
331 the city boundaries, the classification criteria ~~should~~ **will** be applied in developing
332 comments for the particular development proposal provided that sufficient data is
333 available to apply the criteria.

334
335  ~~The classification criteria should will be applied when annexations are considered and~~
336 ~~any areas identified in any of the above classes of recharge potential should be~~
337 ~~appropriately zoned and protected. The classification criteria should only be used if~~
338 ~~reliable data is available to apply the criteria.~~

339
340  ~~Lands that are classified, based on reliable data, as having high or moderate potential~~
341 ~~recharge should will be identified in zoning overlay maps and a lower allowable~~ **Zoning**
342 **provisions should limit** impervious surface coverage where adequate stormwater
343 collection is lacking ~~should be applied,~~ **and appropriate means of infiltration may be**
344 **required.**

345
346
347 **FREQUENTLY FLOODED AREAS**
348

349 Defined - Areas that experience a general and temporary condition of partial or complete
350 inundation of normally dry areas from the overflow of inland waters and/or the
351 unusual and rapid accumulation of runoff of surface waters from any source.
352 Such areas include the 100-year flood plain as defined and mapped by the Federal
353 Emergency Management Administration (FEMA). A general representation of
354 the FEMA map is presented ~~on~~ in Figure **III-10** located on page **III- 48**. This map
355 is not to be considered a substitute for FEMA maps and should not be used for
356 regulatory determinations. Further explanation of flood damage regulation is
357 located on page 48 under Flood Damage Prevention Ordinance.

358

359 CLASSIFICATION

360

361 Class I. The floodway of any river or stream as designated by FEMA; and, draws,
362 alluvials and floodchannels that are not mapped by FEMA but are areas of local
363 concern that have a historical reoccurrence of flood events characterized by
364 significant damage caused more by water velocity than by general inundation.

365

366 Class II. All areas mapped by FEMA as 100-year flood plain; and, those areas of local
367 concern that experience reoccurrences of flooding that are characterized by
368 damage due primarily to inundation.

369

370 DESIGNATION

371

372 FEMA maps designate floodways and 100-year floodplain while specific problems areas
373 should be designated by the city based on local experience and historical data. Mapping
374 for the areas of local concern should supplement FEMA maps for flood damage
375 protection.

376

377 GOALS

378

379 POLICIES

380

381 ☒ Manage land use in such a way that flood damage potential is minimized.

382

383 ☒ Pursue funding to conduct a flood study ~~ies for those areas if areas are identified~~
384 **that are not sufficiently addressed by FEMA mapping.** ~~prepare a flood~~
385 ~~management plan and update the FEMA map (November 16, 1982).~~

386

387 ☒ The flood damage protection ordinance ~~should~~ **will** be amended to include any
388 areas of local concern as they may be discovered and designated by the city.

389

390 ☒ **As development occurs to the north along the Okanogan River, Lake**
391 **Osoyoos, Tonasket Creek, and Nine-mile creek, shoreline restoration**
392 **projects should be implemented as a component of development.**

393

394 ☒ **Setbacks for development that acknowledge channel migration should be set**
395 **with ample flexibility to reflect site specific issues.**

396

397 ~~§~~ Since subdivision in the floodplain creates new lots that create additional flood
398 damage risks and are thereby subject to construction limitations, new subdivision
399 should not be allowed that creates lots that are wholly within the floodplain.

400

401 GEOLOGICALLY HAZARDOUS AREAS

402

403 Erosion Hazard Areas

404

405 Defined - Areas that contain soil types which, according to Soil Conservation Service's
406 Soil Classification System, may experience a severe to very severe erosion process.

407

408 CLASSIFICATION/RATING SYSTEM

409

410 Erosion hazard areas are those areas that contain ALL THREE of the following
411 characteristics:

412

413 1) A slope of 30% or greater,

414

415 2) Soils identified by the **Natural Resource Conservation Service (NRCS) Soil**
416 ~~Conservation Service (SCS)~~ as unstable and having a high potential for erosion,
417 and

418

419 3) Areas that are exposed to the erosion effects of wind or water.

420

421 DESIGNATION/MAPPING

422

423 SCS soil erosion-hazard ratings are interpretations of the potential for erosion, applied to
424 broadly generalized map units. They do not pinpoint erosion sites, but rather areas which
425 because of soil properties, availability of water, etc., are more susceptible to severe
426 erosion than others. Where the area has been mapped, the County Soil Survey can be
427 used to identify areas of erosion potential. The soil information needs to be combined
428 with site-specific information (rills, inter-rills, and wind erosion) to determine if erosion
429 hazard is present on the site. The SCS has identified the soil types that have Erosion
430 Hazard potential ~~in the County where most of the future development.~~

431

432 GOAL

433

434 POLICIES

435

436 6 **Take appropriate measures to ~~A~~ avoid** the loss of life, property **and habitat**
437 due to development in areas determined to be geologically hazardous.

438

439 6 ~~The city should~~ **Evaluate** all development proposed to be located on or next to
440 designated geologically hazardous areas or areas that are suspect of being
441 geologically hazardous. Evaluation **may require scientific information to be**
442 **provided by the proponent that** will determine the level of avoidance and/or
443 design constraints.

444

445 6 ~~The city should require mitigation of hazard areas created by humans, prior to site~~
446 ~~development.~~ **Mitigation will be an option for site development in areas**
447 **considered to be highly susceptible to erosion.**

448

449 6 Areas identified as Erosion and/or Landslide Hazard Areas shall not be developed
450 unless it is demonstrated that the project is structurally safe from the potential
451 hazard, and that the development will not increase the hazard risk.

452

453 6 Reasonable setbacks or design considerations for development on or next to an
454 Erosion Hazard Area should be established on a case-by-case basis.

455

456 6 Existing uses legally established in Erosion Hazard Areas ~~shall~~ **SHOULD** be
457 allowed to continue while expansion of such uses should meet structural standards
458 that ensure the safety of the project.

459

460 6 A run-off management plan or an erosion control plan should be required by
461 anyone proposing to develop in an Erosion Hazard Area.


462

463 6 Disturbance of an Erosion Hazard Area should be followed up with reseeded,
464 preferably using native vegetation, to assist in stabilization of the area and to
465 discourage the infiltration of noxious weeds that affect native plant growth.

466

467 **LANDSLIDE HAZARD AREAS**

468

469  Landslide hazard areas have not been identified within the City **or within the**
470 **boundary of the Urban Growth Area.** As annexations occur the City should
471 incorporate mapping and designations made by Okanogan County into the
472 Comprehensive Plan and regulations. A reasonable setback for development near
473 Landslide Hazard Areas should be established on a case-by-case basis, based on

474 the type of development proposed and the type and extent of landslide hazard
475 present.
476

477 FISH AND WILDLIFE CONSERVATION AREAS

478

479 Generally, the concept of fish and wildlife habitat is not thought of as a component to
480 urban development, especially in small towns and cities located in rural areas. Fish and
481 wildlife habitat is currently abundant in Okanogan County so why should the residents of
482 such a small portion of the county be concerned? Cumulatively and incrementally,
483 development of land for human purposes impacts various elements of a wide diversity of
484 fish and wildlife habitat. Over the long term, many areas that may have played a
485 significant role in the life-cycle of fish and wildlife may be irretrievably lost.

486

487 In order to reduce the cumulative impacts of future development on fish and wildlife,
488 growth areas (including cities and towns) can be planned and developed in such a way
489 that critical habitat components may be retained. While general habitat remains in
490 agricultural and a variety of public lands, critical habitat areas that happen to fall within
491 the path of growth need special consideration.

492

493 Besides the obvious fish habitat inherent to the rivers, probably the most common habitat
494 type found within the city is riparian (water related) habitat located along the rivers'
495 shorelines and the streams that feed them. Wetlands that are isolated from rivers and
496 streams are commonly significant habitat for a number of fish and wildlife species.

497

498 The Washington State Department of **Wildlife (DOW)** has extensive mapping of
499 sensitive habitat around Okanogan County **included as a part of their Priority Habitat**
500 **Species Program**. ~~These maps are used to generally designate fish and wildlife~~
501 ~~conservation areas.~~ **Review of these maps and related information reveals that the**
502 **extent of priority habitat within the Oroville Urban Growth Area consists of the**
503 **Okanogan River, Similkameen River, Tonasket and Nine Mile Creeks, an unnamed**
504 **intermittent stream located immediately south of the Canadian border and**
505 **discharging to Lake Osoyoos and their riparian areas. These areas not only support**
506 **the life cycle of salmonids but the fact that riparian areas in our dry climate also**
507 **support myriad other species is well-documented.**

508

509 **A riparian habitat area (RHA) is defined as the area adjacent to aquatic systems**
510 **with flowing water (e.g., rivers, perennial or intermittent streams, seeps, springs)**
511 **that contains elements of both aquatic and terrestrial ecosystems which mutually**
512 **influence each other.**

513

514 **The Washington Department of Fish and Wildlife (WDFW) has developed statewide**
515 **riparian management recommendations based on the best available science. Nearly**
516 **1,500 pieces of literature on the importance of riparian areas to fish and wildlife**
517 **were evaluated, and land use recommendations designed to accommodate riparian-**
518 **associated fish and wildlife were developed. These recommendations consolidate**

519 **existing scientific literature and provide information on the relationship of riparian**
520 **habitat to fish and wildlife and to adjacent aquatic and upland ecosystems. These**
521 **recommendations have been subject to numerous review processes.** ¹

522

523 **Protection of riparian habitat, compared to other habitat types, may yield the**
524 **greatest gains for fish and wildlife while involving the least amount of area.**

525 **Riparian habitat:**

- 526 **1) covers a relatively small area yet it supports a higher diversity and**
527 **abundance of fish and wildlife than any other habitat;**
- 528 **2) provides important fish and wildlife breeding habitat, seasonal ranges, and**
529 **movement corridors;**
- 530 **3) is highly vulnerable to alteration;**
- 531 **4) has important social values, including water purification, flood control,**
532 **recreation, and aesthetics.**

533

534

535 CLASSIFICATION

536

537 **The City of Oroville is generally considered an area where urban development is expected**
538 **and planned to occur. A significant portion of the urban growth area outside of the**
539 **incorporated area is in shrub-step uplands areas that have been converted over many**
540 **decades to agricultural uses. While these natural areas include habitat for animal and bird**
541 **species, there are vast contiguous properties in the rural areas of Okanogan County outside**
542 **of the Urban Growth Area. Therefore, it is not intended that the City limit development in**
543 **this upland portion of its urban growth area since there are not specific areas designated as**
544 **priority habitat. However, most of the current incorporated area is adjacent to, or a part of,**
545 **the Similkameen and Okanogan riparian areas, and a large portion of the Urban Growth**
546 **Area outside the incorporated area that is lakefront is experiencing significant pressure for**
547 **redevelopment into residential and resort use. Additionally, Tonasket and Ninemile**
548 **creeks are in the Eastlake portion of the Urban Growth area and support a least at portion**
549 **of the life-cycle of steelhead, a threatened species under the Federal Endangered Species**
550 **Act (ESA). In fact, the all of Lake Osoyoos, the Okanogan River, Smilkameen and the**
551 **above mentioned tributaries are designated as Critical Habitat under ESA. Upon**
552 **consideration of **PRIORITY HABITAT SPECIES (PHS)** and other data, these areas are**
553 **considered by the City to be important fish and wildlife habitat areas to be protected**
554 **and/or restored to contribute to their function as such.**

555

556 **The classification strategy for the Oroville and its Urban Growth Area is established with**
557 **respect to those areas characterized by existing urban uses, and those areas that offer the**
558 **greatest opportunity for protection and restoration. The rationale for this structure is that**
559 **there have been high density and intensity urban uses established within the Immediate**

560 **Planning Area** area for a number of decades, and to attempt to eliminate these or “de-
561 **densify”** these areas would not only present property takings issues but would only serve to
562 push development to areas where there is less infrastructure to support growth.

563 **More specifically, the classification system is as follows:**

564

565 **Urban Riparian Habitat includes:**

566 Those riparian areas characterized by historic urban growth, more specifically, that
567 area of the City located between the Okanogan and Similkameen Rivers that have been
568 within the Oroville Incorporated Boundary prior to June 30, 2000.

569

570 **Suburban Riparian Habitat includes:**

571 Those riparian areas within the Urban Growth Area along the shorelines of the
572 Okanogan and Similkameen Rivers, Tonasket and Nine Mile Creeks that have been
573 incorporated on and since June 30, 2000.

574 CLASSIFICATION

575 *Fish and Wildlife Habitat Conservation Areas:*

Level I Species	Level II Species	Level III Species
THREATENED OR ENDANGERED SPECIES	SPECIES AND HABITAT OF LOCAL CONCERN	OTHER IMPORTANT SPECIES AND HABITAT
White Pelican	Anadromous/Resident Fish	Chukar
Bald Eagle	Western Bluebird	Blue Grouse (nest/winter range)
Spotted Owl	Common Loon	Long-Billed Curlew
Western Gray Squirrel	Sharp-Tailed Grouse (wintering and lek)	Priority Mule Deer Winter Range
	Golden Eagle (nest)	White Tail Deer
	Harlequin Duck	
	Mountain Goat	
	Big Horn Sheep	
	Great Blue Heron (Nest sites)	
	Mule Deer:	
	*Critical Winter Range	
	*Migration Corridors	
	*Spring Range	
	Habitat Types:	Habitat Types:
	*Caves	*Talus Slopes
	*Riparian (Type 1, 2, &	*Riparian (Type 4 Waters,

	3 Waters)	subject to setback regulation
	*Cliffs	only)
	*Shrub Steppe	

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DESIGNATION/MAPPING

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~~Level I Habitat: The habitat of Threatened and Endangered Species as identified on the Federal Register and/or the Washington State Listing as designated on the non-regulatory map presented on the following page in Figure 8. Currently, level one habitat occurring within the Oroville urban growth area is limited to of the shoreline of Lake Osoyoos and the Okanogan and Similkameen Rivers. These areas are considered priority habitat for the Bald Eagle which is currently listed as a federal endangered species.~~

~~Level II Habitat: Habitat of fish and wildlife of local concern, as designated on the non-regulatory map in Figure 8, which is essential to sustaining fish and wildlife populations. Habitat may include rare and/or unique features. Level II habitat includes that of local and resident fisheries, again located in the Lake Osoyoos and the Okanogan and Similkameen Rivers.~~

~~Level III Habitat: Habitat as designated on the non-regulatory map in Figure 8 as important to fish and wildlife. Currently, none of these habitat types have been identified as existing in the urban growth area.~~

GOALS

POLICIES

- Increase an awareness of the valuable role that fish and wildlife play in the local tourist economy.
- Increase an awareness of the important role that local fish and wildlife habitat plays beyond the regional perspective.
- ~~Include~~ **Incorporate** fish and wildlife habitat as ~~an~~ attractive amenities of the ~~City of Oroville~~ **area**.

617 • Ensure that all city staff is given the incentive and opportunity to learn
618 how the city can protect and enhance fish and wildlife habitat while using
619 these areas as an opportunity to make Oroville a unique and attractive
620 community.

621

622 • Improve and use existing local regulatory **and non-regulatory** programs
623 to provide recognition of fish and wildlife habitat needs while providing an
624 array of options for property owners to effectively co-exist with critical
625 habitat.

626

627 • Look for opportunities to maintain, improve and restore habitat.

628

629 • ~~Review fish and wildlife habitat maps and relative regulations as~~ **Update**
630 **protection measures as** new information becomes available. ~~and keep an~~
631 ~~updated master map at Oroville City Hall for development review.~~

632

633 • **Provisions in regulations should be made for incentives to expand**
634 **Riparian Habitat, especially in cases where subdivisions or planned**
635 **developments are proposed.**

636

637 • **The City should seek out funding, partnerships and other**
638 **opportunities to restore Urban Riparian Habitat under its control**
639 **and/or ownership.**

640

641 • **Urban Riparian Habitat protection should be limited to those areas**
642 **within the jurisdiction of the Shoreline Management Act, and**
643 **regulation should be limited to that provided by the City's Shoreline**
644 **Management Program.**

645

646 • **WDFW Riparian Habitat Guidelines should be utilized as guidance in**
647 **the establishment of widths and protection measures for proposed**
648 **development in Suburban Riparian Habitat on a case-by-case basis to**
649 **give the best protection deemed necessary but within reason for urban**
650 **or suburban uses.**

651

652 • **Parks and trails should be allowed to be integrated within Riparian**
653 **Habitat Areas whenever possible; however, professional design for**
654 **low impact uses should be required.**

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Amendments to the Shoreline Master Programs of both the City and County should strive to restore and protect ecological function supporting fish and wildlife habitat while respecting existing uses especially where urban uses have been established for many years, and where their association with the water will benefit them in regard to economic development.

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666 Figure III-8 - Fish and Wildlife Conservation Areas

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WETLANDS

What are Wetlands?

The Growth Management Act requires counties, cities and towns to use the following definitions for the purpose of classifying, designating and regulation of wetlands:

Wetlands are areas that are inundated or saturated by surface water 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. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversions of wetlands, if permitted by the county or city.

Wetlands are transitional areas between water and land, where the water table is at or near the surface of the soil. Wetlands are characterized by certain plant types, wet soils, and water (the presence of which may change with the seasons or even from day to day). Some wetlands are easy to identify - bogs, marshes, estuaries, and swamps are good examples of these. Others are less obvious, and may actually be dry during the summer months.

Wetlands are:

- 1) areas where the soil is wet for a long enough period of time that,
- 2) soils become depleted of oxygen, and
- 3) wetland vegetation is more prevalent than upland vegetation. All three of these characteristics must be present for an area to be considered a wetland (hydrology, soil type, and vegetation).

Why are Wetlands Important?

706

707 Wetlands act like sponges to absorb enormous quantities of water during heavy
708 rain storms and periods of flooding. The water retained by wetlands can
709 significantly decrease peak river flows during storms, reducing the effects of
710 flooding. Some of this water percolates from the wetland into the ground, where it
711 replenishes groundwater. Where wetlands are located adjacent to streams, stored
712 water is slowly released as surface water, which drains into streams and helps to
713 keep stream flows continuous - an important factor in maintaining habitat for fish.

714

715 Because the vegetation within a wetland slows the movement of the water, silt, and
716 other particles drop out of the water and settle to the bottom. Certain pollutants
717 and excess nutrients are also filtered from water that passes through the wetland.
718 By reducing sedimentation and lowering pollutant and nutrient levels in rivers and
719 streams, wetlands further protect fish habitats and improve water quality in
720 streams, rivers, and groundwater.

721

722 Wetlands are nature's rich nurseries for fish and wildlife. About 85 percent of
723 Washington's wildlife species use wetlands and their buffers for breeding and
724 feeding. Waterfowl and other resident and migratory birds, many of which are
725 popular targets for hunters, rely on wetlands for feeding and nesting grounds.
726 Numerous plants, invertebrates, reptiles, amphibians, and mammals also depend on
727 the biologically rich environment of a wetland.

728

729 Why Are Buffers Around Wetlands Important?

730

731 Buffers are needed to protect wetlands so they can perform public health and
732 safety functions such as filtering ground water and controlling floods. Without
733 adequate buffers, wetlands can become so degraded that they no longer provide
734 these functions.

735

736 Buffers are also needed to protect wetlands because they are an essential part of a
737 wetland system. Fish need buffers to protect water quality and many wetland
738 dependent species rely on adjacent upland buffers for nesting, foraging, and cover.

739

740 What Are The Economic Benefits in Protecting Wetlands?

741

742 Open space provides a variety of amenities, which are often reflected in increased
743 real property values and added marketability for nearby property. Additional
744 benefits include: reduced costs for pollution control and hazards mitigation,

745 "quality of life" amenities, and nature-based tourism. There is also the ability to
746 put wetlands into the Okanogan County Open Space/Open Space designation and
747 receive a property tax reduction.

748

749 Wetlands and the City of Oroville

750

751 There Oroville area is significant in that a substantial number of wetlands exist that
752 are associated with the Okanogan and Similkameen Rivers, and Lake Osoyoos.
753 **Some of these wetland areas appear to have been used inappropriately for**
754 **solid waste disposal and should be investigated for public health and safety**
755 **problems, as well as threats to fish and wildlife.**

756

757 A few isolated wetlands areas also exist in the area, ~~at least one is located within~~
758 ~~the city.~~ two of which have been identified within the city limits (north and west
759 of the center of Oroville). These appear to be “kettles”, or depressions created by
760 glacial activity. ~~and Others are located within the Urban Growth Area are south of~~
761 ~~the city limits adjoining SR 97.~~

762

763 As Oroville grows, the potential for wetland loss increases. It is necessary to
764 ensure that a reasonable balance exists between the goal of private property rights
765 and wetlands protection.

766

767

GOAL

768

769 ➤ ~~Strive to ensure that Oroville experiences~~
770 ~~little no net loss of the functions and values~~
771 ~~provided by its remaining wetlands.~~

772

773

774 POLICIES

775

776 ➤ **The City will utilize the Washington State Wetlands Identification and**
777 **Delineation Manual to determine the existence and extent of wetlands.**

778

779 ➤ **The Washington Wetland Rating System for Eastern Washington will**
780 **be used as the classification system in Oroville, and protection shall be**
781 **relative to the functions and values associated with this classification**
782 **scheme.**

783 **Use Best Available Science (BAS)**

784 ➤ **The National Wetlands Inventory Maps for the Oroville area will be**
785 **used as an initial screening for the existence of wetlands for**
786 **development proposals, as well as a critical areas checklist that**
787 **requests information to help determine if a wetland may be existent.**
788 **An inventory should be created as new wetland information is**
789 **generated for development proposals.**

790

791 ➤ **The primary source of Best Available Science (BAS) for wetlands in**
792 **the City will be that information provided by the Dept. of Ecology in**
793 **the agency publications Wetlands in Washington State, Volumes 1 & 2**
794 **as they currently exist or may be revised in the future.**

795

796 ➤ **Conservative standard buffer widths should be established that are**
797 **consistent with the BAS and reasonable for urbanizing areas; however,**
798 **the flexibility should be made available to propose ~~Buffer zones should~~**
799 **~~be established for wetlands~~ buffers on a case-by-case basis by qualified**
800 **wetland biologists using BAS and ~~that are based~~ considering ~~on~~ the**
801 **particular need of the wetland, and ~~should be flexible enough for~~**
802 **~~adjustment in specific situations.~~**

803

804 ➤ **Wetlands associated with the rivers and Lake Osoyoos should be**
805 **protected under the Oroville Shorelines Master Program **in unison with a****
806 ****Critical Areas Ordinance** which will add authority to require buffers**
807 **outside of shoreline areas designated by the Shoreline Management**
808 **Act, and the City Shoreline Master Program.**

809

810

811 ➤ **The City will seek out opportunities to maintain, improve and restore**
812 **wetlands and appropriate buffer areas.**

813

814 ➤ **Funding should be actively pursued to conduct wetland protection**
815 **activities, including: wetlands inventorying; wetlands delineation;**
816 **provision of wetlands education; development of non-regulatory protection**
817 **programs; and, the training of city planning **and code enforcement** staff.**

818

819 ➤ **Incentives for the protection of wetlands should be incorporated into all**
820 **land use ordinances and open space programs.**

821

822 ➤ Regulations to protect wetlands should be developed, that are clear, easy to
823 understand and enforceable at the local level, while avoiding "Takings" of
824 private property rights shall be of the utmost importance. Provisions that
825 could cause conflict in interpretation should be addressed in detail.

826

827 ➤ Existing and ongoing commercial and agricultural operations in wetland
828 areas that are legally conducted activities at the time of the adoption of
829 wetlands regulations should be protected.

830

831

832 ➤ Wetland alteration proposals should be approved only if no alternative is
833 available. When no alternative exists, wetland replacement or
834 enhancement should be encouraged whenever economically feasible.

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841

842 ~~Two wetlands have been identified within the city limits (north and west of the~~
843 ~~center of Oroville) and others located within the Urban Growth Area are south of~~
844 ~~the city limits adjoining SR 97 that maintain an appearance that may be~~
845 ~~symptomatic of ecological contamination and should be reviewed as hazards to~~
846 ~~public safety, health and welfare.~~

847

848 ~~There are a number of wetland areas in or at the edge of Oroville that are~~
849 ~~associated with the Okanogan River. These wetlands are recognized as having~~
850 ~~high habitat value and~~

851

852

853

854 É ~~An accurate accounting of all known wetlands in the urban area should be~~
855 ~~developed that incorporates the Washington State Four-tier Classification~~
856 ~~System for Eastern Washington (as revised for Okanogan County).~~
857 ~~However, until funding is obtained to conduct a comprehensive inventory~~
858 ~~of wetlands, the National Wetlands Inventory (NWI) Maps should be used,~~
859 ~~along with other supportive documentation, to review development~~
860 ~~proposals. Any classification made as a result of development review~~

861 ~~should be used to update the mapping.~~ A copy of the NWI map for the
862 Oroville area is presented in Figure 9 on the following page.
863
864

865 Figure III - 9 - NWI Map
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868

869 References

870

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914

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RIPARIAN

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December 1997

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