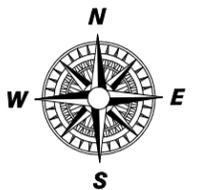


City of Kennewick Shoreline Management Program 2009

- | | | | | | |
|---|---------------------------------|---|-------------|---|--|
|  | Urban Conservancy |  | Floodplain |  | Urban Growth Boundary |
|  | Clover Island High Intensity |  | Wetlands |  | Shore Protected (armored) 50' Buffer with Stormwater Treatment |
|  | Predesignated Urban Conservancy |  | City Limits |  | Shore Unprotected (Unarmored) 75' Buffer |

NOTES:

1. The two hundred feet of the shoreline boundary will be reviewed on a case by case basis for individual developments and permits.
2. Shoreline jurisdiction that are included due to wetland designation according to WAC 173-22-040 would be limited to the edge of the Ordinary High Water Mark; no extension of 200 feet will be required from the edge of that OHWM. Buffer requirements for Critical Areas will still apply.



Appendix A-1

Environment Designations Boundary Description

Aquatic

All areas from the ordinary high water mark of the Columbia River shoreland within the City of Kennewick extending waterward, except that portion of the entire Clover Island and Clover Island Drive.

Urban Conservancy

Most of the Kennewick shoreline including Columbia Park, levee east and levees west described in the Shoreline Inventory Report of 2005 have been assigned this environment designation. This includes the area starting from the ordinary high water mark of the Columbia River shoreland within the City of Kennewick extending landward two hundred feet in all directions parallel to the ordinary high water mark, all bound from west to east by the following: the west side of the Columbia Park beginning at the City of Kennewick Urban Growth boundary (UGA) abutting City of Richland's city limits at T9, R29E, S29; to the eastern edge of the City of Kennewick UGA at South Verbena Street, T8, R30E, S05; except for that portion of the Clover Island Drive and the entire Clover Island that have High Intensity environment designation.

Clover Island High Intensity

The entire Clover Island within the southwest quarter of Section 31, T9N, R30 East W.M.; and that portion of Clover Island Drive from the ordinary high water mark line of the Columbia River shoreland waterward are designated high-intensity environment.

Appendix A-2. City of Kennewick Shoreline Critical Areas Regulations

CRITICAL AREAS – GENERAL PROVISIONS

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- 1.020 Purpose
- 1.030 Authority and Applicability
- 1.040 Reference maps and inventories
- 1.060 Administrative Procedures
- 1.070 Disclosure
- 1.080 Interpretation
- 1.090 Jurisdiction - Critical Areas
- 1.100 General Provisions for Mitigation
- 1.110 Allowed Activities
- 1.120 General Review Process
- 1.130 Wetland, Geologically Hazardous Areas, and Habitat Conservation Areas – General Report Requirements
- 1.140 Wetland, Habitat Conservation, and Geologically Hazardous Areas – Modifications to Report Requirements
- 1.150 Mitigation Requirements
- 1.160 Mitigation Sequencing
- 1.170 Compensatory Mitigation
- 1.180 Mitigation Plan Requirements
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- 1.200 Critical Area Markers and Signs
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CRITICAL AREAS – WETLANDS

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- 2.020 Activities Allowed in Wetlands
- 2.030 Wetlands – Additional Requirements
- 2.040 Performance Standards – General Requirements
- 2.050 Performance Standards – Mitigation Requirements
- 2.060 Performance Standards – Specific Activities and Uses
- 2.070 Wetland Buffer Averaging

CRITICAL AREAS – CRITICAL AQUIFER RECHARGE AREAS

- 3.010 Critical Aquifer Recharge Areas Designation
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4.030 Regulation

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5.010 Designation of Geologically Hazardous Areas

5.020 Designation of Specific Hazard Areas

5.030 Classification of Geologically Hazardous Areas

5.040 Mapping of Geologically Hazardous Areas

5.050 Activities Allowed in Geologically Hazardous Areas

5.060 Critical Area Report – Additional Requirements for Geologically Hazardous Areas

5.070 Critical Area Report – Additional Requirements for Specific Hazards

5.080 Performance Standards – General Requirements

5.090 Performance Standards – Specific Hazards

CRITICAL AREAS – FISH AND WILDLIFE HABITAT CONSERVATION AREAS

6.010 Designation of Fish and Wildlife Habitat Conservation Areas

6.020 Critical Area Report – Additional Requirements for Habitat Conservation Areas

6.030 Performance Standards – General Requirements:

6.040 Performance Standards – Specific Habitats

6.050 Mitigation Ratio for Riparian Buffers

6.060 Riparian Buffer Averaging

6.070 Administrative Riparian Buffer Reduction

CRITICAL AREAS – GENERAL PROVISIONS

1.010 Definitions

Words not defined in this Chapter shall be as defined first through the Shoreline Master Program, WAC 173-26 & 27, then in the Kennewick Municipal Code, the Washington Administrative Code, or the Revised Code of Washington. Words not found in these codes shall be as defined in the Webster's Third New International Dictionary, latest edition. The definitions are as follows:

1. "Adaptive Management." Adaptive management relies on scientific methods to evaluate how well regulatory and non-regulatory actions protect the critical area and, based upon monitoring and adaptive management [173-26-201(1)(g) WAC], what changes are necessary to avoid loss of ecological functions. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.
2. "Adjacent" means immediately adjoining (in contact with the boundary of the influence area) or within a distance that is less than that needed to separate activities from critical areas to ensure protection of the functions and values of the critical areas. Adjacent shall mean any activity or development located:
 - a. On a site immediately adjoining a critical area;
 - b. A distance equal to or less than the required critical area buffer width and building setback;
 - c. A distance equal to or less than one-half mile (2,640 feet) (Distance of 2,640 feet is based on Department of Fish and Wildlife "Management Recommendations for Washington's Priority Species, Volume IV: Birds") from a bald eagle nest;
 - d. A distance equal to or less than two hundred (200) feet upland from a stream, wetland, or water body;
 - e. Bordering or within the floodway, floodplain or channel migration zone; or
 - f. A distance equal to or less than two hundred (200) feet (Distance of 200 feet was established based upon a review of Department of Fish and Wildlife "Management Recommendations for Washington's Priority Habitats: Riparian," 1997; and Department of Ecology "Wetland Buffers: Use and Effectiveness," 1992; and City of Kennewick specific conditions) from a critical aquifer recharge area.
3. "Advance Mitigation." Mitigation of an anticipated critical area impact or hazard completed according to an approved mitigation management plan, report or other applicable information and prior to site development.
4. "Alteration." Any human induced change in an existing condition of a critical area or its buffer. Alterations include, but are not limited to grading, filling, channelizing, dredging, clearing (vegetation), construction, compaction, excavation or any other activity that changes the character of the critical area.
5. "Aquifer" is a geological formation, group of formations or part of formation that is capable of yielding a significant amount of water to a well or spring.

6. "Aquifer, Confined" is an aquifer bounded above and below by beds of distinctly lower permeability than that of the aquifer itself and that contains ground water under sufficient pressure for the water to rise above the top of the aquifer.
7. "Aquifer Recharge Areas" are areas that, due to the presence of certain soils, geology, and surface water, act to recharge ground water by percolation.
8. "Aquifer Susceptibility" means the ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer unimpeded by chemical interactions with the vadose zone media.
9. "Aquifer, Unconfined" means an aquifer not bounded above by a bed of distinctly lower permeability than that of the aquifer itself and containing ground water under pressure approximately equal to that of the atmosphere. This term is synonymous with the term "water table aquifer."
10. "Base Flood" means a flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.
11. "Buffer or Buffer Zone" is an area contiguous to and protects a critical habitat that is required for the continued maintenance, functioning, and/or structural stability of a critical area.
12. "Compensation Project" are actions necessary to replace project-induced critical area and buffer losses, including land acquisition, planning, construction plans, monitoring and contingency actions.
13. "Compensatory Mitigation" means replacing project-induced critical area function and value losses or impacts through restoration, enhancement or preservation and includes, but is not limited to, the following:
 - a. Restoration: Actions performed to reestablish wetland functional characteristics and processes that have been lost by alterations, activities, or catastrophic events within an area that no longer meets the definition of a wetland.
 - b. Creation: Actions performed to intentionally establish a wetland at a site where it did not formerly exist.
 - c. Enhancement: Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.
 - d. Preservation: Actions taken to ensure the permanent protection of existing, high-quality wetlands.
14. "Conservation Easement" is a legal agreement that the property owner enters into to restrict uses of the land. Such restrictions can include, but are not limited to, passive recreation uses such as trails or scientific uses and fences or other barriers to protect habitat. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property, therefore, providing permanent or long-term protection.
15. "Critical Aquifer Recharge Area" is an area designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2).

16. "Critical Facility" is a facility for which even a slight chance of flooding, inundation, or impact from a hazard event might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, and installations that produce, use or store hazardous materials or hazardous waste.
17. "Developable Area" is a site or portion of a site that may be utilized as the location of development, in accordance with the rules of this Chapter.
18. "Development" means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to the act at any stage of water level. It also means any activity upon the land consisting of construction or alteration of structures, earth movement. Development includes the storage or use of equipment or materials inconsistent with the existing use. Development also includes approvals issued by the City of Kennewick that binds land to specific patterns of use, including but not limited to, subdivisions, short subdivisions, zone changes, conditional use permits, and binding site plans. Development activity does not include the following activities:
 19. "Development Permit" means any permit issued by the City of Kennewick, or other authorized agency, for construction, land use, or the alteration of land.
 20. "Eco-Connectivity" is a physical feature of the land as well as functional one. It is the geo-physical connection between natural habitat areas that allow fish and animals to move between feeding, reproductive, rearing, and resting areas. The functional connection is dependent on the physical connection.
 21. "Ecological functions" means the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem [WAC 173-26-030 (11)].
 22. "Erosion" is the process whereby wind, rain, water, and other natural agents mobilize and transport particles.
 23. "Erosion Hazard Areas" are at least those areas identified by the United States Department of Agriculture National Resources Conservation Service as have a "severe" rill and inter-rill erosion hazard.
 24. "Exotic" means any species of plants or animals, which are (not listed on the State plant list) foreign to the planning area.
 25. "Extreme Slope Hazard Areas" are those areas with pre-development slope greater than forty percent (40%)
 26. "Fish and Wildlife Habitat Conservation Areas" are areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by WAC 365-190-080(5). These areas are guided by the State's Priority Habitats and Species list and include the following:
 - a. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;
 - b. Habitats of local importance, including but not limited to areas designated as priority habitat by the Department of Fish and Wildlife;

- c. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;
 - d. Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington;
 - e. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
 - f. State natural area preserves and natural resource conservation areas; and
 - g. Land essential for preserving connections between habitat blocks and open spaces.
27. "Habitat" is an area or environment that is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish that could be recovered by restoration or management and includes off-channel habitat. (See WAC 222-16-030(5)(h)).
28. "Flood or Flooding" is a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.
29. "Flood Insurance Map" is the official map on which the Federal Insurance Administration has delineated the areas of special flood hazards and include the risk premium zones applicable to the community. Also known as "flood insurance rate map" or "FIRM."
30. "Flood Insurance Study" is the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.
31. "Floodplain" is the total land area adjoining a river, stream, watercourse or lake subject to inundation by the base flood. "Flood plain" is synonymous with one hundred-year flood plain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon the flood damage prevention ordinance (KMC 18.66) and data provided by FEMA maps
32. "Floodway" is the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the surface water elevation more than one (1) foot. Also known as the "zero rise floodway." For the purpose of this chapter, "Floodway" means the area, as identified in a master program, that either: (i) Has been established in federal emergency management agency flood insurance rate maps or floodway maps; or (ii) consists of those portions of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative ground cover condition, topography, or other indicators of flooding that occurs with reasonable regularity, although not necessarily annually. Regardless of the method used to identify the floodway, the floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state;

33. "Formation" means an assemblage of earth materials grouped together into a unit that is convenient for description or mapping.
34. "Formation, Confining" means the relatively impermeable formation immediately overlying a confined aquifer.
35. "Frequently Flooded Areas" means lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance and attenuation functions, as determined by the Planning Director in accordance with WAC 365-190-080(3). Frequently flooded areas perform important hydrologic functions and may present a risk to persons and property. Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.
36. "Geologically Hazardous Areas" means areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by WAC 365-190-080(4). Types of geologically hazardous areas include: erosion, landslide, seismic, mine, and volcanic hazards.
37. "Ground Water" means water in a saturated zone or stratum beneath the surface of land or a surface water body
38. "Growth Management Act" means RCW 36.70A, and 36.70B, as amended.
39. "Habitat Conservation Areas" means areas designated as fish and wildlife habitat conservation areas.
40. "Hazard Areas" means areas designated as frequently flooded areas or geologically hazardous areas due to potential for erosion, landslide, seismic activity, extreme slopes, or other geological condition.
41. "Hazardous Substances" means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in WAC 173-303-090 or 173-303-100.
42. "High Intensity Land Use" means land uses which are associated with high levels of human disturbance or substantial habitat impacts including, but not limited to, commercial uses, industrial uses, and residential (more than 1 unit/acre), institutional, retail sales, conversion to high intensity agriculture and hobby farms, and high intensity recreation.
43. "Historic Condition" means condition of the land, including flora, fauna, soil, topography, and hydrology that existed before the area and vicinity were developed or altered by human activity.
44. "Hydraulic Project Approval (HPA)" means a permit issued by the state Department of Fish and Wildlife for projects that affect the bed or flow of waters of the state in accordance with Chapter 77.55 RCW and WAC 220.110.
45. "Hydric Soil" means a soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual
46. "Hydrologic Soil Groups" means soils grouped according to their runoff-producing characteristics under similar storm and cover conditions. Properties that influence runoff potential are depth to seasonally high water table, intake rate and

permeability after prolonged wetting, and depth to a low permeable layer. Hydrologic soil groups are normally used in equations that estimate runoff from rainfall, but can be used to estimate a rate of water transmission in soil. There are four hydrologic soil groups:

- a. Low runoff potential and a high rate of infiltration potential;
 - b. Moderate infiltration potential and a moderate rate of runoff potential;
 - c. Slow infiltration potential and a moderate to high rate of runoff potential; and
 - d. High runoff potential and very slow infiltration and water transmission rates.
47. "Hydrophytic Vegetation" means Macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual.
48. "Hyporheic Zone" means the saturated zone located beneath and adjacent to streams that contains some portion of surface waters, serves as a filter for nutrients, and maintains water quality.
49. "Impervious Surface" means a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.
50. "In-Kind Compensation" means replacement of the same species, habitat type, and function impacted. If the impacted habitat is disturbed, it means replacement with the natural habitat that would occur. It does not mean replacement "in-category."
51. "Isolated Wetlands" means those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream, and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.
52. "Infiltration" means the downward entry of water into the immediate surface of soil.
53. "Injection well(s)" means:
- a. Class I – A well used to inject industrial, commercial, or municipal waste fluids beneath the lowermost formation containing, within one-quarter (1/4) mile of the well bore, an underground source of drinking water.
 - b. Class II – A well used to inject fluids:
 - (i) Brought to the surface in connection with conventional oil or natural gas exploration or production and may be commingled with wastewaters from gas plants that are an integral part of production operations, unless those waters are classified as dangerous wastes at the time of injection;
 - (ii) For enhanced recovery of oil or natural gas; or
 - (iii) For storage of hydrocarbons that are liquid at standard temperature and pressure.

- c. Class III – A well used for extraction of minerals, including but not limited to the injection of fluids for:
 - (i) In-situ production of uranium or other metals that have not been conventionally mined;
 - (ii) Mining of sulfur by Frasch process; or
 - (iii) Solution mining of salts or potash.
 - d. Class IV – A well used to inject dangerous or radioactive waste fluids.
 - e. Class V – All injection wells not included in Classes I, II, III, or IV.
54. “Inter-rills” are areas subject to sheetwash.
 55. “Joint Aquatic Resource Permits Application (JARPA)” means a single application form that may be used to apply for hydraulic project approvals, shoreline management permits, approvals of exceedance of water quality standards, water quality certifications, coast guard bridge permits, Department of Natural Resources use authorization, and Army Corps of Engineers permits.
 56. “Lakeshore Management Plan” means McNary Lakeshore Management Plan, Lake Wallula, Oregon and Washington. 1983, or any subsequent revisions. A U. S. Corps of Engineers lakeshore management plan intended to manage and protect the shoreline and to promote recreation and to operate and maintain water resource projects in the public interest. The Plan is a regulatory tool used to administer such activities as dock construction permits and vegetation removal.
 57. “Landslide Hazard Areas” are areas that are potentially subject to risk of mass movement due to a combination of geologic landslide resulting from a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, ground water, or other factors.
 58. “Long-Term Commercial Significance” includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land’s proximity to population areas, and the possibility of more intense uses of the land. RCW 36.70A.030(10); WAC 365-190-030(11).
 59. “Low Intensity Land Use” means land uses which are associated with low levels of human disturbance or low habitat impacts, including but not limited to forestry (cutting of trees only), passive recreation uses (e.g. hiking), unpaved trails, utility corridor without a maintenance road and limited or no vegetation management.
 60. “Minerals” mean materials including gravel, sand, and valuable metallic substances. RCW 36.70A.030(11); WAC 365-190-030(12).
 61. “Moderate Intensity Land Use” means land uses which are associated with moderate levels of human disturbance or substantial habitat impacts including, but not limited to residential (1 unit/acre or less), moderate intensity open space (e.g., parks with biking), conversion to moderate intensity agriculture (.e.g., orchard), paved trails, building of roads, utility corridor or right of way shared by several utilities.
 62. “Monitoring” means evaluating the impacts of development proposals on the biological, hydrological, and geological elements of such systems and assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and

documenting changes in natural ecosystems and features, and includes gathering baseline data.

63. "Native Vegetation" means plant species that are indigenous to the area in question. Plants that are not listed in Chapter 16-750 WAC.
64. "Native Growth Habitat Area" means an area where native vegetation is preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering and protecting plants and animal habitat;
65. "Natural Waters" means waters, excluding water conveyance systems, that are artificially constructed and actively maintained for irrigation, or any waters of the state. See WAC 222-16-030(5)(d) and WAC 222-16-031(6)(d)
66. "Non-Conformity" means a legally established and permitted existing use or legally permitted constructed structure that is not in compliance with current regulations.
67. "Non-Indigenous." See "Exotic."
68. "Off-Site Mitigation" means compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact may be authorized. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.
to replace critical areas away from the site on which a critical area has been impacted. For off-site mitigation to be acceptable, it must be demonstrated that functions and values, including temporal loss, can be achieved off-site, resulting in no net loss of ecological functions.
69. "On-Site Mitigation" means on or adjacent to the project impact site or in the same stream reach, based on resource needs. It is not to be limited to property ownership or city or county boundaries, but is limited to within the watershed, that do not limit the functions and values of the resources.
70. "Out-of-Kind Replacement" means to replace critical areas with substitute critical areas whose functions and values do not closely approximate those destroyed or degraded. It does not refer to replacement "out-of-category."
71. "Permeability" means the capacity of an aquifer or confining bed to transmit water. It is a property of the aquifer or confining bed and is independent of the force causing movement.
72. "Potable Water" means water that is safe and palatable for human use.
73. "Practical Alternative" means an alternative that is available and capable of being carried out after taking into consideration, cost, existing technology, and logistics in light of overall project purposes, and having fewer impacts to critical areas.
74. "Priority habitat" means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:
 - a. Comparatively high fish or wildlife density;
 - b. Comparatively high fish or wildlife species diversity;
 - c. Fish spawning habitat;
 - d. Important wildlife habitat;

- e. Important fish or wildlife seasonal range;
 - f. Important fish or wildlife movement corridor;
 - g. Rearing and foraging habitat;
 - h. Refugia habitat;
 - i. Limited availability;
 - j. High vulnerability to habitat alteration;
 - k. Unique or dependent species; or
 - l. A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.
75. "Project Area" means all areas within fifty (50) feet of the area proposed to be disturbed, altered, or used by the proposed activity or the construction of any proposed structures.
76. "Qualified Professional" means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology or related field, and two years of related work experience.
- a. A qualified professional for habitats or wetlands must have a degree in biology and professional experience related to the subject species.
 - b. A qualified professional for a geological hazard must be a professional geologist (preferred) or engineer, licensed in the state of Washington.
 - c. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.
77. "Recharge" is the process involved in the absorption and addition of water to ground water.
78. "Reclaimed Water" means municipal wastewater effluent that has been adequately and reliability treated so that it is suitable for beneficial use. Following treatment it is no longer considered wastewater (treatment levels and water quality requirements are given in the water reclamation and reuse standards adopted by the state Departments of Ecology and Health).
79. "Regulatory Flood" means a level of flooding that a regulatory agency's design regulations apply to.
80. "Repair or Maintenance" is an activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

81. "Rills" are steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.
82. "Riparian Habitat" is any area adjacent to surface water which possesses elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends from the OHW to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. It includes the entire extent of the floodplain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence aquatic ecosystem. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities. See Department of Fish and Wildlife "Management Recommendations for Washington's Priority Habitats – Riparian," page 4, 1997.
83. "Scientific Process" is a valid scientific process that produces reliable information useful in understanding the consequences of a decision. The characteristics of a valid scientific process are as follows:
 - a. Peer review. The information has been critically reviewed by other qualified scientific experts in that scientific discipline.
 - b. Methods. The methods that were used are standardized in the pertinent scientific discipline or the methods have been appropriately peer-reviewed to assure their reliability and validity.
 - c. Logical conclusions and reasonable inferences. The conclusions presented are based on reasonable assumptions supported by other studies and are logically and reasonably derived from the assumptions and supported by the data presented.
 - d. Quantitative analysis. The data have been analyzed using appropriate statistical or quantitative methods.
 - e. Context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.
 - f. References. The assumptions, techniques, and conclusions are well referenced with citations to pertinent existing information.
84. "Section 404 Permit" is a permit issued by the Corps of Engineers for the placement of dredge or fill material or clearing in waters of the U.S., including wetlands, in accordance with 33 USC § 1344.
85. "Seeps" is a spot where water oozes from the earth, often forming the source of a small stream.
86. "Seismic Hazard Areas" are areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.
87. "Serviceable" means presently usable.
88. "SEPA" is the Washington State Environmental Policy Act, Chapter 43.21C RCW.

89. "Shrub-Steppe" are vegetative communities consisting of one or more layers of perennial grass with a conspicuous but discontinuous over-story layer of shrubs have been termed "shrubsteppe." In Washington, these communities usually contain big sagebrush (*Artemisia tridentata*) in association with bunchgrasses, although other associations are found (Dobler et al, 1996).
90. "Significant Portion of its Range" means that portion of a species range likely to be essential to the long-term survival of the population in Washington.
91. "Soil Survey" means the most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.
92. "Species" means any group of animals classified as a species or subspecies as commonly accepted by the scientific community.
93. "Species, Endangered" means any fish or wildlife species that is either proposed, threatened, or endangered. with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.
94. "Species of Local Importance" means those species of local concern due to their population status or their sensitivity to habitat manipulation, or that are game species.
95. "Priority species" means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below.
 - a. Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.
 - b. Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.
 - c. Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.
 - d. Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.
96. "Species, Threatened" means any fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

97. "Stream" means water contained within a channel, either perennial or intermittent, and classified according to WAC 222-16-030 or WAC 222-16-031 and as listed under "water typing system." Streams also include natural watercourses modified by man. Streams do not include irrigation ditches, waste ways, drains, outfalls, operational spillways, channels, storm water runoff facilities or other wholly artificial watercourses, except those that directly result from the modification to a natural watercourse.
98. "Sub-Drainage Basin or Subbasin" means the drainage area of the highest order stream containing the subject property impact area. Stream order is the term used to define the position of a stream in the hierarchy of tributaries in the watershed. The smallest streams are the highest order (first order) tributaries. These are the upper watershed streams and have no tributaries of their own. When two first order streams meet, they form a second order stream, and when two second order streams meet they become a third order stream, and so on.
99. "Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.
100. "Substantial Improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: before the improvement or repair is started; or if the structure has been damaged and is being restored, before the damage occurred.
101. "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or to attempt to engage in any such conduct.
102. "Unavoidable" means adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved. See RCW 90.84.010(9).
103. "Vulnerability" means the combined effect of susceptibility to contamination and the presence of potential contaminants.
104. "Water Resource Inventory Area (WRIA)" means one of sixty-two (62) watersheds in the state of Washington, each composed of the drainage areas of a stream or streams, as established in Chapter 173-500 WAC as it existed on January 1, 1997.
105. "Water Table" means that surface in an unconfined aquifer at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the aquifer just far enough to hold standing water.
106. "Water Table Aquifer." See "Aquifer, unconfined."
107. "Water Typing System" are waters classified according to WAC 222-16-031 including the following:
 - a. Type 1 Water – All waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, but not including those waters associated with wetlands as defined in Chapter 90.58 RCW.
 - b. Type 2 Water – Segments of natural waters that are not classified as Type 1 Water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:

- (i) Are used by fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish populations:
 - (A) Stream segments having a defined channel twenty (20) feet or greater within the bankfull width and having a gradient of less than four percent (4%).
 - (B) Lakes, ponds, or impoundments having a surface area of one (1) acre or greater at seasonal low water; or
 - (ii) Are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:
 - (A) The site must be connected to a fish bearing stream and be accessible during some period of the year; and
 - (B) The off-channel water must be accessible to fish through a drainage with less than a five percent (5%) gradient.
- c. Type 3 Water – Segments of natural waters that are not classified as Type 1 or 2 Waters and have a moderate to slight fish, wildlife, and human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:
- (i) Are used by fish for spawning, rearing or migration. The requirements for determining fish use are described in the State Forest Practices Board Manual, Section 13. If fish use has not been determined:
 - (A) Waters having the following characteristics are presumed to have fish use:
 - (1) Stream segments having a defined channel of three (3) feet or greater in width and having a gradient of sixteen percent (16%) or less.
 - (2) Stream segments having a defined channel or three (3) feet or greater within the bankfull width, and having a gradient greater than sixteen percent (16%) and less than or equal to twenty percent (20%), and having greater than 175 acres contributing basin size, based on hydrographic boundaries;
 - (3) Ponds or impoundments having a surface area of less than one (1) acre at seasonal low water and having an outlet to a fish stream;
 - (4) Ponds of impoundments having a surface area greater than one-half (0.5) acre at seasonal low water.
 - (B) The Department of Natural Resources shall waive or modify the characteristics in (a) of this Subsection where:
 - (1) Waters have confirmed, long term, naturally occurring water quality parameters incapable of supporting fish;
 - (2) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

- (3) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (a) of this Subsection, as determined in consultation with the Department of Fish and Wildlife, Department of Ecology, affected tribes and interested parties.
 - d. Type 4 Water – All segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are waters that do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type 4 Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see State Forest Practices Board Manual, Section 23), then Type 4 Waters begin at a point along the channel where the contributing basin area is at least three hundred (300) acres.
 - e. Type 5 Waters – All segments of natural waters within the bankfull width of the defined channels that are not Type 1, 2, 3, or 4 Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 Water. Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters.
108. “Well” is a bored, drilled or driven shaft, or a dug hole whose depth is greater than the largest surface dimension for the purpose of withdrawing or injecting water or other liquids.
 109. “Wellhead Protection Area (WHPA)” is the portion of a zone of contribution for a well, wellfield or spring, as defined using criteria established by the state Department of Ecology.
 110. “Wetlands” are 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 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, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. Identification and delineation of Wetlands is also a product of the Washington State Wetland Identification and Delineation Manual. (KMC 18.59.010).
 111. “Wetland Category” are wetlands that are categorized into Category I, II, III or IV based upon the categorization procedures in the Washington State Wetland Rating System for Eastern Washington (Ecology Publication No. 04-06-0152004, 2007 as amended).
 112. “Wetland Classes, Classes of Wetlands, or Wetland Types” are the descriptive classes of the wetlands taxonomic classification system of the U.S. Fish and Wildlife Service (Cowardin, et al. 1979).
 113. “Wetland Edge” means the boundary of a wetland as delineated based on the definitions contained in this Chapter.

114. "Wetlands Mitigation Bank" means a site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources. See RCW 90.84.010(5).
115. "Zone of Contribution" means the area surrounding a well or spring that encompasses all areas or features that supply ground water recharge to the well or spring. (Ord. 5206 Sec. 1, 2007)

1.020 Purpose

The purpose of this Chapter is to implement the Shoreline Management Act's policy of protection of shoreline natural resources through the protection and encouraged restoration of ecological functions necessary to sustain these resources; in conjunction with the other provisions of this Program.

The purpose of this Chapter is also to designate and classify ecologically sensitive and hazardous areas within shoreline jurisdiction and to protect these areas and their functions and values, while also allowing for reasonable use of property.

1.030 Authority and Applicability

1. When a chapter reference is used, it shall be inclusive of all of this Chapter.
2. The provisions of this Chapter shall apply to all lands, all land uses and development activity, and all structures and facilities within the shoreline jurisdiction of the City of Kennewick, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the shoreline jurisdiction of the City. No person, company, agency, or applicant shall alter a critical area or buffer within the shoreline jurisdiction except as consistent with the purposes and requirements of this Chapter & KMC 18.68 .
3. Approval or denial of a permit or development proposal pursuant to the provisions of this Chapter does not discharge the obligation of the applicant to comply with the provisions of this Chapter
4. When the provisions of this chapter or any other provisions of this Program are in direct conflict with each other or with other federal or state regulations, the provision that is the most protective of the resource(s) shall apply.

1.040 Reference maps and inventories

Critical areas within shoreline jurisdiction are depicted in the shoreline map in Appendix A-1 and also in the Exhibits 1 to 4 of this document. Critical area inventory within the shoreline jurisdiction is available in the Shoreline and Inventory and Assessment Report of 2005 (Appendix A-3).

The distribution of critical areas within the City are described and displayed in reference materials and on maps maintained by the City's Planning Department. These reference materials, in the most current form, are intended for general information only and do not depict site-specific designations. They are intended to advise the City, applicants and other participants in the development permit process that a critical area may exist and that further study, review and consideration may be necessary. These reference materials shall include but are not limited to the following:

1. US Department of Agriculture Soil Survey for Benton County Area, Washington, July 1971, as amended
2. U.S.G.S. 7.5 Minute Series Digital Elevation Model
3. Federal Emergency Management Agency. June 15, 1981. Flood Insurance Rate Maps. Flood Boundary and Floodway Maps, and Flood Insurance Study for City of Kennewick, Benton County
4. US Fish and Wildlife Service National Wetlands Inventory
5. Aerial photos.

6. WDFW Priority Habitats and Species and Wildlife Heritage Maps and Data
7. City critical area designation maps.

1.060 Administrative Procedures

The administrative procedures followed during the critical area review process within shoreline jurisdiction shall conform to RCW 90.58, the standards and requirements of the City's Administrative Procedures Code (Title 4) and Zoning Code (Title 18). This shall include, but not be limited to, timing and appeals associated with applications covered by this Chapter.

1.070 Disclosure

The presence of any known or suspected critical areas on or within two hundred feet of property that is the subject of a development permit shall be identified by the applicant in the application materials submitted to the City.

1.080 Interpretation

In the interpretation and application of this ordinance, the provisions of this Chapter shall be considered to be the minimum requirements necessary, shall be liberally construed to serve the purpose of this ordinance, and shall be deemed to neither limit nor repeal any other provisions under state statute.

1.090 Jurisdiction - Critical Areas

1. The City shall regulate all uses within 200 feet (based on the maximum buffer size recommended in this Chapter. See Chapter 2 for additional information) of, or that are likely to affect, one or more critical areas, consistent with the use of scientific and technical information and the provisions herein.
2. Critical areas regulated by this Chapter include:
 - a. Wetlands as designated in Chapter 2;
 - b. Critical aquifer recharge areas as designated in Chapter 3;
 - c. Frequently flooded areas as designated in Chapter 4;
 - d. Geologically hazardous areas as designated in Chapter 5; and
 - e. Fish and wildlife habitat conservation areas as designated in Chapter 6.
3. All areas within the City's shoreline meeting the definition of one or more critical area, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.

1.100 General Provisions for Mitigation

Any mitigation action taken pursuant to this Chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action. All actions and developments shall be designed and constructed in accordance with *Mitigation Sequencing* requirements in Section 1.160 to avoid, minimize and restore all adverse impacts. Applicants must first demonstrate an inability to avoid or reduce impacts, before restoration and compensation of impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas.

1.110 Allowed Activities

1. Process. The Planning Director shall allow activities that are verified to comply with this section and the master program. The Planning Director shall provide a copy of this section, including any future updates, and the maps of critical area designations to city departments and other potential affected agencies as determined by the Planning Director. City Departments and other local agencies when conducting allowed activities (except for 1.1.110 (3)(c) and (d)), will notify the Planning Director in writing in advance of the planned activity, when it will occur, and steps that will be taken to comply with the provisions of this Chapter. Emergency activities or any other activities that occur without advance notice will be followed up with a report to the Planning Director describing how provisions of this Chapter are being met, and applicable permitting shall begin. Documentation of allowed activities shall be maintained on file at the Planning Department.
2. Allowed activities shall avoid impacts to critical areas. All allowed activities shall use mitigation sequencing to avoid potential impacts to critical areas, using best management practices that result in the least amount of impact to the critical areas where practicable. Designation as an allowed activity does not give permission to degrade a critical area or ignore risk from natural hazards. Best management practices shall be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, fish and wildlife protection, and regulation of chemical applications. The City shall monitor the use of best management practices to ensure that the activity does not result in degradation to the critical area. Any incidental damage to, or alteration of, a critical area or their required buffers, from permitted or exempted use(s) or development impacts(s) shall be restored, rehabilitated, or replaced at the responsible party's expense within one growing season.
3. Allowed activities. The following developments, activities, and associated uses are allowed and shall be exempt from the permitting provisions of this Chapter except as noted in provisions below, provided that they are otherwise consistent with the provisions of this shoreline master program (which may require a shoreline SDP, CUP or VAR permit, even if a critical area permit is not required) other local, state, and federal laws and requirements:
 - a. Emergencies. As exempted in 18.68.280(2)(h).
 - b. Operation, maintenance or repair only as exempted in 18.68.280(2)(g). Operation, maintenance or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees or drainage systems, that do not degrade the critical area, that do not include significant vegetative removal, that do not require a permit or are covered under a programmatic permit from an authorized agency, if the activity does not further alter or increase the impact to, or encroach further within, the critical area or buffer and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair;
 - c. Passive outdoor activities. Recreation, education, and scientific research activities that do not degrade the critical area, including fishing, hiking, and bird watching.
 - d. Permit requests subsequent to previous critical area review. Development permits and approvals that involve both discretionary land use approvals (such as subdivisions, rezones, or conditional use permits), and construction

approvals (such as building permits) if all of the following conditions have been met:

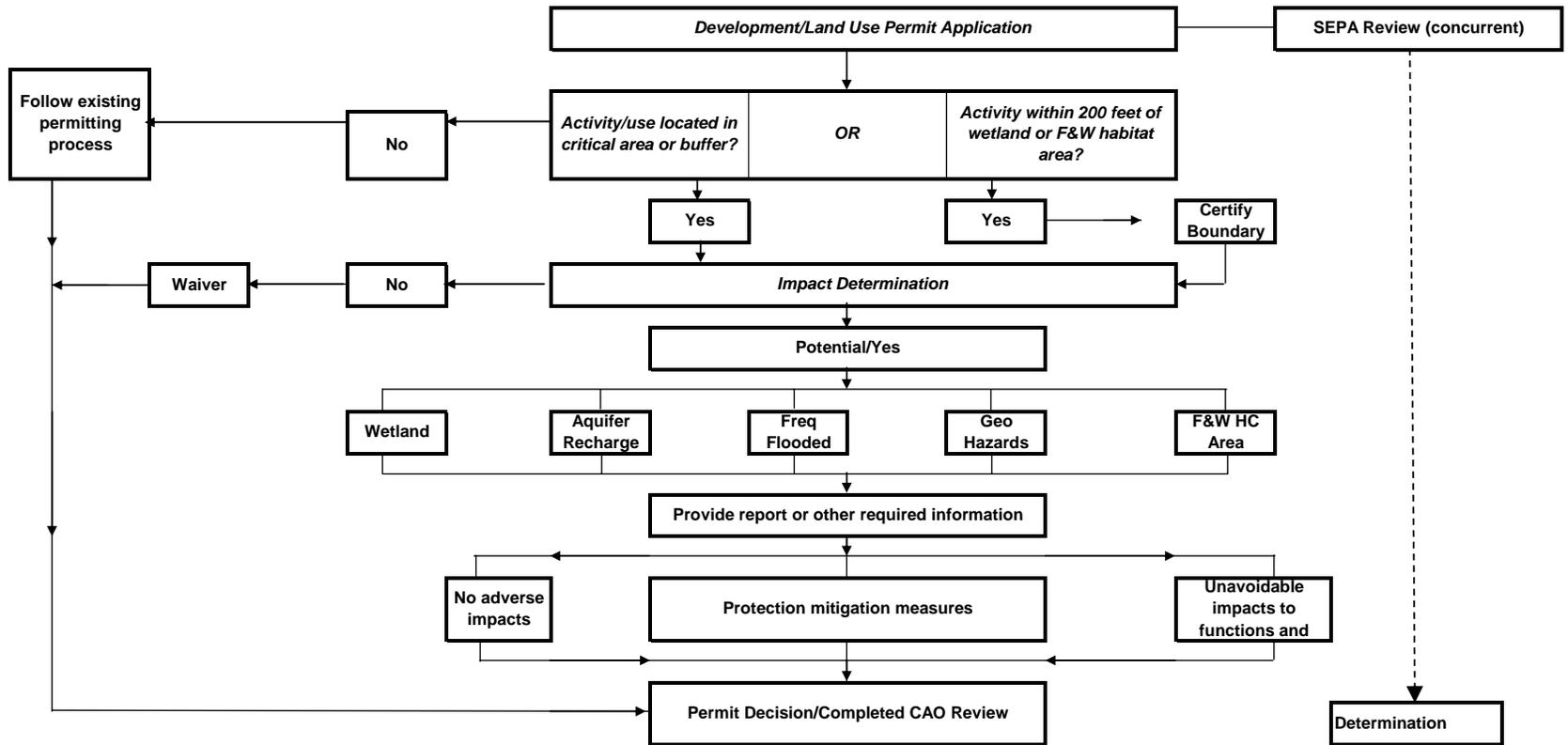
- (i) The provisions of this Chapter have been previously addressed as part of another approval;
 - (ii) There have been no material changes in the potential impact to the critical area or buffer since the prior review;
 - (iii) There is no new information available that is applicable to any critical area review of the site or particular critical area;
 - (iv) The permit or approval has not expired or, if no expiration date, no more than five years has elapsed since the issuance of that permit or approval; and
 - (v) Compliance with any standards or conditions placed upon the prior permit or approval has been achieved or secured;
- e. Modification to existing structures. As regulated under 18.68.120(2)(d);
 - f. Activities within the improved right-of-way. Replacement, modification, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances, not including substations, when such facilities are located within the improved portion of the public right-of-way or a City authorized private roadway except those activities that alter a wetland or watercourse, such as culverts or bridges, or results in the transport of sediment or increased stormwater and as regulated under 18.68.130(3)(h);
 - g. Public and private pedestrian trails. Public and private pedestrian trails not in wetlands, wetland buffers or fish and wildlife habitat conservation areas or their buffers, where the trail surface meets all other requirements and requirements found in 18.68.130(3);
 - h. Select vegetation removal activities. Select vegetation removal activities are allowed upon review and approval of the Director. Accepted vegetation removal activities include: a) removing and controlling invasive plants or noxious weeds; b) removal of trees that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to private property and measures to control a fire or halt the spread of disease or damaging insects consistent with the State Forest Practices Act, Chapter 76.09 RCW. Unless otherwise provided or as a necessary part of an approved alteration, removal of any vegetation or woody debris from a habitat conservation area or wetland shall be prohibited;
 - i. Chemical applications. The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, provided that their use shall be conducted in accordance with applicable state and federal law. (More information on commercial and residential use of chemicals can be found in Department of Ecology "Guidance Document for Establishment of Critical Aquifer Recharge Areas Ordinances" Version 3.0, Publication #97-30; and from the state Department of Agriculture, <http://www.wa.gov/agr/>);
 - j. Minor site investigative work. Work necessary for land use submittals, such as topographic surveys, soil logs, percolation tests, and other related activities, where such activities do not require construction of new roads or significant amounts of excavation. In every case, impacts to the critical area shall be minimized and disturbed areas shall be immediately restored; and

- k. Navigational aids and boundary markers. Construction or modification of navigational aids and boundary markers as regulated under 18.68.280(i).

1.120 General Review Process

1. The City shall begin the process discussed below and outlined in Figure 1, within 90 days after permit application:
 - a. Verify the information submitted by the applicant for the applicable permit;
 - b. Evaluate the project area and vicinity for critical areas;
 - c. For wetland and/or fish and wildlife habitat conservation areas, the City may require that boundaries be verified and mapped by a qualified professional. The scale of the boundary information shall be the same as the City maps, and such boundaries shall be submitted to the City as part of the application for the applicable permit if the project is:
 - (i) Within 200 feet of a wetland, or fish and wildlife critical area for which the boundaries have not been certified and depicted by the City on the critical areas map (see Exhibits 1-4 which are adopted by reference and on file in the Department of Community Planning); and
 - (ii) Will not be receiving a no-impact waiver as provided in Section 1.1.120 (2) below.
 - d. Determine whether the proposed project is likely to impact the functions or values of critical areas; and

Figure 1: City of Kennewick Shorelines Critical Areas Review Process



NOTE: Appeal process follows route of associated permit. Appeals of administrative decisions regarding provisions of the Critical Areas code use the administrative appeal process contained within the City's Zoning Code.

- e. Determine if the proposed project adequately addresses the impacts and avoids impacts to the critical area associated with the project.
2. Critical areas present, but no-impact waiver. If the Planning Director determines that there are critical areas within or adjacent to the project area, but that the proposed activity is unlikely to degrade the functions or values of the critical area, the Planning Director may waive the requirement for a report or other applicable information. If the waiver involves a wetland, the Planning Director may require a wetland category rating be completed prior to determining whether a waiver can be granted. A waiver may be granted if there is substantial evidence that all of the following requirements will be met:
 - a. There will be no alteration of the critical area or buffer;
 - b. The development proposal will not impact the critical area in a manner contrary to the purpose, intent, and requirements of this Chapter; and
 - c. The proposal is consistent with other applicable regulations and standards.A summary of this analysis and the findings shall be included in any staff report or decision on the underlying permit.
3. Critical Areas Present and Potential Impact Likely. If the Planning Director determines that the proposed project is within, adjacent to, or is likely to impact a critical area, the Planning Director shall:
 - a. Notify the applicant that a critical area report, SEPA checklist, and other applicable information must be submitted prior to further review of the project, and indicate each of the critical area types that should be addressed;
 - b. Require a critical area report or other applicable information from the applicant prepared by a qualified professional. The critical area report must be based upon the most current, accurate, and complete scientific and technical information available that is applicable to the issues of concern.
 - c. Review and evaluate the critical area report and other applicable information to determine whether the development proposal conforms to the purposes and performance standards of this Chapter;
 - d. Assess potential impacts to the critical area and determine if they are necessary and unavoidable;
 - e. Determine if any mitigation proposed by the applicant is sufficient to protect the functions and values of the critical area and public health, safety, and welfare concerns consistent with the goals, purposes, objectives, and requirements of this Chapter; and
 - f. A summary of this analysis and the findings shall be included in any decision on the underlying permit(s). Critical area review findings may result in: a) no adverse impacts to critical area(s); b) list of applicable critical area(s) protection conditions for the underlying permit(s); or c) denial of permit based upon unavoidable impacts to critical area(s) functions and values. (Ord. 5206 Sec. 1, 2007)

1.130 Wetland, Geologically Hazardous Areas, and Habitat Conservation Areas – General Report Requirements

1. Prepared by qualified professional. If required by Section 1.1.120, the applicant shall submit a report prepared by a qualified professional as defined herein.
2. Incorporate the most current, accurate, and complete scientific and technical information available that is applicable to the issues of concern. The context, scope, magnitude, significance, and potential limitations of the scientific information should be considered. At a minimum, make use of and, where applicable, incorporate all available scientific information, aerial photography, inventory data, technical assistance materials, manuals and services from reliable sources of science. The report shall use scientifically valid methods and studies in the analysis of data and field reconnaissance and reference the source of science used. The report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this Chapter.
3. Minimum report contents. At a minimum, the report shall contain the following:
 - a. The name and contact information of the applicant, a description of the proposal, and identification of the permit requested;
 - b. A copy of the site plan for the development proposal showing:
 - (i) Identified critical areas, buffers, and the development proposal with dimensions;
 - (ii) Limits of any areas to be cleared; and
 - (iii) A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations, consistent with the current edition of the City of Kennewick Construction Standards.
 - c. The names and professional qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
 - d. Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area;
 - e. A statement specifying the accuracy of the report, and all assumptions made and relied upon;
 - f. An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;
 - g. An analysis of site development alternatives;
 - h. A description of reasonable efforts made to apply mitigation sequencing pursuant to Section 1.160 to avoid, minimize, and mitigate impacts to critical areas;
 - i. Plans for adequate mitigation, as needed, to offset any impacts, in accordance with Section 1.150 through 1.190, including, but not limited to:
 - (i) The impacts of any proposed development within or adjacent to a critical area or buffer on the critical area; and
 - (ii) The impacts of any proposed alteration of a critical area or buffer on the development proposal, other properties and the environment;

- j. A discussion of the performance standards applicable to the critical area and proposed activity;
 - k. Financial guarantees to ensure compliance, if applicable; and
4. Unless otherwise provided, a report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Planning Director.

1.140 Wetland, Habitat Conservation, and Geologically Hazardous Areas – Modifications to Report Requirements

- 1. Limitations to study area. The Planning Director may limit the required geographic area of the critical area report as appropriate if:
 - a. The applicant, with assistance from the City, cannot obtain permission to access properties adjacent to the project area; or
 - b. The proposed activity will affect only a limited part of the subject site.
- 2. Modifications to required contents. The applicant may consult with the Planning Director prior to or during preparation of the report to obtain City concurrence on modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation. (Ord. 5206 Sec. 1, 2007)

1.150 Mitigation Requirements

- 1. The applicant shall avoid all impacts that degrade the functions and values of a critical area or areas. Unless otherwise provided in this Chapter, if alteration to the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated in accordance with the critical area report and SEPA requirements.
- 2. Mitigation shall be in-kind and on-site, when possible, and sufficient to maintain the functions and values of the critical area, and to prevent risk from a hazard posed by a critical area.
- 3. Mitigation shall not be implemented until a) after City receipt of a report or other applicable information that includes a mitigation plan, and mitigation shall be in accordance with the provisions of the report or other applicable information; and b) city approval of the underlying permit(s).
- 4. Mitigation monitoring shall be required for a minimum of five (5) years. The project mitigation plan shall include monitoring elements that ensure certainty of success for the project natural value and functions. If the mitigation goals are not obtained within the initial five-year period, the applicant remains responsible for restoration of the natural values and functions until the mitigation goals agreed to in the mitigation plan are achieved.

1.160 Mitigation Sequencing

Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed,

such alteration shall be avoided, minimized, or compensated for in the following order of preference:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
3. Rectifying the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by repairing, enhancing, or restoring the affected environment to the historical conditions, or pre-development, or the conditions existing at the time of the initiation of the project;
4. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through approval engineered or other methods;
5. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
6. Compensating for the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and fish and wildlife habitat, and vegetation conservation areas by replacing, enhancing, or providing substitute resources or environments; and
7. Monitoring the hazard or other required mitigation for a reasonable period of time and taking remedial action when necessary.

Mitigation for individual actions may include a combination of the above measures.

1.170 Compensatory Mitigation

Compensatory mitigation shall be allowed only after mitigation sequencing is applied and higher priority means of mitigation are determined to be infeasible. Requirements for compensatory mitigation must include provisions for:

1. Mitigation replacement ratios or a similar method of addressing the following:
 - a. The risk of failure of the compensatory mitigation action
 - b. The length of time it will take the compensatory mitigation action to adequately replace the impacted wetland functions and values;
 - c. The gain or loss of the type, quality, and quantity of the ecological functions of the compensation wetland as compared with the impacted wetland.
2. Establishment of performance standards for evaluating the success of compensatory mitigation actions;
3. Establishment of long-term monitoring and reporting procedures to determine if performance standards are met; and
4. Establishment of long-term protection and management of compensatory mitigation sites.

Credits from a certified mitigation bank may be used to compensate for unavoidable impacts.

1.180 Mitigation Plan Requirements

When mitigation is required, the applicant shall submit to the City a mitigation plan as part of the critical area report or other applicable information. The goals and objectives will be related to the functions and values of the impacted critical area, they include:

1. Environmental goals and objectives. The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:
 - a. A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities;
 - b. A review of the scientific and technical information supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed; and
 - c. An analysis of the likelihood of success of the compensation project.
2. Performance standards. The mitigation plan shall address the applicable performance standards identified in this Chapter.
3. Detailed construction plans. The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as:
 - a. The proposed construction sequence, timing, and duration;
 - b. Grading and excavation details;
 - c. Erosion and sediment control features;
 - d. A vegetation planting plan specifying plant species, quantities, locations, size, spacing, and density; and
 - e. Measures to protect and maintain plants until established.
 - f. These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.
4. Monitoring program. The mitigation plan shall include a program for monitoring construction of the compensation project, and for assessing a completed project. A protocol shall be included outlining the schedule for site monitoring in years 1, 3 and 5 after site construction, and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. At a minimum, a monitoring report shall be submitted to document mitigation plan performance in year 5 after site construction.
5. Contingency plan. The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.
6. Financial guarantees. The mitigation plan shall include financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented. Financial

guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with Section 1.230.

7. Other permits. Other local, state, and federal regulatory jurisdictions may require permits for habitat mitigation projects. The applicant shall comply with all other appropriate regulatory permits, agreements, and authority, as required by each respective jurisdiction.

1.190 Unauthorized Critical Area Alterations and Enforcement

1. When a critical area or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored. The City shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, replacement or where determined appropriate by the Planning Director, mitigation measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Chapter and other applicable city codes governing the underlying permit(s). Administrative procedures including but not limited to review and appeal of City actions related to unauthorized critical area alterations are outlined in Section 1.060 and KMC 18.68.300.
2. Restoration/mitigation plan required. All development work shall remain stopped until a restoration/mitigation plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional and shall describe how the actions proposed meet the minimum requirements described in Subsection C and/or mitigation requirements outlined in Sections 1.150, 1.160, and 1.170, if mitigation is determined to be appropriate by the Planning Director. The Planning Director shall, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.
3. Minimum performance standards for restoration or mitigation.
 - a. For alterations to critical aquifer recharge areas, frequently flooded areas, wetlands, and habitat conservation areas the following minimum performance standards shall be met for the restoration or mitigation of impacts to a critical area, provided that if the violator can demonstrate in a restoration/mitigation plan that greater functional and habitat values can be obtained, these standards may be modified by the Planning Director:
 - (i) The historic structural and functional values shall be restored, including water quality and habitat functions;
 - (ii) The historic soil types and configuration shall be replicated;
 - (iii) The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities; and
 - (iv) The historic functions and values should be replicated at the location of the alteration.
 - b. For alterations to flood and geological hazards, the following minimum performance standards shall be met for the restoration of a critical area, provided that, if the violator can demonstrate that greater safety can be obtained, these standards may be modified:

- (i) The hazard shall be reduced to a level equal to, or less than, the pre-development hazard;
 - (ii) Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and
 - (iii) The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.
4. Penalties and Remedies - see KMC 18.68.230(7) and 300.

1.200 Critical Area Markers and Signs

The critical area or buffer shall be identified with temporary signs prior to any site alteration. Such temporary signs may be replaced with permanent signs, as determined appropriate by the Planning Director.

1.210 Native Growth Habitat Areas

1. Unless otherwise required in this Chapter, native growth habitat areas shall only be used in development proposals for subdivisions, short subdivisions, planned unit developments, and binding site plans to delineate and protect those contiguous critical areas and buffers listed below:
 - a. All landslide hazard areas and buffers;
 - b. All wetlands and buffers;
 - c. All habitat conservation areas; and
 - d. All other lands to be protected from alterations as conditioned by project approval.
2. See Exhibits 1 and 4, or the latest revisions of these maps for designated wetlands, erosion hazard areas and habitat conservation areas.

1.220 Building Setbacks

Unless otherwise provided, buildings and other structures shall be set back a distance of fifteen (15) feet from the edges of all critical area buffers or from the edges of all critical areas, if no buffers are required except for Clover Island High Intensity Environment where building setbacks are zero (0) feet from such edges of buffers. The Planning Director can modify or reduce setback requirements provided that the reduced setback will have no net loss of ecological functions on the shoreline. The following may be allowed in the building setback area:

1. Landscaping;
2. Paths or walkways;
3. Building overhangs if such overhangs do not extend more than eighteen (18) inches into the setback area

1.230 Bonds to Ensure Mitigation, Maintenance, and Monitoring

1. Mitigation required pursuant to a development proposal should be completed prior to City final permit approval. When it is not feasible for mitigation to be completed prior to City final permit approval, such as final plat approval or final building inspection, the

City shall require the applicant to post a performance bond in a form and amount deemed acceptable by the City.

2. The bond shall be in the amount of one hundred and twenty-five percent (125%) of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater.
3. The performance bonds shall remain in effect until the City determines, in writing, that the standards bonded for have been met. Bonds shall be held by the City for a minimum of five (5) years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods when necessary.
4. Depletion, failure, or collection of bond funds shall not discharge the obligation of an applicant or violator to complete required mitigation, maintenance, monitoring, or restoration.
5. Public development proposals shall be relieved from having to comply with the bonding requirements of this section if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.
6. Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within thirty (30) days after it is due or comply with other provisions of a mitigation plan shall constitute a default, and the City may demand payment of any financial guarantees or require other action authorized by the City code or any other law.
7. Any funds recovered pursuant to this Section shall be used to complete the required mitigation.

1.240 Critical Area Inspections

Reasonable access to the site shall be provided to the City, state, and federal agency review staff for the purposes of inspections during any proposal review, restoration, emergency action, or monitoring period. Additionally, the City or its agent shall have reasonable access to the site for completing necessary remediation work in the event of noncompliance.

CRITICAL AREAS – WETLANDS

SECTION:

- 2.010: Designation, Rating and Mapping Wetlands
- 2.020: Activities Allowed in Wetlands
- 2.030: Wetlands – Additional Requirements
- 2.040: Performance Standards – General Requirements
- 2.050: Performance Standards – Mitigation Requirements
- 2.060: Performance Standards – Specific Activities and Uses
- 2.070: Wetland Buffer Averaging

2.010 Designation, Rating and Mapping Wetlands

1. Designating wetlands. Wetlands are those areas, designated in accordance with the Washington State Wetland Identification and Delineation Manual, 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 adapted for life in saturated soil conditions. All areas within the City of Kennewick meeting the wetland designation criteria in the Washington State Identification and Delineation Manual (Ecology Publication 96-94), regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.
2. Wetland ratings. Wetland Types I - IV shall be rated according to the Department of Ecology wetland rating system found in the Washington State Wetland Rating for Eastern Washington, (Ecology Publication #04-06-15). This document contains definitions and methods for determining if specific criteria are met by a particular wetland. The City of Kennewick contains few wetland areas and most of these have been subject to disturbance in the past. The City has evaluated the most significant wetland areas that are known within the City Limits and its urban growth boundary under the Ecology Rating System. The wetlands identified in the City's shoreline area, include but are not limited to wetlands within Columbia Park and the Columbia River shoreline zone, including Duffy's Pond near Clover Island. These wetlands all classify as Category III Wetlands. This effort leads the City to believe that any additional wetlands that may occur within the City limits will rank as Category III Wetlands or as Category IV wetlands and that it is unlikely that higher quality wetlands occur in the City of Kennewick. Provisions have been provided for Category I and II wetlands, should there be a future determination these exist in Kennewick.
3. Mapping. The approximate location and extent of known wetlands are shown on the adopted critical area map (Exhibit 1, or the latest revision of this map). This information is to be used as a guide for the City, project applicants and/or property owners, and may be updated as new information becomes available. In some instances (uncertified boundaries), it is a reference and does not provide a final critical area designation.

The exact location of a wetland's boundary shall be determined through the performance of a field investigation by a qualified professional applying the

2.020 Activities Allowed in Wetlands

The activities listed below are allowed in wetlands in addition to those activities listed in, and consistent with, the provisions established in Section 1.110, and do not require submission of a critical area report, except where such activities result in the loss to the functions and values of a wetland or wetland buffer. These activities include:

1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife that does not entail changing the structure, or functions of the existing wetland.
2. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the wetland by changing existing topography, water conditions or water sources.
3. Boat mooring.
4. Recreational and educational activities.
5. Research.

2.030 Wetlands – Additional Requirements

1. Prepared by a qualified professional. A qualified professional shall prepare a critical areas report for wetlands. The City shall determine whether a person is a qualified professional based on criteria established in Qualified Individuals listed in KMC 1.120(87) WAC 395-195-905(4).
2. Area addressed in critical area report. The following areas shall be addressed in a critical area report for wetlands:
 - a. The project area of the proposed activity;
 - b. All wetlands and recommended buffers within two hundred (200) feet of the project area (critical area reports should consider wetlands and other critical areas within two hundred (200) feet due to the maximum potential buffer recommended for wetlands); and
 - c. All shoreline areas, water features, flood plains, and other critical areas, and related buffers within two hundred (200) feet of the project area.
3. Wetland analysis. In addition the minimum required contents of critical area reports in Section 1.130 and 1.140, a critical area report for wetlands shall contain an analysis of the wetlands including the following site and proposal-related information at a minimum:
 - a. A written assessment and accompanying maps of the wetlands and buffers within two hundred (200) feet of the project area, or one-half mile upstream or downstream if the wetland is a riverine wetland, including the following information at a minimum:
 - (i) Wetland delineation and required buffers;
 - (ii) Existing wetland acreage;
 - (iii) Wetland category; vegetative, faunal, and hydrologic characteristics;

- (iv) Soil and substrate conditions; and
 - b. A discussion of measures, including avoidance, minimization and mitigation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land use activity.
 - c. Proposed mitigation, if needed, including a written assessment and accompanying maps of the mitigation area, including the following information at a minimum:
 - (i) Existing wetland acreage and proposed impact area;
 - (ii) Vegetative, faunal, and hydrologic conditions;
 - (iii) Relationship within watershed and to existing waterbodies;
 - (iv) Soil and substrate conditions, topographic elevations;
 - (v) Existing and proposed adjacent site conditions;
 - (vi) Required wetland buffers; and
 - (vii) Property ownership.
 - d. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs.
4. Additional information may be required. When appropriate, the City may also require the critical area report to include an evaluation by the Department of Ecology or an independent qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, and to include any recommendations as appropriate.

2.040 Performance Standards – General Requirements

1. Activities may only be permitted in a wetland or wetland buffer if the applicant can show that the proposed activity will not degrade the functions and values of the wetland and other critical areas.
2. Activities and uses shall be prohibited from wetlands and wetland buffers, except as provided for in this Chapter.
3. Wetland buffers.
 - a. Standard buffer widths. The standard buffer widths are based on wetland category, intensity of impacts, and wetland functions or special characteristics. The buffer is to be vegetated with native plant communities that are appropriate for the site conditions. If vegetation in the buffer is disturbed (grazed or mowed) proponents planning changes to land that will increase impacts to wetlands need to rehabilitate the buffer with native plant communities that are appropriate for the site conditions. The width of the buffer is measured in horizontal distance.

Table 1
Types of proposed land use that can result in high, moderate, and low levels of impacts to adjacent wetlands.

Level of Impact from Proposed Change in Land Use	Types of Land Use Based on Common Zoning Designations
High	Commercial Urban Industrial Institutional Retail sales Residential (more than 1 unit/acre) Conversion to high-intensity agriculture (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling and raising and maintaining animals, etc.) High-intensity recreation (golf courses, ball fields, etc.) Hobby farms
Moderate	Residential (1 unit/acre or less) Moderate-intensity open space (parks with biking, jogging, etc.) Conversion to moderate-intensity agriculture (orchards, hay fields, etc.) Paved trails Building of logging roads Utility corridor or right-of-way shared by several utilities and including access/maintenance road
Low	Forestry (cutting of trees only) Low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.) Unpaved trails Utility corridor without a maintenance road and little or no vegetation management.

Table 2 Buffer Widths		
Wetland Characteristics	Buffer Width by Impact of Proposed Land Use	Other Measures Recommended for Protection
Category IV Wetlands (For wetlands scoring less than 30 points or more for all functions)		
Score for all 3 basic functions is less than 30 points	Low – 25 ft Moderate – 40 ft High – 50 ft	No recommendations at this time
Category III Wetlands (For wetlands scoring 30-50 points or more for all functions)		
Moderate level of function for habitat (score for habitat 20-28 points)	Low – 75ft Moderate – 110ft High – 150 ft	No recommendations at this time
Not meeting above characteristic	Low – 40 ft Moderate – 60 ft High – 80 ft	No recommendations at this time
Category II Wetlands (For wetlands that score 51-69 points or more for all functions or having the “Special Characteristics” identified in the rating system)		
High level of function for habitat (score for habitat 29-36 points)	Low – 100 ft Moderate – 150 ft High – 200 ft	Maintain connections to other habitat areas.
Moderate level of function for habitat (score for habitat 20-28 points)	Low – 75ft Moderate – 110ft High – 150 ft	No recommendations at this time
High level of function for water quality improvement and low for habitat (score for water quality 24-32 points; habitat less than 20 points)	Low – 50 ft Moderate – 75 ft High – 100 ft	No additional surface discharges of untreated runoff
Vernal pool	Low – 100 ft Moderate – 150 ft High – 200 ft OR Develop a regional plan to protect the most important vernal pool complexes – buffers of vernal pools outside protection zones can then be reduced to: Low – 40 ft Moderate - 60 ft High – 80 ft	No intensive grazing or tilling of wetland
Riparian forest	Buffer width to be based on score for habitat functions or water quality functions	Riparian forest wetlands need to be protected at a watershed or subbasin scale Other protection based on needs to protect habitat and/or water quality functions
Not meeting above characteristic	Low – 50 ft Moderate – 75 ft High – 100 ft	No recommendations at this time ¹
Category I Wetlands (For wetlands that score 70 points or more for all functions or having the “Special Characteristics” identified in the rating system)		
Natural Heritage Wetlands	Low – 125 ft Moderate – 190 ft High – 250 ft	No additional surface discharges to wetland or its tributaries. No septic systems within 300 ft of wetland. Restore degraded parts of buffer.
Bogs	Low – 125 ft Moderate – 190 ft High – 250 ft	No additional surface discharges to wetland or its tributaries.

Table 2 Buffer Widths		
Wetland Characteristics	Buffer Width by Impact of Proposed Land Use	Other Measures Recommended for Protection
		Restore degraded parts of buffer.
Alkali	Low – 100 ft Moderate – 150 ft High – 200 ft	No additional surface water discharges to wetland or its tributaries Restore degraded parts of buffer
Forested	Buffer width based on score for habitat functions or water quality functions	If forested wetland scores high for habitat, need to maintain connections to other habitat areas.
High level of function for habitat (score for habitat 29-36 points)	Low – 100 ft Moderate – 150 ft High – 200 ft	Restore degraded parts of buffer. Maintain connections to other habitat areas
Moderate level of function for habitat (score for habitat 20-28 points)	Low – 75ft Moderate – 110ft High – 150 ft	No recommendations at this time
High level of function for water quality improvement (24-32 points) and low for habitat (less than 20 points)	Low – 50 ft Moderate – 75 ft High – 100 ft	No additional surface discharges of untreated runoff
Not meeting above characteristics	Low – 50 ft Moderate – 75 ft High – 100 ft	No recommendations at this time

- b. Measurement of wetland buffers. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category and the proposed land use. The buffer for a wetland created, restored, or enhanced as compensation for wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland.

2.050 Performance Standards – Mitigation Requirements

When the acreage required for compensatory mitigation is divided by the acreage of impact, the result is a number known variously as a replacement, compensation, or mitigation ratio. Compensatory mitigation ratios are used to help ensure that compensatory mitigation actions are adequate to offset unavoidable wetland impacts by requiring a greater amount of mitigation area than the area of impact. Requiring greater mitigation area helps compensate for the risk that a mitigation action will fail and for the time lag that occurs between the wetland impact and achieving a fully functioning mitigation site.

1. Definitions of Types of Compensatory Mitigation. The ratios presented are based on the type of compensatory mitigation proposed (e.g., restoration, creation, and enhancement). In its Regulatory Guidance Letter 02-02, the U.S. Army Corps of Engineers provided definitions for these types of compensatory mitigation. For consistency, the authors of this document use the same definitions which are provided under Compensatory Mitigation in Section 1.010 and 1.170.

**Table 3
Mitigation Ratios for Projects in Kennewick**

Category and Type of Wetland Impacts	Re-establishment or Creation	Rehabilitation Only¹	Re-establishment or Creation (R/C) and Rehabilitation (RH)¹	Re-establishment or Creation (R/C) and Enhancement (E)¹	Enhancement Only¹
All Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1
All Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category II Forested	4:1	8:1	1:1 R/C and 4:1 RH	1:1 R/C and 6:1 E	16:1
Category II Vernal Pool	2:1 Compensation must be seasonally ponded wetland	4:1 Compensation must be seasonally ponded wetland	1:1 R/C and 2:1 RH	Case-by-case	Case-by-case
All other Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Natural Heritage site	Not considered possible ²	6:1 Rehabilitation of a Natural Heritage site	R/C Not considered possible ²	R/C Not considered possible ²	Case-by-base
Category I Alkali	Not considered possible ²	6:1 Rehabilitation of an alkali wetland	R/C Not considered possible ²	R/C Not considered possible ²	Case-by-case
Category I Bog	Not considered possible ²	6:1 Rehabilitation of a bog	R/C Not considered possible ²	R/C Not considered possible ²	Case-by-case

1. These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

2. Natural Heritage sites, alkali wetland, and bogs are considered irreplaceable wetlands because they perform some functions that cannot be replaced through compensatory mitigation. Impacts to such wetlands would therefore result in a net loss of some functions no matter what kind of compensation is proposed.

2. Mitigation maintenance and monitoring. Mitigation areas will be maintained and monitored for a minimum of five years after the mitigation has been completed. In

instances where the desired mitigation result is a forested wetland, a monitoring period of up to 10 years may be required. Mitigation planting survival will be 100% for the first year, and 80% for each of the 4 years following. Mitigation must be installed no later than the next growing season after completion of site improvements, unless otherwise approved by the Planning Director.

- a. Where necessary, a permanent means of irrigation shall be installed for the mitigation plantings that are designed by a landscape architect or equivalent professional, as approved by the Planning Director. The design shall meet the specific needs of riparian and shrub steppe vegetation.
- b. Monitoring reports by the biologist must include verification that the planting areas have less than 20% total non-native /invasive plant cover consisting of exotic and/or invasive species. Exotic and invasive species may include any species on the state noxious weed list, or considered a noxious or problem weed by the Natural Conservation Services Department or local conservation districts.
- c. Onsite monitoring and monitoring reports shall be submitted to Planning Director 1 year after mitigation installation; 3 years after mitigation installation; and 5 years after mitigation installation. Monitoring reports shall be submitted by a qualified professional biologist. The biologist must verify that the conditions of approval and provisions in the fish and wildlife management and mitigation plan have been satisfied.
- d. Mitigation sites shall be maintained to ensure that the mitigation and management plan objectives are successful. Maintenance shall include corrective actions to rectify problems, include rigorous, as-needed elimination of undesirable plants; protection of shrubs and small trees from competition by grasses and herbaceous plants, and repair and replacement of any dead plants.
- e. A performance bond may be required to ensure completion and success of the proposed mitigation.

2.060 Performance Standards – Specific Activities and Uses

The following activities may be permitted within a wetland buffer in accordance with the review procedures of this Chapter; provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

1. Conservation and restoration activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife;
2. Passive recreation. Passive recreation facilities designed and in accordance with the critical area report, including:
 - a. Walkways and trails, provided that those pathways that are generally parallel to the perimeter of the wetland shall be located in the outer twenty-five percent (25%) of the buffer area;
 - b. Wildlife viewing structures; and
 - c. Fishing areas accessed by foot.
3. Stormwater management facilities. Stormwater management facilities are not allowed in buffers of Category I or II wetlands. Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:

- a. No other location is feasible; and
 - b. The location of such facilities will not degrade the functions or values of the wetland.
4. Subdivisions. The subdivision and short subdivision of land in wetlands and associated buffers is subject to the following:
- a. Land that is located wholly within a wetland or its buffer may not be subdivided;
 - b. Land that is located partially within a wetland or its buffer may be divided provided that an accessible and contiguous portion of each new lot is:
 - (i) Located outside of the wetland and its buffer; and
 - (ii) Meets the minimum lot size requirements of the City zoning code (Title 18).
 - c. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only if the City determines that no other feasible alternative exists in and when consistent with this Chapter.
5. Other uses. The following uses shall achieve, at a minimum, no net loss of wetland area and functions, including lost time when the wetland does not perform the function:
- a. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;
 - b. The dumping, discharging, or filling with any material, including discharges of storm water and domestic, commercial, or industrial wastewater;
 - c. The draining, flooding, or disturbing of the water level, duration of inundation, or water table;
 - d. The driving of pilings;
 - e. The placing of obstructions;
 - f. The construction, reconstruction, demolition, or expansion of any structure;
 - g. Significant vegetation removal, provided that these activities are not part of a forest practice governed under chapter 76.09 RCW and its rules;
 - h. Other uses or development that results in a significant ecological impact to the physical, chemical, or biological characteristics of wetlands; or
 - i. Activities reducing the functions of buffers described in (c)(i)(D) of this subsection.

2.070 Wetland Buffer Averaging

- 1. Standard buffer widths may be modified by the City for a particular development proposal by averaging the required standard buffer widths for that development based on a report submitted by the applicant and prepared by a qualified professional approved by the city (e.g. wetland biologist), and shall only be allowed where the applicant demonstrates all of the following:
 - a. Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property;
 - b. The designated wetland contains variations in sensitivity due to existing physical characteristics;

- c. The width averaging will not adversely impact the designated wetland's functional value;
- d. The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging; and
- e. The buffer width (see Table 2) shall not be reduced, at any location, by more than 25 percent of the required buffer.

Appendix A-2
CHAPTER 3

CRITICAL AREAS – CRITICAL AQUIFER RECHARGE AREAS

SECTION:

- 3.010: Critical Aquifer Recharge Areas Designation
- 3.020: Mapping of Critical Aquifer Recharge Areas
- 3.030: Regulation
- 3.040: Performance Standards – General Requirements
- 3.050: Performance Standards – Specific Uses
- 3.060: Uses Prohibited from Critical Aquifer Recharge Areas

3.010 Critical Aquifer Recharge Areas Designation

Critical aquifer recharge areas (CARA) are those areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2). CARA has prevailing geologic conditions associated with infiltration rates that create a high potential for contamination of ground water resources or contribute significantly to the replenishment of ground water. The following areas have been identified based on local conditions:

1. Wellhead protection areas. Wellhead protection areas shall be defined by the boundaries of the ten (10) year time of ground water travel, or boundaries established using alternate criteria approved by the Department of Health in those settings where ground water time of travel is not a reasonable delineation criterion, in accordance with WAC 246-290-135.

3.020 Mapping of Critical Aquifer Recharge Areas

1. The approximate location and extent of critical aquifer recharge areas are shown on the adopted critical area map (Exhibit 2: or the latest revision of this map).
2. This map is to be used as a guide for the City, project applicants and/or property owners, and will be updated as new information becomes available.

3.030 Regulation

The following are in place to protect critical aquifer recharge areas and regulate activities that might potentially impact these areas.

1. City of Kennewick Construction Standards (KMC 5.56).
2. City of Kennewick Wellhead Protection Plan.
3. State and federal regulations applicable to specific uses including but not limited to those provided in Sections 3.050 and 3.060.

3.040 Performance Standards – General Requirements

1. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not adversely affect the recharging of the aquifer and that the proposed activity will not cause contaminants to enter the aquifer.

2. The proposed activity must comply with the water source protection requirements and recommendations of the federal Environmental Protection Agency, state Department of Health, and the Benton County Health Department, and as provided in the City's wellhead protection plan.
3. The proposed activity must be designed and constructed in accordance with erosion control and surface/stormwater management requirements in current City regulations.

3.050 Performance Standards – Specific Uses

1. Storage Tanks. All storage tanks proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to the following requirements:
 - a. Underground Tanks. All new underground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:
 - (i) Prevent releases due to corrosion or structural failure for the operational life of the tank;
 - (ii) Be protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substances; and,
 - (iii) Use material in the construction or lining of the tank that is compatible with the substance to be stored.
 - b. Aboveground Tanks. All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:
 - (i) Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;
 - (ii) Have a primary containment area enclosing or underlying the tank or part thereof; and
 - (iii) A secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.
2. Vehicle Repair and Servicing. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.
3. Spreading or injection of reclaimed water. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the departments of Ecology and Health.
 - a. Surface spreading must meet the ground water recharge criteria given in Chapter 90.46.080 RCW and Chapter 90.46.010(10).
 - b. Direct injection must be in accordance with the standards developed by authority of Chapter 90.46.042 RCW.

4. State and Federal Regulations. The uses listed below shall be conditioned as necessary to protect critical aquifer recharge areas in accordance with the applicable state and federal regulations:

Table 4 Statutes, Regulations, and Guidance Pertaining to Activities Impacting Ground Water	
Activity	Statute - Regulation - Guidance
Above Ground Storage Tanks	Chapter 173-303 -640 WAC
Animal Feedlots	Chapter 173-216 WAC, Chapter 173-220 WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)
Below Ground Storage Tanks	Chapter 173-360 WAC
Chemical Treatment Storage and Disposal Facilities	Chapter 173-303-182 WAC
Hazardous Waste Generator (Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)	Chapter 173-303 WAC
Injection Wells	Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)
Oil and Gas Drilling	Chapter 332-12-450 WAC, WAC, Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC
On-Site Sewage Systems (< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapter 15.54 RCW, Chapter 17.21 RCW
Sawmills	Chapter 173-303 WAC, 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	Chapter 332-18-015 WAC
Waste Water Application to Land Surface	Chapter 173-216 WAC, Chapter 173-200 WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture

3.060 Uses Prohibited From Critical Aquifer Recharge Areas

The following activities and uses are prohibited in critical aquifer recharge areas (prohibited uses are based on “Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances,” by Ecology, July 2000, Publication #97-30):

1. Landfills. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, wood waste, and inert and demolition waste landfills;
2. Underground injection wells. Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells (Chapter 173-218 WAC).

CRITICAL AREAS - FREQUENTLY FLOODED AREAS

SECTION:

4.010: Classification

4.020: Designation

4.030: Regulation

4.010 Classification

The flood areas in the City of Kennewick are classified as either one of two types:

1. **Floodway:** Floodways are defined as the channel of a stream and adjacent land areas which are required to carry and discharge the flood water or flood flows of any river or stream associated with a regulatory flood.
2. **Flood Fringe:** The flood fringe is defined as that land area which is outside a stream's floodway, but is subject to periodic inundation due to flooding, associated with a regulatory flood.

These flood areas have been accurately delineated based on hydrologic and hydraulic studies completed by the Federal Emergency Management Agency in 1981, and as subsequently revised and amended.

The methodology and detail of these studies is accepted as the best available.

4.020 Designation

1. All areas within the City meeting the frequently flooded designation criteria in the Identification and Delineation Manual, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.
2. The approximate location and extent of frequently flooded areas are shown on the adopted Critical Areas Map (Exhibit 3, or the latest revision of this map). Maps from the Federal Emergency Management Agency, as part of the National Flood Insurance Program (completed May, 1981; last revised June 15, 1994), clearly delineate frequently flooded areas. The present boundaries of the floodway and 100-year floodplain are those designated on the flood boundary and floodway maps contained in the Federal Emergency Management Agency report entitled, "Flood Insurance Study – City of Kennewick, Washington" (completed May, 1981; last revised June 15, 1994) and areas of special flood hazard outlined on the City of Kennewick Zoning Map.

4.030 Regulation

Title 15 (Buildings and Construction) and Chapter 18.66 (Flood Damage Protection) of the City of Kennewick Code regulate proposed activities adjacent to or within frequently flooded areas. If allowed, any structures permitted in the designated flood areas are subject to the flood-proofing regulations provided in Title 15 and Chapter 18.66.

Appendix A-2
CHAPTER 5

CRITICAL AREAS – GEOLOGICALLY HAZARDOUS AREAS

SECTION:

- 5.010: Designation of Geologically Hazardous Areas
- 5.020: Designation of Specific Hazard Areas
- 5.030: Classification of Geologically Hazardous Areas
- 5.040: Mapping of Geologically Hazardous Areas
- 5.050: Activities Allowed in Geologically Hazardous Areas
- 5.060: Critical Area Report – Additional Requirements for Geologically Hazardous Areas
- 5.070: Critical Area Report – Additional Requirements for Specific Hazards
- 5.080: Performance Standards – Basic Requirements
- 5.090: Performance Standards – Specific Hazards

5.010 Designation of Geologically Hazardous Areas

Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Such incompatible development may not only place itself at risk, but also may increase the hazard to surrounding development and use. Areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area (See WAC 365-190-080(4)(a)):

1. Erosion hazard;
2. Landslide hazard;
3. Seismic hazard;
4. Extreme slope hazard;
5. Other geological events including mass wasting, debris flows, rock falls, and differential settlement.

5.020 Designation of Specific Hazard Areas

1. Erosion hazard areas. Erosion hazard areas are those areas identified by the U.S. Department of Agriculture - Natural Resources Conservation Service (USDA-NRCS) as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard (See WAC 365-190-080(4)(c). Rill erosion tends to occur on slopes, particularly steep slopes with easily-erodible soils or poor vegetation. Erosion hazard areas also include those areas with slope greater than fifteen percent (15%).
2. Landslide hazard areas. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope

(gradient), slope aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to the following:

- a. Areas of historic failures, such as (See WAC 365-190-070(4)(d)(i)):
 - (i) Those areas delineated by the USDA-NRCS as having a "severe" limitation for building site development for factors other than slope for one or more types of building development;
 - (ii) Those areas mapped by the Department of Ecology (Coastal Zone Atlas) or the Department of Natural Resources (slope stability mapping) as unstable ("U" or class 3), unstable old slides ("UOS" or class 4), or unstable recent slides ("URS" or class 5); or
 - (iii) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Department of Natural Resources;
 - b. Areas with all three of the following characteristics (See WAC 365-190-080(4)(d)(ii)):
 - (i) Slopes steeper than fifteen percent (15%); and
 - (ii) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - (iii) Springs or ground water seepage;
 - c. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials (See WAC 365-190-080(4)(d)(iv));
 - d. Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking (See WAC 365-190-080(4)(d)(v));
 - e. Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action (See WAC 365-190-080(4)(d)(vi));
 - f. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding (See WAC 365-190-080(4)(d)(vii)); and
 - g. Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten (10) feet of vertical relief (See WAC 365-190-080(4)(d)(ix)).
3. Seismic hazard areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by (See WAC 365-180-080(4)(e)):
- a. The magnitude of an earthquake;
 - b. The distance from the source of an earthquake;
 - c. The type of thickness of geologic materials at the surface; and

- d. The type of subsurface geologic structure. Settlement and soil liquefaction conditions occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with a shallow ground water table.
- 4. Extreme slope hazard areas. Extreme slope hazard areas have severe erosion potential and a high probability of slope failure and landslide occurrence.
- 5. Other hazard areas. Geologically hazardous areas shall also include areas determined by the Planning Director to be susceptible to other geological events including mass wasting, debris flows, rock falls, and differential settlement.

5.030 Classification of Geologically Hazardous Areas

The level of risk for each geologic hazard type is described in this section. Documentation of specific areas in which a known or suspected risk exists for each of the following hazard areas is provided in the City Critical Areas Map (see Exhibit 4: Geologically Hazardous Areas). The provisions of this Chapter apply only to those areas for which a known or suspected risk exists.

Table 5 Documentation and Data Sources for Risk Classifications	
Classification	Documentation and Data Sources
Known or Suspected Risk	Documentation or projection of the hazard by a qualified professional exists.
Low or No Risk	Documentation exists by a qualified professional regarding low hazard risk or lack of hazard.
Risk Unknown	Documentation, data, or projection of the hazard risk by a qualified professional are not available or sufficient to determine the presence or absence of a geologic hazard.

- 1. Erosion hazard areas – Known or suspected risk in steep areas.
- 2. Landslide hazard areas – Known or suspected risk in areas with slope > 15%.
- 3. Seismic hazard areas – Low or no risk
- 4. Extreme slope hazard areas – Known or suspected risk in areas with slope > 40%.
- 5. Other hazard areas - Other geologically hazardous areas may be designated by the City if documentation thereof is available.

5.040 Mapping of Geologically Hazardous Areas

- 1. The approximate location and extent of geologically hazardous areas containing known or suspected risk are shown on the adopted Critical Areas Map (Exhibit 4: or latest version of this map). The hazard areas outlined on this map are based on the following data:
 - a. USGS 10-meter Digital Elevation Model (slope);
 - b. USDA Soil Survey of Benton County Area, Washington;
 - c. Additional data as determined necessary by the City.

2. This map is to be used as a guide for the City, project applicants and/or property owners, and may be updated as new information becomes available. It is a reference and does not provide a final critical area designation.

5.050 Activities Allowed in Geologically Hazardous Areas

The following activities are allowed in geologically hazardous areas pursuant to Section 1.110, and do not require submission of a critical area report provided that the activity will not increase the risk of the hazard:

1. Erosion and landslide hazard areas. Except as otherwise provided for in this Chapter, only those activities approved and permitted consistent with the critical area report in accordance with this Chapter shall be allowed in erosion or landslide hazard areas.
2. Extreme slope hazard areas. Installation of fences may be allowed within an extreme slope hazard area.
3. Other hazard areas. The following activities may be allowed within other geologically hazardous areas:
 - a. Construction of new buildings with less than 3,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
 - b. Additions to existing residences that are 250 square feet or less; and
 - c. Installation of fences.

5.060 Critical Area Report – Additional Requirements for Geologically Hazardous Areas

1. Prepared by a qualified professional. A critical areas report for a geologically hazardous area shall be prepared by a geotechnical engineer or geologist, licensed in the state of Washington, with experience analyzing geologic, hydrologic, and ground water flow systems; or by a geologist who earns his or her livelihood from the field of geology and/or geotechnical analysis, with experience analyzing geologic, hydrologic and ground water flow systems, who has experience preparing reports for the relevant type of hazard. Preparation of these reports by a state of Washington registered geologist is preferred.
2. Area addressed in critical area report. The following areas shall be addressed in a critical area report for geologically hazardous areas:
 - a. The project area of the proposed activity; and
 - b. All geologically hazardous areas within two hundred (200) feet of the project area or that have potential to be affected by the proposal.
3. Geotechnical assessment. A critical area report for a geologically hazardous area shall contain an assessment of geological hazards including the following site and proposal-related information at a minimum:
 - a. Site and construction plans. The report shall include a copy of the site plans for the proposal showing:
 - (i) The type and extent of geologic hazard areas, and any other critical areas, and buffers on, adjacent to, within two hundred (200) feet of, or that are likely to impact the proposal;

- (ii) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;
 - (iii) The topography, in two-foot contours, of the project area and all hazard areas addressed in the report; and
 - (iv) Clearing limits.
 - b. Assessment of geological characteristics. The report shall include an assessment of the geologic characteristics and engineering properties of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted taxonomic classification systems in use in the region. The assessment shall include, but not be limited to:
 - (i) A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;
 - (ii) A detailed overview of the field investigations, published data and references; data and conclusions from past assessments of the site; and site specific measurements, test, investigations, or studies that support the identification of geologically hazardous areas; and
 - (iii) A description of the vulnerability of the site to seismic and other geologic events.
 - c. Analysis of proposal. The report shall contain a geotechnical analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property and affected adjacent properties; and
 - d. Minimum buffer and building setback. The report shall make a recommendation for the minimum no-disturbance buffer and minimum building setback from any geologic hazard based upon the geotechnical analysis.
- 4. Incorporation of previous study. Where a valid geotechnical report has been prepared within the last five (5) years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be incorporated into the required critical area report. The applicant shall submit a geotechnical assessment detailing any changed environmental conditions associated with the site.
- 5. Mitigation of long-term impacts. When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity.

5.070 Critical Area Report – Additional Requirements for Specific Hazards

In addition to the general critical area report requirements of Section 1.130, critical area reports for geologically hazardous areas must meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

1. Erosion, landslide and extreme slope hazard areas. In addition to the basic critical area report requirements, a critical area report for an erosion hazard or landslide hazard area shall include the following information at a minimum:
 - a. Site plan. The report shall include a copy of the site plan for the proposal showing:
 - (i) The height of slope, slope gradient, and cross section of the project area;
 - (ii) The location of springs, seeps, or other surface expressions of ground water on or within two hundred (200) feet of the project area or that have potential to be affected by the proposal (a distance of two hundred feet is suggested so that geological features that might affect the proposal are included in the critical area report. It may be necessary to include features further than two hundred feet from the project area in some instances, such as a series of related geological features that extend more than two hundred feet); and
 - (iii) The location and description of surface water runoff.
 - b. Geotechnical analysis. The geotechnical analysis shall specifically include:
 - (i) A description of the extent and type of vegetative cover;
 - (ii) An estimate of load capacity including surface and ground water conditions, public and private sewage disposal systems, fills and excavations and all structural development;
 - (iii) An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;
 - (iv) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a one hundred year storm event;
 - (v) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties.
 - (vi) A study of slope stability including an analysis of proposed angles of cut and fill and site grading;
 - (vii) Recommendations for building limitations, structural foundations, and an estimate of foundation settlement;
 - (viii) An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion;
 - c. Erosion and sediment control plan. For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in the City's Construction Standards;

- d. Drainage plan. The report shall include a drainage plan for the collection, transport, treatment, discharge and/or recycle of water. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area.
 - e. Mitigation plans. Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan and/or other means for maintaining long-term soil stability.
 - f. Monitoring surface waters. If the Planning Director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the critical area report shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the City.
2. Other geologically hazardous areas. In addition to the basic report requirements, the Planning Director may require additional information to be included in the critical area report when determined to be necessary to the review the proposed activity and the subject hazard. Additional information that may be required, includes, but is not limited to:
- a. Site plan. The site plan shall show all hazard areas located within two hundred (200) feet of the project area or that have potential to be affected by the proposal; and
 - b. Geotechnical analysis. The geotechnical analysis shall include a complete discussion of the potential impacts of the hazard on the project area and of the proposal on the hazard.

5.080 Performance Standards – General Requirements

- 1. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:
 - a. Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;
 - b. Will not adversely impact other critical areas;
 - c. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and
 - d. Are determined to be safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.
- 2. Critical facilities shall not be sited within geologically hazardous areas unless there is no other practical alternative.
- 3. In addition to the provisions of this Chapter, alterations of geologically hazardous areas or associated buffers must conform to City Construction Standards and building codes.

5.090 Performance Standards – Specific Hazards

1. Erosion and landslide hazard areas. Activities on sites containing erosion or landslide hazards shall meet the following requirements:
 - a. Buffer required. A buffer shall be established from all edges of erosion or landslide hazard areas. The size of the buffer shall be determined by the Planning Director to eliminate or minimize the risk of property damage, death or injury resulting from erosion and landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.
 - (i) Minimum buffer. The minimum buffer shall be equal to the height of the slope or fifty (50) feet, whichever is greater.
 - (ii) Buffer reduction. The buffer may be reduced to a minimum of ten (10) feet when a qualified professional demonstrates to the Planning Director's satisfaction that the reduction will adequately protect the proposed development, adjacent developments and uses and the subject critical area
 - (iii) Increased buffer. The buffer may be increased where the Planning Director determines a larger buffer is necessary to prevent risk of damage to proposed and existing development;
 - b. Alterations. Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a geotechnical analysis is submitted and determines that:
 - (i) The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
 - (ii) The development will not decrease slope stability on adjacent properties; and
 - (iii) Such alterations will not adversely impact other critical areas.
 - c. Construction Standards. Development within an erosion or landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design that deviates from one or more of these standards provides greater long-term slope stability while meeting all other provisions of this Chapter. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. In addition to those requirements outlined in Section 18.62.080, the basic development Construction Standards within geologically hazardous areas are:
 - (i) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the Uniform Building Code.
 - (ii) Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

- (iii) Structures and improvements shall minimize alterations to the natural contour of the slope and foundations shall be tiered where possible to conform to existing topography;
 - (iv) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
 - (v) The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
 - (vi) The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes;
 - (vii) Development shall be designed to minimize impervious lot coverage.
- d. Vegetation shall be retained. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited;
 - e. Utility lines and pipes. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.
 - f. Point discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:
 - (i) Conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge;
 - (ii) Discharged at flow durations matching predeveloped conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the predeveloped state; or
 - (iii) Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface and stormwater runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope;
 - g. Subdivisions. The division of land in erosion and landslide hazard areas and associated buffers is subject to the following:
 - (i) Land that is located wholly within an erosion or landslide hazard area or its buffer may not be subdivided. Land that is located partially within an erosion or landslide hazard area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of, and will not affect, the erosion or landslide hazard or its buffer.
 - (ii) Access roads and utilities may be permitted within the erosion or landslide hazard area and associated buffers if the City determines that no other feasible alternative exists.
 - h. Prohibited development. On-site sewage disposal systems, including drain fields, shall be prohibited within erosion and landslide hazard areas and related buffers.

2. Extreme slope hazard areas. Activities on sites containing extreme slope hazards shall be considered unbuildable. This includes, but is not limited to, construction of buildings, sewage disposal systems and roads. Construction of facilities shall not be permitted in extreme slope hazard areas
3. Other hazard areas. Activities on sites containing or adjacent to seismic or other geologically hazardous areas, shall meet the standards of Section 1.190.

Appendix A-2
CHAPTER 6

CRITICAL AREAS – FISH AND WILDLIFE HABITAT CONSERVATION AREAS

SECTION:

- 6.010: Designation of Fish and Wildlife Habitat Conservation Areas
- 6.020: Critical Area Report – Additional Requirements for Habitat Conservation Areas
- 6.030: Performance Standards – General Requirements
- 6.040: Performance Standards – Specific Habitats
- 6.050: Mitigation Ratio for Riparian Buffers
- 6.060: Riparian Buffer Averaging
- 6.070: Administrative Riparian Buffer Reduction

6.010 Designation of Fish and Wildlife Habitat Conservation Areas

1. Fish and wildlife habitat conservation areas include:
 - a. Areas where state or federal designated endangered, threatened, and sensitive species have a primary association.
 - (i) Federal designated endangered and threatened species are those fish, wildlife, and plant species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service should be consulted as necessary for current listing status.
 - (ii) State designated endangered, threatened, and sensitive species are those fish, wildlife and plant species native to the state of Washington identified by the state Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats. State designated endangered, threatened, and sensitive species are periodically recorded in WAC 232-12-014 (state endangered species), and WAC 232-12-011 (state threatened and sensitive species). The state Department of Fish and Wildlife maintains the most current listing and should be consulted as necessary for current listing status.
 - (iii) A combined list of federal and state identified species having the potential to be within the City of Kennewick area is included in Appendix A.
 - b. State priority habitats and areas associated with state priority species. Priority habitats and species are considered to be priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant

- species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the state Department of Fish and Wildlife.
- c. Habitats and species of local importance. Habitats and species of local importance are those identified by the City, including those that possess unusual or unique habitat warranting protection because of qualitative species diversity or habitat system health indicators (see map, Exhibit 1, or the latest revision of this map, or the latest information from the state Priority Habitat and Species database).
 - d. Naturally occurring ponds under twenty (20) acres. Naturally occurring ponds are those ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.
 - e. Waters of the state. Waters of the state includes lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-031.
 - f. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity.
 - g. State natural area preserves and natural resource conservation areas. Natural area preserves and natural resource conservation areas are defined, established, and managed by the state Department of Natural Resources.
 - h. Land essential for preserving eco-connectivity between habitat blocks and open spaces.
2. All areas within the City meeting one or more of these criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.
 3. Mapping. The approximate location and extent of conservation areas are shown on the critical area map adopted by the City (Exhibit 1: or latest version of this map), and as most recently updated and the following critical area maps hereby adopted:
 - a. Department of Fish and Wildlife Priority Habitat and Species Maps;
 - b. Resident salmonid distribution maps contained in the Habitat Limiting Factors Reports published by the Washington Conservation Commission;
 - c. Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area Maps; and
 - d. Additional data as determined necessary by the City.

The City of Kennewick Critical Areas Map is to be used as a guide for the City, project applicants and/or property owners, and may be continuously updated as new critical areas are identified. In some instances, it is a reference and does not provide a final critical area designation.

6.020 Critical Area Report – Additional Requirements for Habitat Conservation Areas

1. Prepared by a qualified professional. A critical areas report for a habitat conservation area shall be prepared by a qualified professional who is a biologist with experience preparing reports for the relevant type of habitat.
2. Area addressed in critical area report. The following topics shall be addressed in a critical area report for habitat conservation areas (The distance of 200 feet is suggested to account for buffers/zones that may not be accurately mapped at the time of application):
 - a. The project area of the proposed activity;
 - b. All habitat conservation areas and recommended buffers within two hundred (200) feet of the project area; and
 - c. All shoreline areas, flood plains, and other critical areas, and related buffers within two hundred (200) feet of the project area.
3. Habitat assessment. A habitat assessment is an investigation of the project area to evaluate the presence or absence of a potential critical fish, wildlife, or plant species or habitat. A critical area report for a habitat conservation area shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:
 - a. Detailed description of vegetation on and adjacent to the project area;
 - b. Identification of any species of local importance, priority species and habitats (PHS), or endangered, threatened, sensitive or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
 - c. A discussion of any federal, state, or local special management recommendations, including Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
 - d. A discussion of measures, including avoidance, minimization and mitigation, proposed to preserve existing habitats or restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with Section 1.160; and
 - e. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.
4. Additional information may be required. When appropriate due to the type of habitat or species present or the project area conditions, the City may also require the habitat management plan to include:
 - a. An evaluation by the Department of Fish and Wildlife or qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate;
 - b. An evaluation by the local Native American Indian Tribe; and

- c. Detailed surface and subsurface hydrologic features both on and adjacent to the site.

6.030 Performance Standards – General Requirements:

1. Alterations shall not degrade the functions and values of habitat. A habitat conservation area may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat. All new structures and land alterations shall be prohibited from habitat conservation areas, except in accordance with this Chapter.
2. Non-indigenous species shall not be introduced. No plant, wildlife, or fish species not indigenous to the region shall be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.
3. Mitigation shall result in contiguous corridors. Mitigation sites shall try to achieve contiguous functioning habitat corridors in accordance with a mitigation plan that is part of the critical area report to minimize the isolating effects of development on habitat areas, so long as mitigation of aquatic habitat is located within the same aquatic ecosystem as the area disturbed.
4. Approvals of activities may be conditioned. The City shall condition approvals of activities allowed within or adjacent to a habitat conservation area or its buffers, as necessary to minimize or mitigate any potential adverse impacts. Conditions may include, but are not limited to, the following:
 - a. Establishment of buffer zones;
 - b. Preservation of critically important vegetation;
 - c. Limitation of access to the habitat area, including fencing to deter unauthorized access;
 - d. Seasonal restriction of construction activities;
 - e. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.
 - f. Mitigation planting survival will be 100% for the first year, and 80% for each of the 4 years following.
 - g. Mitigation must be installed no later than the next growing season after completion of site improvements, unless otherwise approved by the Planning Director.
5. Where necessary, a permanent means of irrigation shall be installed for the mitigation plantings that are designed by a landscape architect or equivalent professional, as approved by the Planning Director. The design shall meet the specific needs of riparian and shrub steppe vegetation.
6. Monitoring reports by the biologist must include verification that the planting areas have less than 20% total non-native /invasive plant cover consisting of exotic and/or invasive species. Exotic and invasive species may include any species on the state noxious weed list, or considered a noxious or problem weed by the Natural Conservation Services Department or local conservation districts.
7. Onsite monitoring and monitoring reports shall be submitted to Planning Director 1 year after mitigation installation; 3 years after mitigation installation; and 5 years after

mitigation installation. Monitoring reports shall be submitted by a qualified professional biologist. The biologist must verify that the conditions of approval and provisions in the fish and wildlife management and mitigation plan have been satisfied.

8. Mitigation sites shall be maintained to ensure that the mitigation and management plan objectives are successful. Maintenance shall include corrective actions to rectify problems, include rigorous, as-needed elimination of undesirable plants; protection of shrubs and small trees from competition by grasses and herbaceous plants, and repair and replacement of any dead plants.
9. Subdivisions. The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following provisions:
 - a. Land that is located wholly within a habitat conservation area or its buffer may not be subdivided.
 - b. Land that is located partially within a habitat conservation area or its buffer may be divided provided that an accessible and contiguous portion of each new lot is located outside of the habitat conservation area or its buffer and meets the minimum lot size requirements of City's Zoning Code – Title 18 and Subdivision Code – Title 17.
 - c. Access roads and utilities serving the proposed may be permitted within the habitat conservation area and associated buffers only if the City determines that no other feasible alternative exists and when consistent with this Chapter.

6.040 Performance Standards – Specific Habitats

1. Endangered, threatened, and sensitive species.
 - a. No development shall be allowed within a habitat conservation area or buffer with which state or federal endangered, threatened, or sensitive species have a primary association.
 - b. Whenever activities are proposed adjacent to a habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and submitted to the City. Approval for alteration of land adjacent to the habitat conservation area or its buffer shall not occur prior to consultation with the Department of Fish and Wildlife and the appropriate federal agency.
 - c. Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). Whenever activities are proposed adjacent to a verified nest territory or communal roost, a habitat management plan shall be developed by a qualified professional. Activities are adjacent to bald eagle sites when they are within eight hundred (800) feet, or within a quarter mile (2,640 feet) and in a shoreline foraging area. The City shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the Department of Fish and Wildlife.
2. Wetland habitats. All proposed activities within or adjacent to habitat conservation areas containing wetlands shall, at a minimum, conform to the wetland development

performance standards set forth in Chapter 18.59, in addition to meeting the habitat conservation area standards in this Chapter.

3. Riparian habitat areas. Unless otherwise allowed in this Chapter, all structures and activities shall be located outside of the riparian habitat areas (RHAs).
 - a. Water dependant uses, as defined by this Program, may be located within a habitat conservation area or buffer when the applicant or property owner can demonstrate compliance with this Chapter.
 - b. Establishment of riparian habitat areas. RHAs shall be established for habitats that include aquatic systems.
 - c. Riparian habitat area widths. Recommended RHA widths are shown in the table below. A riparian habitat area shall have the width recommended, unless a greater width is required pursuant to Chapter 2.030 or a lesser width is allowed pursuant to Section 18.59.030(4). Widths shall be measured outward, on the horizontal plane, from the ordinary high water mark or from the top of bank if the ordinary high water mark cannot be identified. Riparian areas should be sufficiently wide to achieve the full range of riparian and aquatic ecosystem functions, which include but are not limited to protection of instream fish habitat through control of temperature and sedimentation in streams; preservation of fish and wildlife habitat; and connection of riparian wildlife habitat to other habitats. (Recommended riparian habitat widths are adapted from Department of Fish and Wildlife "Management Recommendations for Washington's Priority Habitats: Riparian," 1997).

Table 6 Riparian Habitat Areas	
Stream/Type	RHA Widths (all measured from OHWM)
Clover Island High Intensity Environment	25 feet ⁽¹⁾
Urban Conservancy Columbia River/McNary Pool Shoreline (Shoreline of Statewide Significance) - Levee (limited to no riparian habitat function) (Riparian function based upon HDR analysis (2007) and review of existing shoreline function for Columbia River/McNary Pool levee, armored and unarmored shoreline)	50 feet ⁽¹⁾
Urban Conservancy Columbia River/McNary Pool Shoreline (Shoreline of Statewide Significance) Armored Shoreline (limited to no riparian habitat function)	50 feet ⁽¹⁾
Urban Conservancy Columbia River/McNary Pool Shoreline (Shoreline of Statewide Significance) - Unarmored Shoreline (limited to moderate potential for habitat function)	75 feet ⁽¹⁾⁽²⁾
Type 3 or other perennial or fish bearing streams (Family Fishing Pond inlet and CID return near Kiwanis Building in Columbia Park) ⁽³⁾	75 feet ⁽¹⁾⁽²⁾

(1) Stormwater handling in areas adjacent to riparian areas will be controlled consistent with requirements in the Stormwater Management Manual for Eastern Washington (Ecology 2004), and will be protective of shoreline riparian function.

(2) Many Kennewick shorelines have limited riparian habitat function, to promote restoration of these areas a buffer reduction is available to a maximum of 40% reduction of shoreline buffer area – see Section 6.060.

(3) Columbia Park campground drainage and duck ponds would likely become Type 3 waters if reconnected to the Columbia River as identified in the City's Shoreline Program Restoration Plan (HDR 2009).

6.050 Mitigation Ratio for Riparian Buffers

1. Critical habitat conservation areas will be left undisturbed, unless the development proposal involves appropriate mitigation and enhancement measures, as determined on a site specific basis.
2. Whenever possible, the maximum amount of vegetation will be maintained in its natural state and will be disturbed only as minimally necessary for the development.
3. Riparian vegetation will not be removed unless there are no other alternatives available. When it is necessary, only those areas of vegetation that are absolutely unavoidable may be cleared, and shall be re-vegetated with natural riparian vegetation as soon as possible and at a replacement ratio of 1:1 for the development in the buffer and 2:1 replacement ratio for disturbed riparian vegetation (this is an area replacement ratio - 1sq. ft. replaced:1sq. ft. disturbed, etc.).

4. Re-vegetation of disturbed areas which re-establishes desirable native plants adapted to the site that enhance applicable fish and wildlife populations will be, at a minimum, encouraged, as specified in the conditions for approval of the development. Said, re-vegetation will be maintained in good growing condition, as well as being kept free of noxious weeds.
5. When appropriate, fencing standards that protect wildlife, as well as providing for the operation and protection of a particular land use, may be part of the conditions placed on approval of a development application.
6. Access restrictions may be necessary which protect fish and wildlife habitat conservation areas, particularly during critical times of the year.
7. Particularly in instances where a development proposal involves more intense uses, all or part of the required open space (common and/or private) will be dedicated to fish and wildlife habitat conservation, based on the extent and importance of the habitat.
8. In certain instances it may be necessary to provide vegetation screenings and to provide controls on domestic animals to protect the function of critical habitat areas by reducing the potential for harassment from people and/or domesticated animals.

6.060 Riparian Buffer Averaging

Standard buffer widths may be modified by the city for a development proposal by averaging buffer widths based on a report submitted by the applicant and prepared by a qualified professional approved by the city (e.g. wildlife biologist), and shall only be allowed where the applicant demonstrates all of the following:

1. Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property;
2. The designated habitat conservation area contains variations in sensitivity due to existing physical characteristics;
3. The width averaging will not adversely impact the designated habitat conservation area's functional value;
4. The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging; and
5. The buffer width shall not be reduced by more than 25 percent of the required buffer for the Clover Island High Intensity and Urban Conservancy leveed and armored area, and in no case may the buffer be less than 18.75 feet in width in the Clover Island High Intensity environment designation, no less than 37.5 feet in the leveed area and Armored area of the Urban Conservancy environment designation.
6. The buffer width shall not be reduced by more than 25% (no less than 56.25 feet) of the required buffer without accompanying restoration, or by more than 40% (no less than 45 feet) with accompanying restoration for the un-armored areas and other streams (including potentially connected streams) in the Urban Conservancy environment designation.

6.070 Administrative Riparian Buffer Reduction

The Planning Director shall have, on a case-by-case basis, the authority to reduce buffer widths which would be placed on existing legal lots of record in place at the time of project review when

the applicant demonstrates to the satisfaction of the Planning Director that all of the following criteria have been met:

1. The buffer reduction shall not result in a net loss of functions of the habitat conservation area or buffer.
2. The maximum buffer width reduction allowed shall not exceed twenty-five (25) percent without accompanying restoration, or 40% with accompanying restoration for unarmored lands within urban conservancy.
3. The buffer width reduction is contingent upon the submittal and approval of a fish and wildlife habitat conservation area management and mitigation plan.
4. Sites which have had buffer widths reduced or modified, (buffer averaging), by any prior action administered by the City are not eligible for the provisions of this section. Sites which utilize this provision are not eligible for any future buffer width reductions, under any provision of this Program, except as administered under variances, of this Program.



SHORELINE INVENTORY AND ASSESSMENT REPORT



SEPTEMBER 2005



HDR | ees



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Pasco, Washington 99301
(509) 546-2040



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City of Kennewick – Shoreline Master Program Shoreline Inventory and Assessment Report

1.0 Introduction

The City of Kennewick (City) established their Shoreline Master Program in 1974 consistent with the requirements of Chapter 90.58 RCW and guidelines prepared by the Washington Department of Ecology (Ecology). Since the mid 1990's Kennewick has been planning under the provisions of the Growth Management Act (GMA) and as required, protecting critical areas through a Critical Areas Ordinance. Guidelines and requirements under both of these regulatory programs have changed recently, and as a result, the City has undertaken updates to both sets of regulations.

The process within the new Ecology Shoreline Master Program Guidelines (January, 2004), includes elements of agency and public involvement, assessment of data and establishment of a shoreline “inventory,” a process to designate appropriate protective regulations and restoration programs, and a requirement for a shoreline restoration plan as appropriate. The purpose of this Report is to provide the baseline inventory of shorelines as required by the guidelines. The inventory includes the following elements:

- An inventory of shoreline conditions including land use, public access, and environmentally sensitive areas;
- A map portfolio of these data layers displayed at the appropriate scale, and
- An analysis report that analyzes the information and data collected as it relates to development of an effective Shoreline Master Program.

1.1 Shoreline History

Kennewick's industry, culture and history are tied to the Columbia River in many ways. The Columbia River shoreline in Kennewick was first used by the local Tribes as a place to fish and hunt during the winter months. The name Kennewick was interpreted from a Native American name meaning “grassy place.” The Columbia River provided refuge in the winter as well as transportation for local Tribes and eventually European settlers.

River and railway transportation are the primary threads which tie the Columbia River to the City of Kennewick. Transportation technology allows people to cross the river by train and automobile as well as navigate ships up and down the Columbia. River oriented transportation in Kennewick has created opportunities for growth in agriculture, recreation, travel, tourism and business. The first railway bridge in Kennewick was completed in 1888 and the first Pasco-Kennewick bridge for automobiles was completed in 1922 (Picture 1). This 1922 automobile bridge was replaced by the existing Cable Bridge in 1978. Also, during the late 19th- and early 20th Century, the River Drive was established along the Columbia River where Columbia Park

now exists (Picture 2). This road connected Kennewick with what is currently the City of Richland.

The Columbia River was also changed by the technological advances in transportation. The McNary Dam was built between 1947 and 1954, causing significant physical changes to the Columbia River and Kennewick Shoreline. The major change was the creation of Lake Wallula behind the dam (Pictures 3 and 4). The filling of Lake Wallula changed the Columbia River's depth, path, and velocity. Peak flows and flood frequencies also changed. The McNary Dam project includes levees along parts of the city shoreline. Physical and ecological changes in the river created a new environment for Kennewick residents as well as terrestrial, aquatic, amphibian and avian species. Kennewick residents specifically saw the shoreline change in the increased height of Clover Island, levee shoreline additions and the new Blue Bridge.

The McNary Dam changed the Columbia River physically and recently, the erosion along the shore may have helped to uncover artifacts from Kennewick's past. In 1996, the skull of a 9,000 year-old man was discovered along the shoreline in Columbia Park. The 9,000 year-old skeleton is referred to as the "Kennewick Man." The Columbia River and Kennewick shoreline is a place of rich cultural history and therefore is an area that may contain important historical and cultural artifacts.

1.1.1 Inventory, Protection, and Management of Historic Cultural Resources

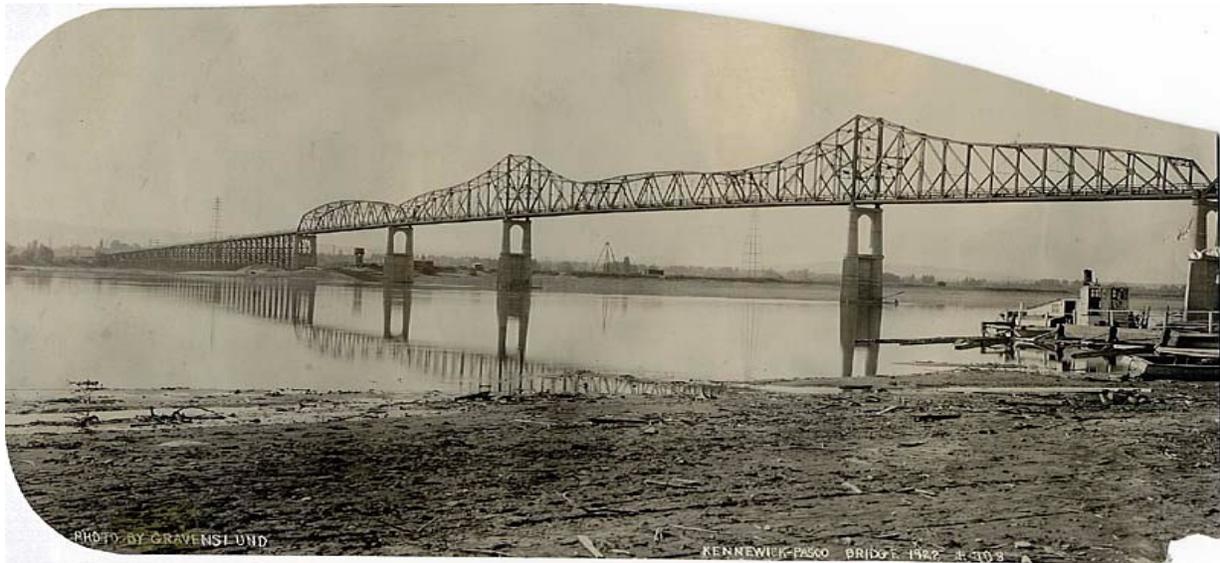
There are several significant archaeological sites along the Kennewick shoreline, located within the Tri-Cities Archaeological District. The Tri-Cities Archaeological District is listed in both the National and State Registers of Historic Places. These registers encourage proper protection and management of specific cultural resources at the national and state level. The National Register of Historic Places encourages protection of the cultural resources in three ways by:

- 1) Providing official recognition of the historic significance of the property and encouraging consideration of its historic value in future development planning,
- 2) Imposing limited protection from activities involving funding, licensing, or assistance by Federal agencies that could result in damage or loss of its historic values, and
- 3) Making the property eligible for Federal financial incentives for historic preservation.

The exact locations of the City of Kennewick's cultural resources, specifically the archaeological sites, are not disclosed to the public. Any future development along the shoreline will require investigating the existing archaeological information obtained by the City of Kennewick or the Washington State Office of Archaeological & Historic Preservation. Additional surveys or inventories may be needed to assess and document archaeological artifacts or sites along the City's shoreline. Information about the Tri-Cities Archaeological District, archaeological permitting, inventory and surveying, and/ or the National and State Registers of Historic Places can be obtained from the Washington State Office of Archaeological & Historic Preservation. A section of the McNary Dam Columbia River levee (Shoreline Segment D) is also eligible to be listed in the National Register of Historic Places. The National Register includes the levee and

ancillary structures such as pump houses, drainage ditches, ponds, pipes and floodgates. Currently, there is a plan to lower the levee and alter the associated structures for recreational purposes. When these changes occur, the levee and structures should be documented and interpretive signage should be posted to inform the public of the historical significance of McNary Dam, Lake Wallula and the levee/ ancillary structures.

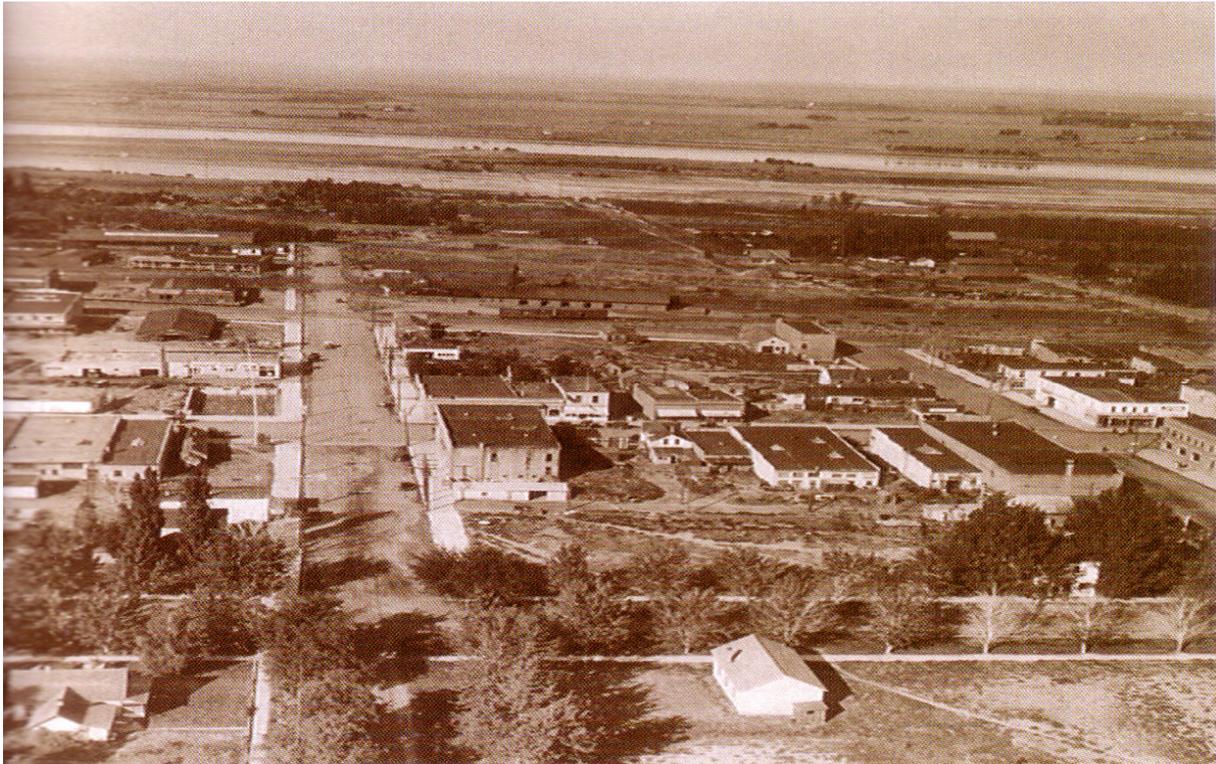
Picture 1- First Automobile Bridge (1922) (City of Kennewick Website)



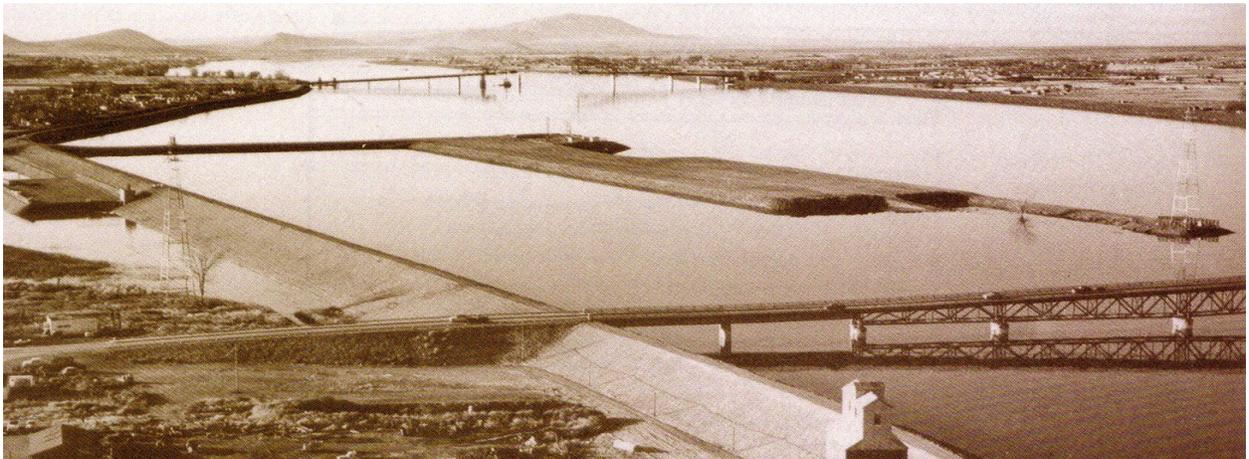
Picture 2- River Drive (City of Kennewick Website)



Picture 3- Columbia River before the McNary Dam (date unknown) (UDAT, 2003)



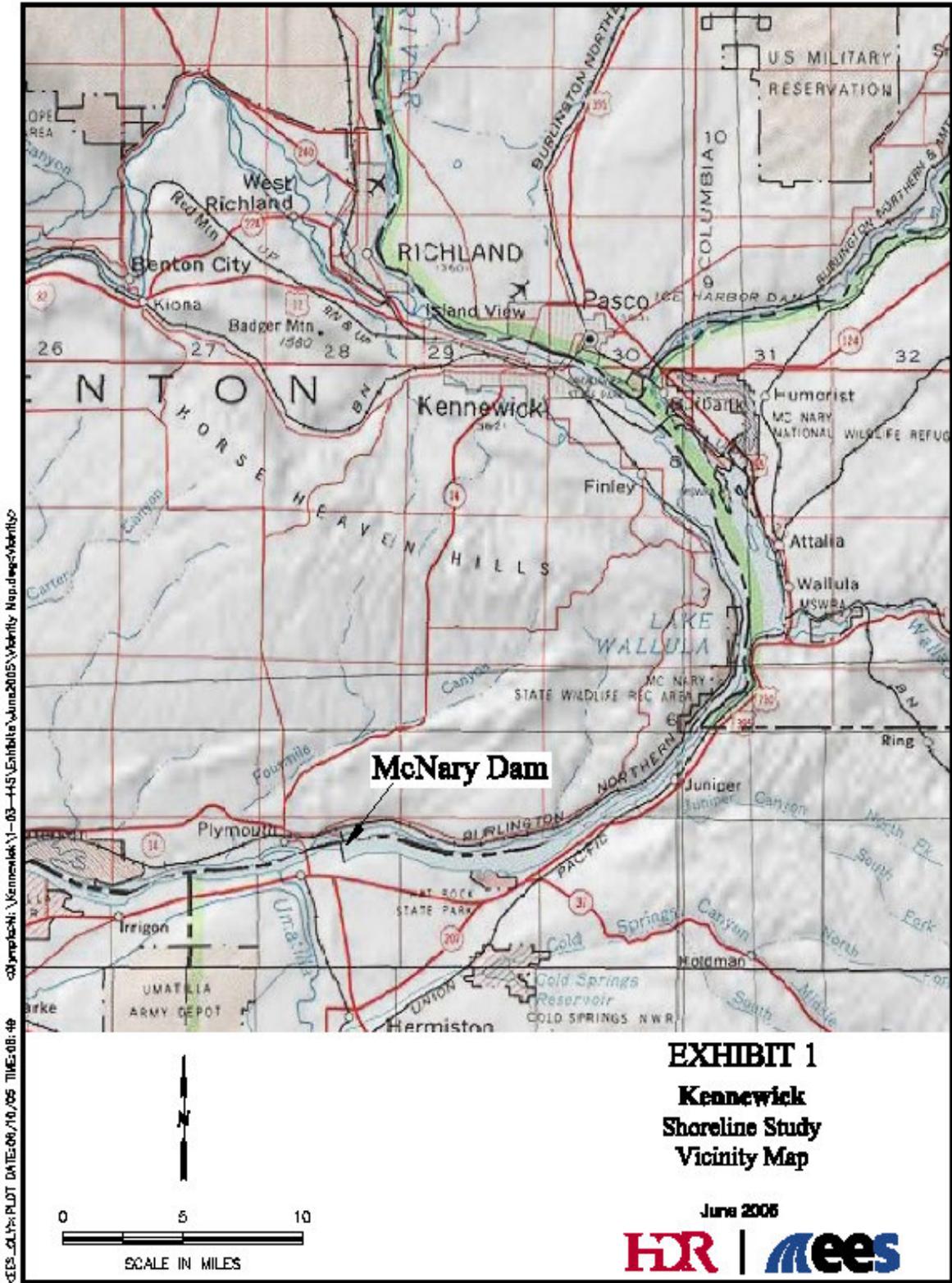
Picture 4- Columbia River after McNary Dam (Looking Towards Clover Island/ Pasco) (UDAT, 2003)



1.2 Present Shoreline Conditions

1.2.1 Boundaries

Information collected in this report includes the Columbia River shoreline and 200 feet landward within the Kennewick city limits and urban growth boundaries (UGB). The Kennewick shoreline data pertains to the structure, function and processes of the Lower Mid-Columbia watershed and specifically, the Kennewick portion of the Columbia River shoreline. The Kennewick shoreline is located just up the river from the Snake and Columbia River confluence within the McNary pool, upriver from the McNary Dam (Exhibit 1). The City of Kennewick is immediately downriver from the Yakima and Columbia River confluence and several miles downriver and southeast from Priest Rapids Dam. Some important public uses and physical features along the Kennewick shoreline within the city limits are Columbia Park, Columbia Park Golf Course, Clover Island, Clover Island Marinas, and a section of the south shore levee.



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EXHIBIT 1
Kennewick
Shoreline Study
Vicinity Map

June 2006



1.2.2 Climate and Environmental Conditions

The City of Kennewick is low in elevation, approximately 320-700 feet MSL. Climate in the area is relatively mild with an average annual temperature of fifty-one degrees Fahrenheit and with prevailing winds from the northwest (National Climate Data Center 1971-2000). Kennewick is arid with annual precipitation averages around seven inches. The underlying soil and landforms in the Kennewick region originated from basalt flows, primarily composed of olivine basalt (HDR, 1997). Other materials along the shoreline are gravel, sand, silt and cobble from river-weathering processes and wind deposits. Soil further landward from the Kennewick shoreline contains windblown loess deposited from the prevailing northwest winds.

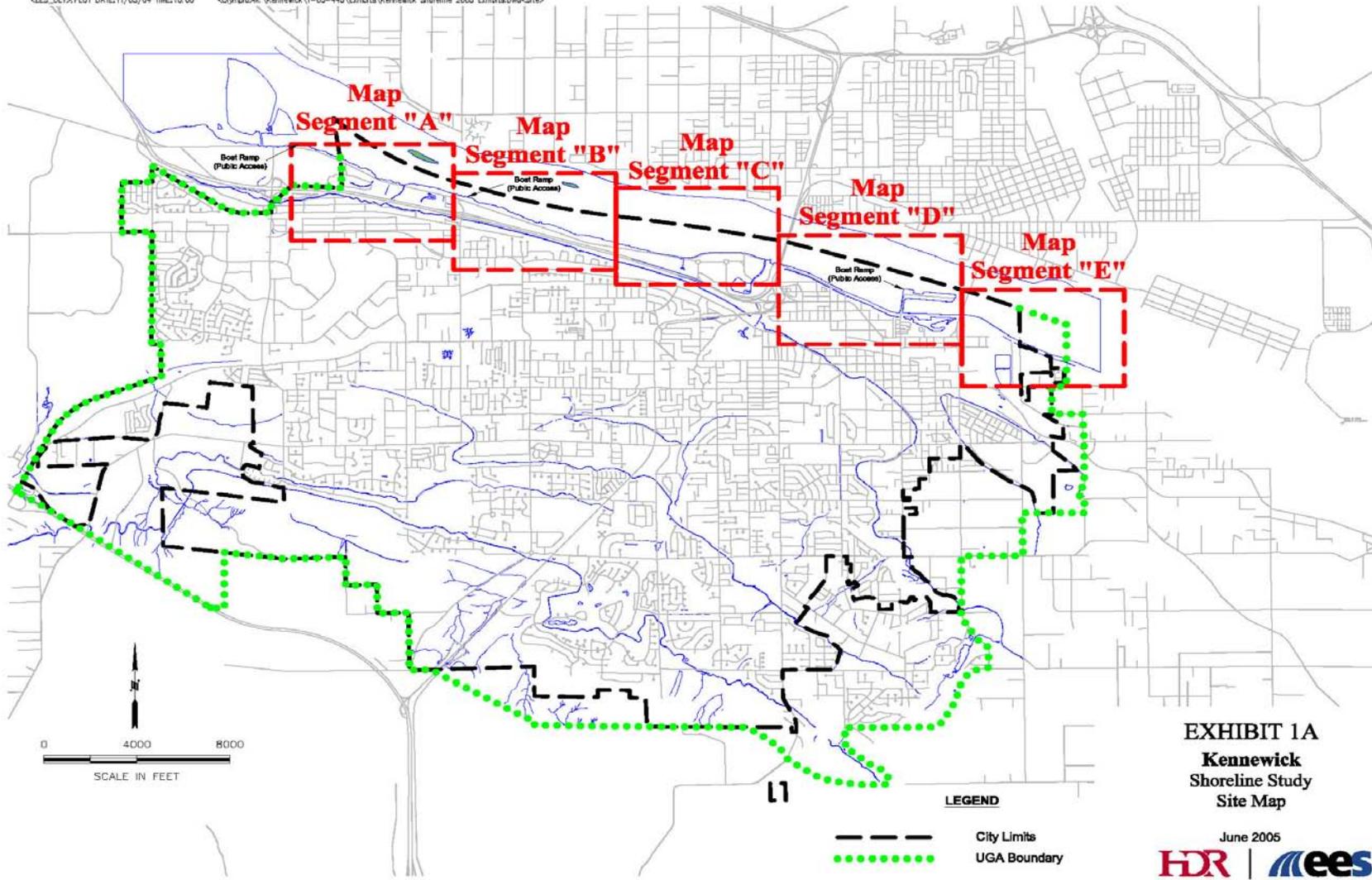


EXHIBIT 1A
Kennewick
Shoreline Study
Site Map

June 2005



1.2.3 Water Quality

The inventory and analysis of the Kennewick Shoreline Master Program considers all aspects of Kennewick's water resources and surrounding watersheds that may influence the shoreline species and habitat restoration. Water quality in the Columbia River mainstem along the Kennewick shoreline is considered adequate. There is some potential for elevated water temperature and increasing sedimentation according to the 1998 Ecology 303(d) listing. Water quality in the Columbia mainstem opposite Kennewick is primarily determined by the quality of the upstream waters. However, there is potential for water quality degradation at a micro-scale along the shoreline away from the main flow of the Columbia River. For example, seasonal testing of water quality surrounding Clover Island showed high temperature and dissolved gases (HDR, 1997). Temperature could become a localized problem with increases in sedimentation, decreases in water flow or lack of shoreline vegetation.

Toxics are not listed as a problem in the Columbia River mainstem, but the lower Yakima River, which enters the Columbia River just above the City, is listed in the 1998 Ecology 303(d) as having accumulations of 4,4'-DDD, 4,4'-DDE, Arsenic, DDT, Dieldrin, Endosulfan, Mercury, and PCB. The toxics in the Yakima River are mixed with the large volume of water from the Columbia River at the confluence, and consequently are not considered a problem for the Kennewick Shoreline. It is important to monitor water quality trends from the Yakima River as it has the possibility of affecting sensitive aquatic species and riparian habitat now or in the future.

2.0 Methods and Approach

The methods of developing a shoreline inventory are described in WAC 173-26-201 and also provided as part of Ecology's June 2004 Shoreline Master Program Submittal Checklist. The checklist was developed to guide cities and counties as Shoreline Master Programs are updated. As part of the process, the checklist items were used to structure the approach, data gathering, and analysis for the inventory portion of Kennewick's Shoreline Master Program update, and helped guide shoreline classification and the City's subsequent regulations. This information was also used to establish baseline environmental conditions of the watershed and describe potential restoration areas within the shoreline.

3.0 Agency and Tribal Communication

Communication with and involvement of various governmental agencies is required by the guidelines. Formal (written) communication with agencies, tribes and private businesses was used to initiate the process and to assure a complete data assessment. A list of contacts is provided in Table 1. Written communication was followed by telephone calls, and where appropriate, meetings were held to facilitate information transfer.

Table 1
Agency Contacts

Name of Agency/Contact	Location	Name of Agency/Contact	Location
Benton County Mary Phillips	P.O. Box 110 Prosser, WA 99350	Port of Kennewick Linda Boomer	101 Clover Island Dr. Kennewick, WA 99336
Umatilla Nation Carey Miller	PO Box 638 Pendleton, OR 97801	Washington Department of Fish and Wildlife Paul Hoffarth	2620 N. Commercial Ave. Pasco, WA 99301
National Oceanic & Atmospheric Administration/Habitat Office Dale Bambrick	304 S. Water St., #201 Ellensburg, WA 98926	Office of Archaeological and Historic Preservation Stephanie Kramer	P.O. Box 48343 Olympia, WA 98504-8343
Northwest Power and Conservation Council Tony Grover	P.O. Box 2187 Vancouver, WA 98668	Yakama Nation Johnson Meninick	P.O. Box 151 Toppenish, WA 98948
Washington Department of Ecology/Central Regional Office Gary Graff	15 W. Yakima Ave., #200 Yakima, WA 98902	Parks and Recreation	615 East Columbia Dr. Kennewick, WA 99336
Washington Department of Ecology/Eastern Regional Office Doug Pineo	N. 4601 Monroe St., #303 Spokane, WA 99205-1295	Washington Department of Transportation/South Central Region –	Yakima, WA
United States Army Corps of Engineers/Ice Harbor Project Lanell Adams	2763 Monument Dr. Burbank, WA 99323	Columbia Park Golf Course Gary Long, Jr.	2701 W. Columbia Dr. Kennewick, WA 99336
United States Army Corps of Engineers/Walla Walla Pete Poolman	201 North 3 rd Ave. Walla Walla, WA 99362	City of Kennewick/GIS Rick White	P.O. Box 6108 Kennewick, WA 99336

4.0 Inventory Requirements and Data Sources

According to the guidelines (WAC 173-26-202 (3) (c)), local government shall, at a minimum, and to the extent such information is relevant and reasonably available, collect the following information:

- (i) Shoreline and adjacent land use patterns and transportation and utility facilities, including the extent of existing structures, impervious surfaces, vegetation, and shoreline modifications in shoreline jurisdiction. Special attention should be paid to identification of water-oriented uses and related navigation, transportation and utility facilities.
- (ii) Critical areas, including wetlands, aquifer recharge areas, fish and wildlife conservation areas, geologically hazardous areas, and frequently flooded areas. See also WAC 173-26-221.
- (iii) Degraded areas and sites with potential for ecological restoration.
- (iv) Areas of special interest, such as priority habitats, developing or redeveloping harbors and waterfronts, previously identified toxic or hazardous material clean-up sites, dredged

material disposal sites, or eroding shorelines, to be addressed through new master program provisions.

- (v) Conditions and regulations in shoreland and adjacent areas that affect shorelines, such as surface water management and land use regulations. This information may be useful in achieving mutual consistency between the master program and other development regulations.
- (vi) Existing and potential shoreline public access sites, including public rights-of-way and utility corridors.
- (vii) General location of channel migration zones, and flood plains.
- (viii) Gaps in existing information. During the initial inventory, local governments should identify what additional information may be necessary for more effective shoreline management.
- (ix) If the shoreline is rapidly developing or subject to substantial human changes such as clearing and grading, past and current records or historical aerial photographs may be necessary to identify cumulative impacts, such as bulkhead construction, intrusive development on priority habitats, and conversion of harbor areas to non-water oriented uses.
- (x) If archaeological or historic resources have been identified in shoreline jurisdiction, consult with the state historic preservation office and local affected Indian tribes regarding existing archaeological and historical information.

4.1 Inventory Documents

Documents were collected from various agencies and the information evaluated based on their applicability to Ecology's Shoreline Master Program checklist. The following tables (2a and 2b) describe and categorize key information received during the shoreline inventory and analysis process. Tables 2a and 2b show the document name, a brief description, and title of the agency that created it, date the document was created and, where the information would apply to Ecology's Shoreline Master Program Inventory checklist (checklist items i-x).

Document information that applied to more than one Shoreline Master Program Inventory checklist item have multiple item numbers listed under the column-# Meets Data Requirements from Ecology Checklist.

Table 2a
Key Document and Relationship to the Ecology Checklist

Document	Descriptions	Name of Agency	Date	Meets Data Requirements from Ecology Checklist
Aerial Photos	Photos	Benton County	1998	i
Bringing Back the Magic of the River	Future Development of the City and Columbia River Shoreline	Urban Design Assistance Team (UDAT)	2003	iv, vi
Clover Island Redevelopment Plan	Future Development of Clover Island	Port of Kennewick	1997	vi
Columbia Park Master Development Plan	Future Development of Columbia Park	City of Kennewick	2000	iv, vi
Columbia Park Pond Modifications	Descriptions of Columbia Park Pond Modifications	Washington Department of Fish and Wildlife	2003	iii
Draft Critical Areas Ordinance (CAO)	Used to Protect Priority Habitat and Species	Economic and Engineering Services, Inc.	2003	ii, iv, v, vii
Existing Shoreline Master Program	Guides Shoreline Development within the City	City of Kennewick	1974	v
National Priority Habitat Maps	Priority Habitat Maps for Aquatic, Amphibian and Avian Species	Washington Department of Fish and Wildlife	2000	ii
National Wetland Inventory Maps	Wetland Maps	U.S. Fish and Wildlife Service	2000	ii
Title 18 Zoning Codes and Map	Guides Development within the City	City of Kennewick	unknown	v

**Table 2b
Documentation and Relationship to the Ecology Checklist**

Document	Descriptions	Name of Agency	Date	Meets Data Requirements from Ecology Checklist
Aquatic Habitat Maps	Maps of Fish Migration, Rearing and Spawning Habitat	WDFW	unknown	ii
City of Kennewick Columbia Park East Boat Launch Plans	Permitting and Plans for Columbia Park East Boat Launch	City of Kennewick.	1998	vi
City of Kennewick Comprehensive Plan	Goals and Future Visions for the City	City of Kennewick.	1999	iv
City of Kennewick Flood Control Ordinance	Flood Damage Prevention (Chapter 18.93 KMC)	City of Kennewick	1996	v
City of Kennewick Road and Utility Maps	Maps of Roads and Utilities in the City	City of Kennewick	2003	i, vi, vii
Clover Island Biological Assessment	Descriptions of Clover Island Development, Construction, Habitat and Endangered Species	City of Kennewick	2001	iii, iv
Clover Island Master Plan	Descriptions of Clover Island Development.	Port of Kennewick	2003	iv
Clover Island Redevelopment Conceptual Storm Water Management Plan	Description of Existing and Future Storm Water Management Plans for Clover Island	Peratrovich, Nottingham & Drage, Inc.	1995	v
Drinking Water Quality Report	Discusses Water Quality in Ranney Collector 5 along the shoreline	City of Kennewick	2002	iii
Flood Maps	Flood Maps in City	FEMA	1981	ii
GIS Maps of Lower Mid Columbia Watershed	Watershed Flow Maps	USGS	unknown	I
Kennewick Downtown Revitalization Strategy	Description of Strategy to Improve Business, Aesthetics and Traffic Conditions	City of Kennewick	1998	iv
Lower Mid Columbia Subbasin Plan	Document that Addresses Critical Species and Habitat for the Subbasin	Northwest Power and Conservation Council	2004	iii
Verbal Communication with Umatilla and Yakama Nations	No Written Documentation is Available	HDR/EES	2004	x

5.0 Shoreline Segments

The City of Kennewick Urban Growth boundaries contain a total of 42,617 linear feet of Columbia River shoreline. In order to graphically display map information in a larger scale, the shoreline has been divided into five distinct map segments. These map segments are used to locate different features within the City of Kennewick boundaries and visually unify shoreline data/ information such as ecological features, existing land use and proposed restoration areas. Shoreline map segments are depicted in this document as follows:

Table 3 Shoreline Segments		
Segment	Name	Descriptions
Segment A	Park A	West side of Columbia Park beginning at the City of Kennewick Urban Growth boundary (UGA) and City limits extending east to Edison Street (See Exhibit 2a).
Segment B	Park B	East from Edition Street to the west end of Columbia Park Golf Course (See Exhibit 2b).
Segment C	Park C	East from the Columbia Park Golf Course to the Blue Bridge (US395) (See Exhibit 2c).
Segment D	Levee West – C1	Blue Bridge (US395) east to the Cable Bridge (US397) and Clover Island (See Exhibit 2d).
Segment E	Levee East	Cable Bridge (US397) to South Verbena Street (See Exhibit 2e).



See Exhibit 2a

See Exhibit 2c

Segment "B"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

- LEGEND**
- City Limits
 - UGA Boundary
 - - - - 200' Shoreline Jurisdiction

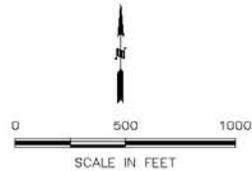


EXHIBIT 2b
Kennewick
Shoreline Study
Park (2 of 3)

June 2005
HDR | **ees**



Segment "C"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

LEGEND

-  City Limits
-  UGA Boundary
-  200' Shoreline Jurisdiction

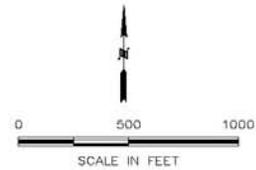


EXHIBIT 2c
Kennewick
Shoreline Study
Park (3 of 3)

June 2005
HDR | **ees**

See Exhibit 2c



See Exhibit 2e

Segment "D"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

LEGEND

-  City Limits
-  UGA Boundary
-  200' Shoreline Jurisdiction

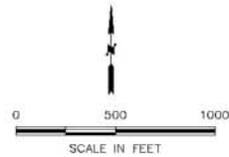
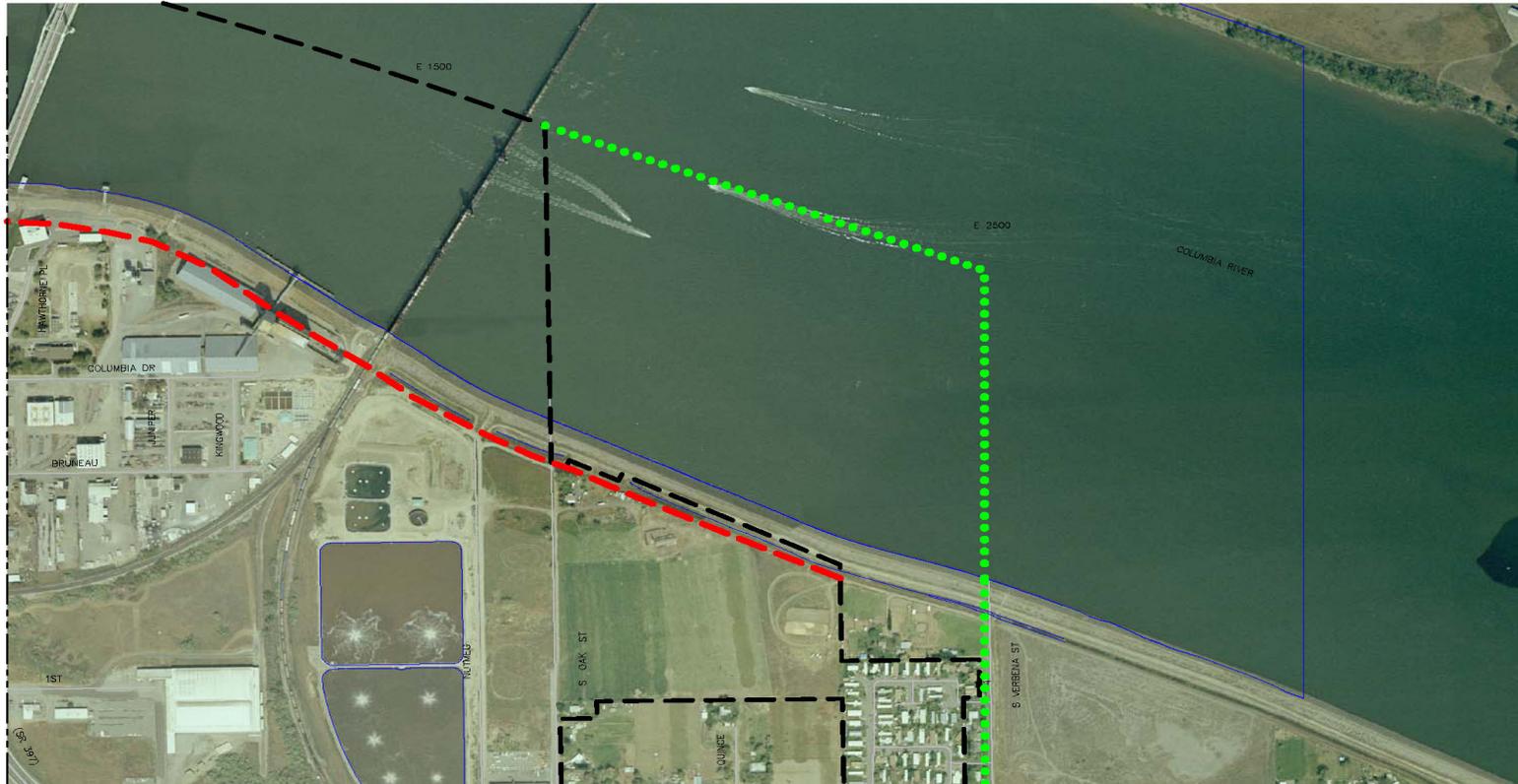


EXHIBIT 2d
Kennewick
Shoreline Study
Levee A and Clover Island

June 2005
HDR | **ees**

See Exhibit 2d



Segment "E"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

LEGEND

-  City Limits
-  UGA Boundary
-  200' Shoreline Jurisdiction

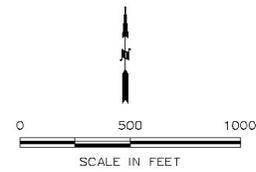
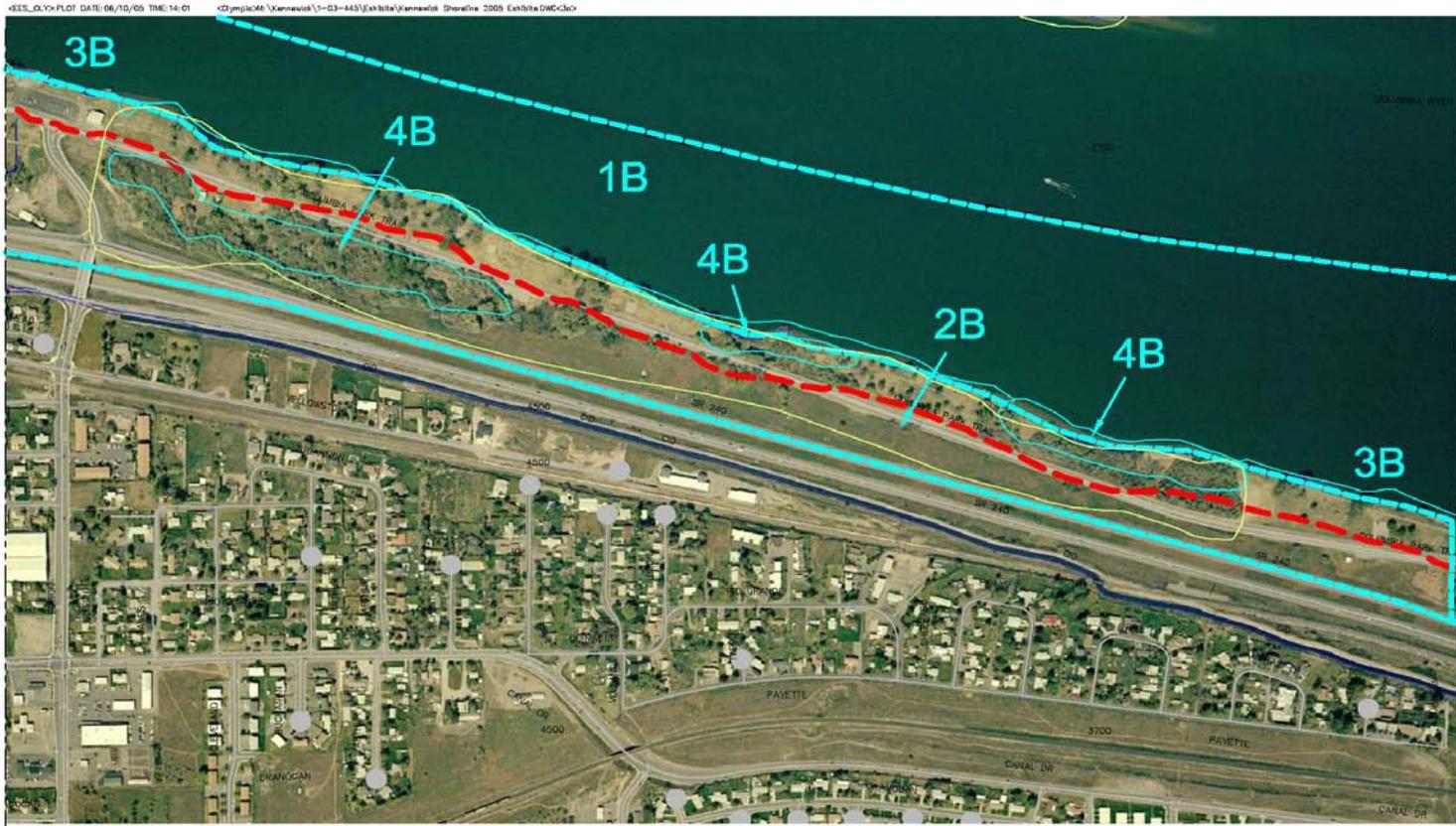


EXHIBIT 2e Kennewick Shoreline Study Levee B

June 2005





See Exhibit 3a

See Exhibit 3c

Segment "B"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

Environmental Features Key

- 1B Main Stem Fish Migration
- 2B Priority Riparian Habitat (WDFW)
- 3B Non Priority (RH)
- 4B Wetlands

LEGEND

- City Limits
- UGA Boundary
- - - 200' Shoreline Jurisdiction
- - - Feature Boundary
- - - Wetland Boundary
- - - Fish Habitat

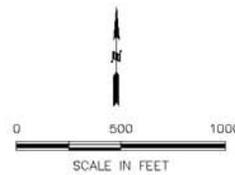
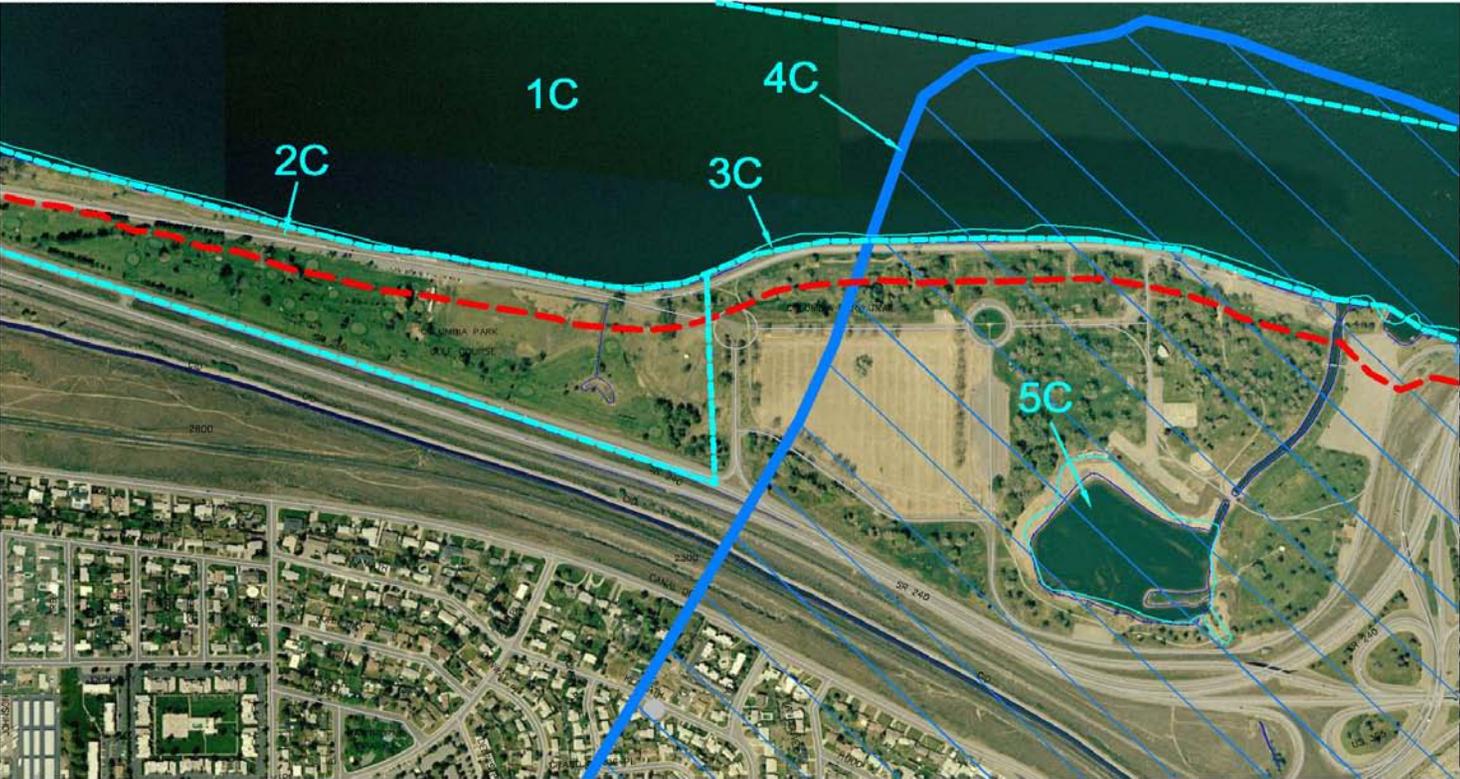


EXHIBIT 3b
Kennewick
Shoreline Study
Park (2 of 3)
Environmental Features
June 2005



See Exhibit 3b

See Exhibit 3d



Segment "C"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

Environmental Features Key

- 1C Main Stem Fish Migration
- 2C Riparian Habitat
- 3C Riparian Habitat (Golf Course to Blue Bridge US 395)
- 4C Aquifer Recharge
- 5C Fishing Pond and Channel

LEGEND

- City Limits
- UGA Boundary
- 200' Shoreline Jurisdiction
- Feature Boundary
- Wetland Boundary
- Fish Habitat
- Aquifer Recharge Area

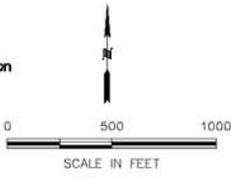
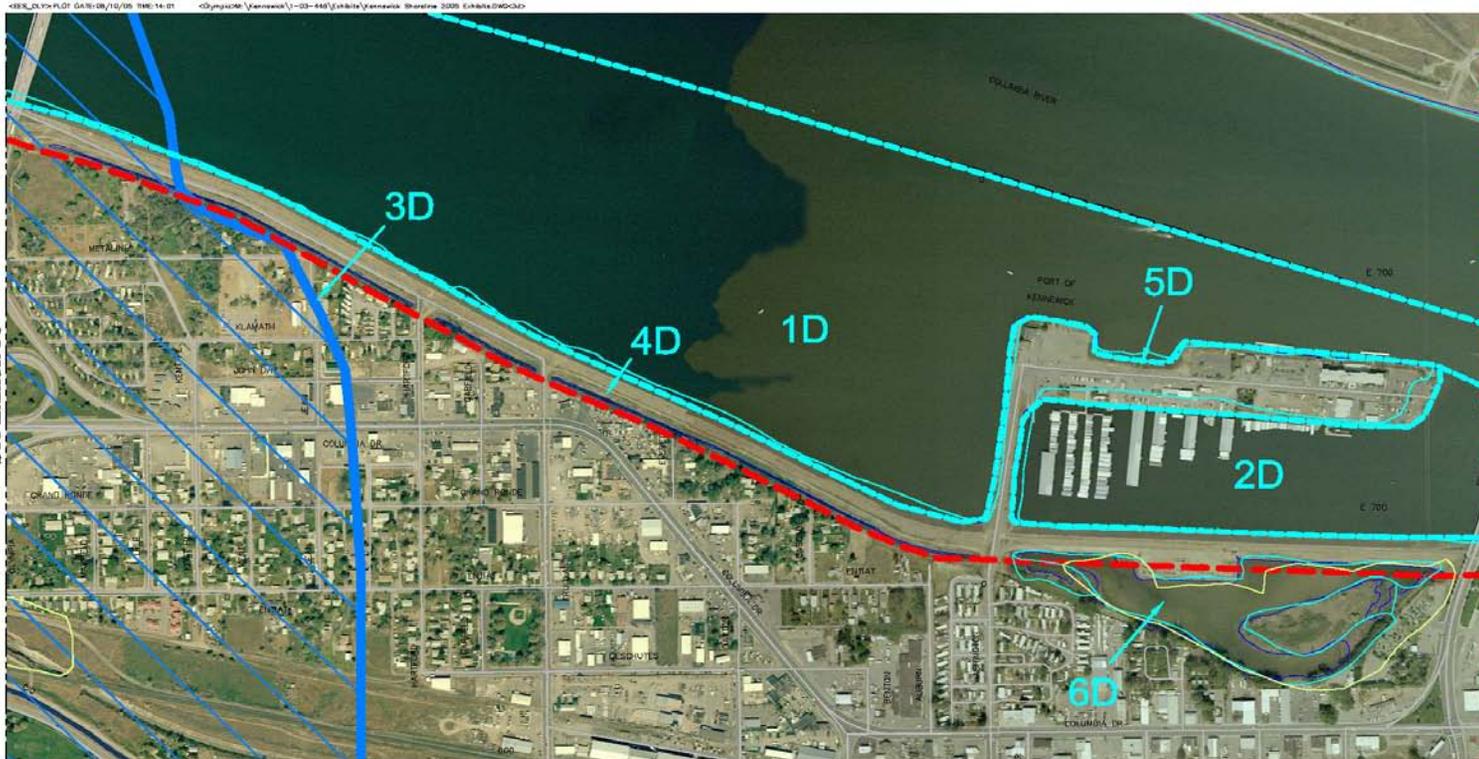


EXHIBIT 3c
Kennebec
Shoreline Study
Park (3 of 3)
Environmental Features
June 2005





See Exhibit 3c

See Exhibit 3c

LEGEND

Segment "D"

Environmental Features Key

- 1D Main Stem Fish Migration
- 2D Degraded Habitat/Clover Island
- 3D Aquifer Recharge
- 4D Levee West
- 5D Cover Island
- 6D Duffy's Pond and Drainage (west)

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

- City Limits
- UGA Boundary
- 200' Shoreline Jurisdiction
- Feature Boundary
- Wetland Boundary
- Fish Habitat
- Aquifer Recharge Area

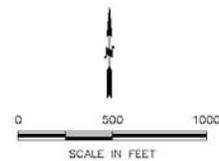


EXHIBIT 3d
Kennewick
Shoreline Study
Levee A and Clover Island
Environmental Features
June 2005



See Exhibit 3d



Segment "E"

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

Environmental Features Key

- 1E Main Stem Fish Migration
- 2E Degraded Habitat Clover Island
- 3E Levee East

LEGEND

- City Limits
- UGA Boundary
- 200' Shoreline Jurisdiction
- Feature Boundary
- Wetland Boundary
- Fish Habitat

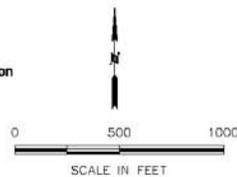
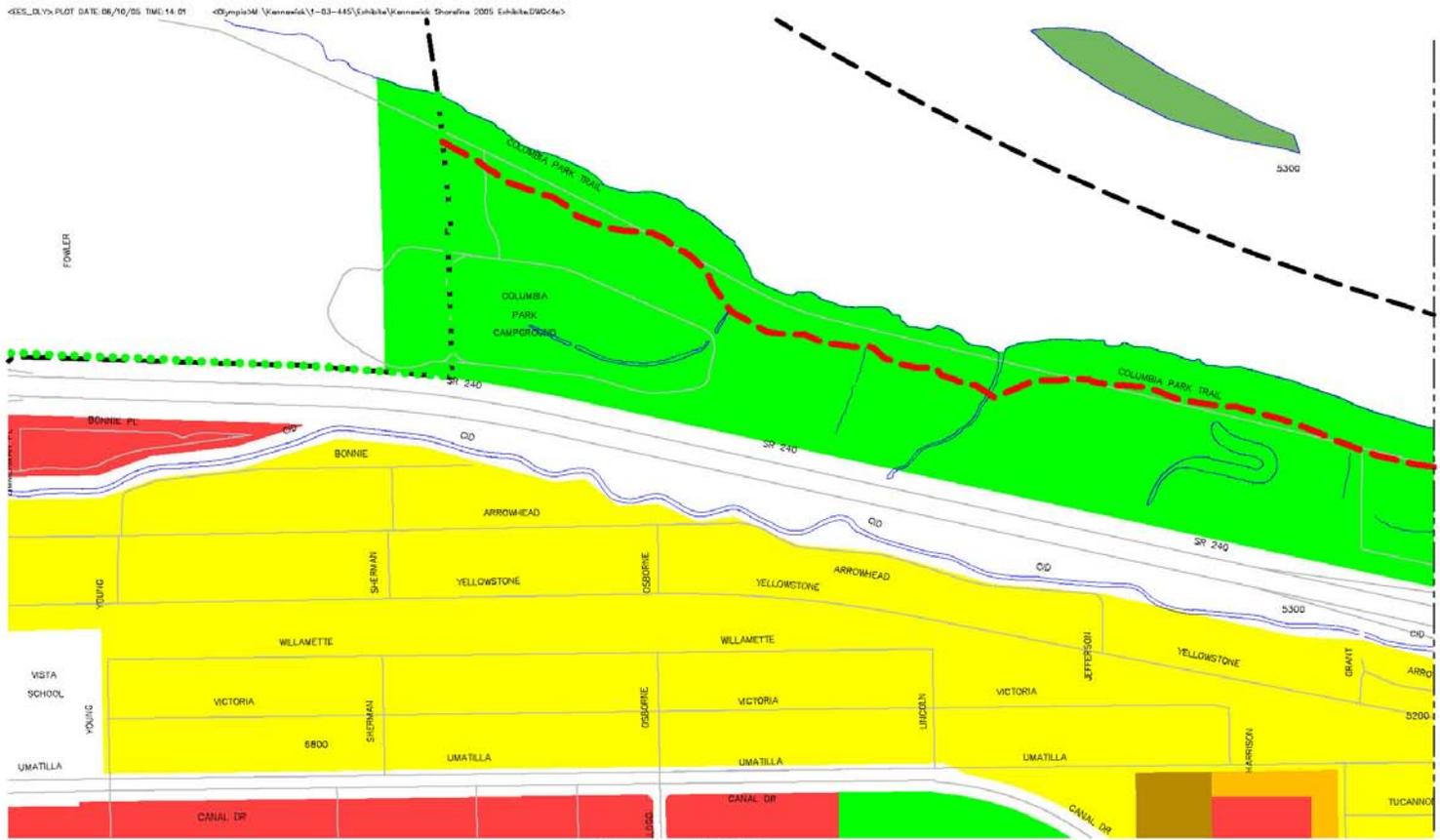


EXHIBIT 3e
Kennewick
Shoreline Study
Levee B
Environmental Features
June 2005





See Exhibit 4b

Land Use Key

■	Industrial Zone
■	Commercial Zone
■	Open Space Zone
■	High Res Zone
■	Med Res Zone
■	Low Res Zone

Notes:
 Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

Segment "A"

LEGEND

	City Limits
●●●●●	UGA Boundary
- - -	200' Shoreline Jurisdiction

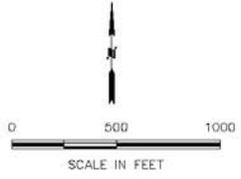
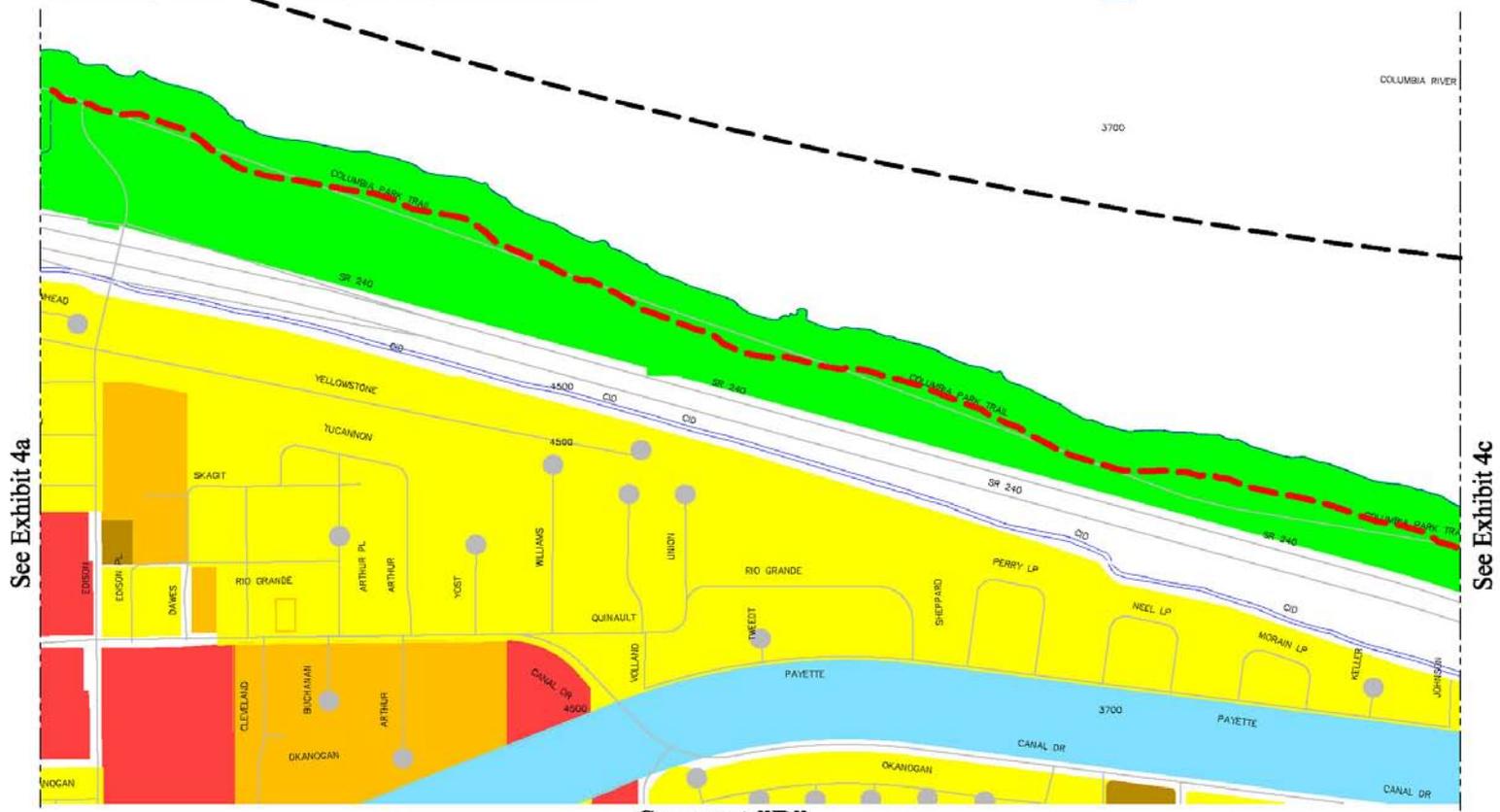


EXHIBIT 4a
Kennewick
 Shoreline Study
 Park (1 of 3)
 Future Land Use - Zoning
 June 2005

HDR | **ees**



See Exhibit 4a

See Exhibit 4c

Segment "B"

Land Use Key

- Industrial Zone
- Commercial Zone
- Open Space Zone
- High Res Zone
- Med Res Zone
- Low Res Zone

LEGEND

- City Limits
- UGA Boundary
- 200' Shoreline Jurisdiction

Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

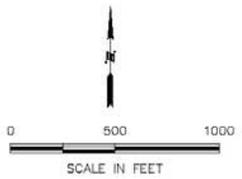


EXHIBIT 4b
Kennewick
 Shoreline Study
 Park (2 of 3)
 Future Land Use - Zoning
 June 2005



See Exhibit 4b

See Exhibit 4d

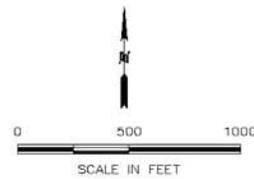
Segment "C"

Land Use Key

- Industrial Zone
- Commercial Zone
- Open Space Zone
- High Res Zone
- Med Res Zone
- Low Res Zone

LEGEND

- City Limits
- UGA Boundary
- 200' Shoreline Jurisdiction



Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

EXHIBIT 4c
Kennebec
Shoreline Study
Park (3 of 3)
Future Land Use - Zoning
June 2005





See Exhibit 4c

See Exhibit 4e

Land Use Key

	Industrial Zone
	Commercial Zone
	Open Space Zone
	High Res Zone
	Med Res Zone
	Low Res Zone

Segment "D"

LEGEND

	City Limits
	UGA Boundary
	200' Shoreline Jurisdiction

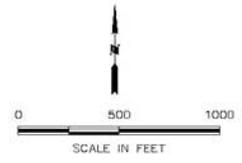
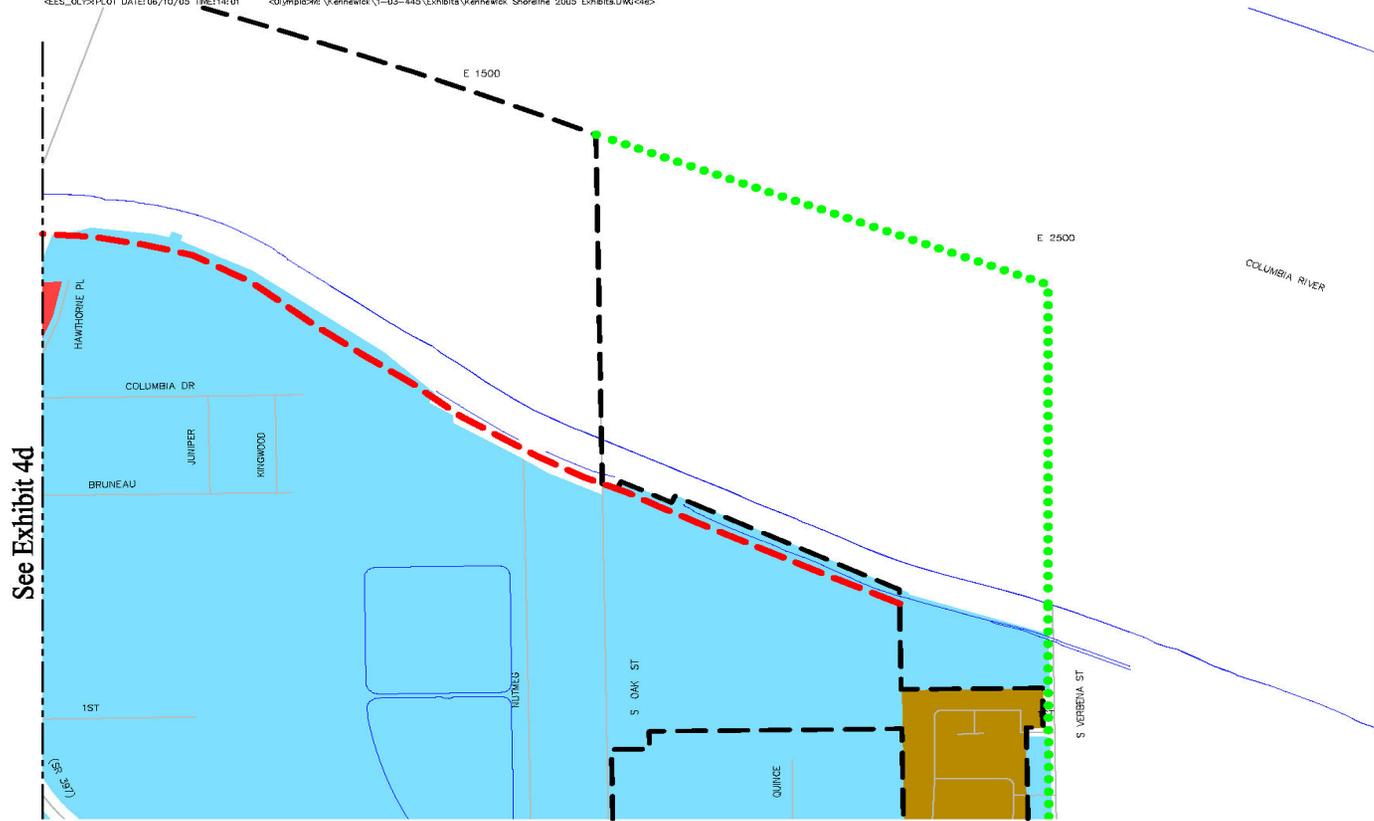


EXHIBIT 4d
Kennewick
 Shoreline Study
 Levee A and Clover Island
 Future Land Use - Zoning
 June 2005
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Note:
 Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.



Note:
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site specific evaluation may be needed to confirm/verify information shown on this map.

- Land Use Key**
- Industrial Zone
 - Commercial Zone
 - Open Space Zone
 - High Res Zone
 - Med Res Zone
 - Low Res Zone

- Segment "E"**
- LEGEND**
- City Limits
 - UGA Boundary
 - 200' Shoreline Jurisdiction

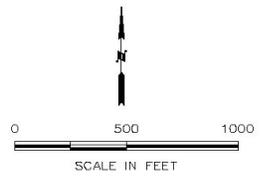


EXHIBIT 4e
Kennewick
Shoreline Study
Levee B
Future Land Use - Zoning
June 2005

HDR | **ees**

6.0 Shoreline Distinctions Based on Existing Land Use

The City of Kennewick has four distinct shoreline areas with different land use characteristics. Each area varies with the amount of public or private shoreline use and whether it has recreational, industrial, residential or business facilities. All of these are located on the Columbia River mainstem.

Table 4 Shoreline Area Distinctions				
Area Distinguished by Land Use	Boundaries	Shoreline Segment	Name	Description of Adjacent Shoreline Activity
1	West side of Columbia Park Campground – US395 Blue Bridge	A-C	Park A-C	<ul style="list-style-type: none"> ■ Columbia Park ■ Columbia Park Golf Course
2	US395 Blue Bridge – Clover Island	D	Levee West – CI	<ul style="list-style-type: none"> ■ Levee ■ Mobile Homes
3	Clover Island – US397 Cable Bridge	D	Levee West – CI	<ul style="list-style-type: none"> ■ Levee ■ Clover Island ■ Duffy’s Pond ■ Mobile Homes ■ Businesses
4	US397 Cable Bridge – South Verbena Street	E	Levee East	<ul style="list-style-type: none"> ■ Levee ■ Rural Area/Mobile Homes ■ Industrial Activity

Segments A-C (Park A-C) includes Columbia Park, Columbia Park Golf Course, Audubon nature trail, camp ground facilities, playgrounds and park functions such as hydroplane races. The entire shoreline, in this segment, is accessible to the public for running, biking, resting, scenic/wildlife viewing, and various recreation activities. There are two public boat launches within Columbia Park; one is located near the west end of the Park (near river mile 333) and the other is located at the east end of the park near Columbia Park Pond (near river mile 331).

Segment D (Levee West- CI) includes the Columbia shoreline section between US395 and Clover Island. The shoreline's dominant feature is the levee running from the Blue Bridge to Clover Island. At this time, no access to the Columbia River exists in this section (either physical or viewing). A residential area with mobile homes resides on the south side of the levee.

Segment D (Levee West-CI) also includes Clover Island and Duffy's pond. Clover Island is owned and maintained by the Port of Kennewick. There are two marinas on Clover Island currently leased by Clover Island Yacht Club and Metz Marina. Other facilities on Clover Island include a Ramada Inn Hotel, Cedar's restaurant, Port of Kennewick offices and a U.S. Coast Guard station. Clover Island is connected to the shoreline by a causeway which is an extension of North Washington Street. The causeway creates a small cove between the Island and the shoreline levee with calm waters for the two marinas. Duffy's Pond is located south and landward from Clover Island. It is owned and maintained by the U.S. Army Corps of Engineering (USACE) and visually/physically separated from the Columbia River by a levee. Land uses around Duffy's pond are mobile homes and businesses.

Segment E (Levee East) is the Columbia Shoreline section located between US397 Cable Bridge and South Verbena Street. A USACE levee separates the river from landward uses. The shoreline between the US397 Cable Bridge and River mile 328 is within the Kennewick City limits and therefore under the City of Kennewick's jurisdiction. The shoreline between river mile 328 and South Verbena Street is within the Urban Growth boundaries and consequently under Benton County's jurisdiction. Although there are different jurisdictions, all of Segment E is considered to have similar land use functions. There is rural land use in this segment that consists of vacant land (outside the Kennewick City limits), farming and industrial/ railroad areas (Picture 5). Segment E (Levee East) differs from Segment D (Levee West-CI) because of different land uses behind the levee (Segment D is residential/business and Segment E currently has both rural and industrial character. Note: Segment E is zoned for future industrial development – See Section 8).

Picture 5- Rural Land Use within City of Kennewick Urban Growth Boundaries



7.0 Shoreline Segments with Environmental Features

This section defines Kennewick's shoreline segments (A-E) using environmental features (ecological functions). These features have been developed through a combination of available data and literature and field observation. The shoreline segment ecological features are described below starting from the west shoreline segment A and moving to the east shoreline segment E. The ecological feature narrative directly corresponds with map exhibits 4a through 4b and therefore some of the ecological feature descriptions may be repeated. For instance, each shoreline segment (A, B, C, D, and E) contain the ecological feature-Columbia River (Main Channel) Aquatic Fish Habitat. Each segment narrative (A-E) will contain a description of that ecological feature.

Shoreline Segment A- Map Exhibit 3a

Environmental Feature 1A- Columbia River (Main Channel) Aquatic Fish Habitat

Aquatic Habitat (Main Stem) is the Columbia River aquatic habitat within Kennewick Urban Growth boundaries in the river main stem. Main channel aquatic habitat in the Columbia River is important for migrating chinook, sockeye and coho salmon, steelhead and Pacific lamprey. The river also provides habitat for resident fish such as white sturgeon, bull trout, northern squawfish and bass. Substrate material along the river bottom consists of fine silt to large cobble and is dependant on the water velocity during high flow periods (HDR, 1997). The main channel substrate is primarily cobble due to high velocity currents which sweep away fine particle substrate. Depending on high or low flow, near shore water velocity ranges from 0.0 to 2.2 feet per second (fps) and mid-channel velocity ranges from 2.4 to 7.0 fps (HDR, 1997).

Environmental Feature 2A- Aquatic Waterfowl Habitat

According to Washington Department of Fish and Wildlife, there is priority waterfowl habitat located on the Columbia River main channel in the northwest corner of the City of Kennewick UGB. This priority habitat designation is an extension of waterfowl habitat associated with Bateman Island (City of Richland). Species of migrating or resident waterfowl that inhabit this area includes dabbling duck, wood duck, mallard, Canadian geese, canvasback, and ringnecks (Washington Department of Fish and Wildlife, 2000).

Environmental Feature 3A- Riparian Habitat

Shoreline Segment A boundary is from the City of Kennewick western border to Edison Street. This area contains important riparian habitat along the Columbia River shoreline. The physical characteristics of the riparian habitat in Segment A are steep slopes (<15%) with riprap and small amounts of vegetation (Picture 6). Existing vegetation includes Russian olive, black locust and various grasses.

Environmental Feature 4A- Kiwanis Irrigation Return Channel

There is one wastewater irrigation channel which runs through the Kiwanis camping area and carries run-off to the Columbia River from the Columbia Irrigation District. This irrigation channel meets the Columbia River midway through Segment A (near river mile 333). The channel contains a trash collector with a bar screen at its end. The channel is dry during periods of low precipitation, and low irrigation. Personnel communication with the Washington Department of Fish and Wildlife suggested that there is a maintenance problem with the trash collector, but little was known about fish habitat associated with the channel (Picture 7).

Environmental Feature 5A- Duck Pond

The Duck Pond is a large wetland within Segment A provides important habitat be associated with the Columbia River shoreline, although the pond is not within the 200 feet Shoreline Master Program jurisdictional boundary. The Duck Pond is little surrounding vegetation, yet attracts a large number of sea gulls and other avian species. Water quality in the Duck Pond may be compromised due to the quantity of bird feces in and around the pond.

Picture 6- Environmental Feature Area- 3A



*Picture 7- Environmental Feature Area 4A - Trash Collector at Kiwanis Camp Ground-
Wastewater Channel – Shoreline Segment A*



Shoreline Segment B- Map Exhibit 3b

Environmental Feature 1B- Columbia River (Main Channel) Aquatic Fish Habitat

This segment provides main stem aquatic habitat similar to that described as Environmental Feature 1A.

Environmental Feature 2B- Priority Riparian Habitat

Segment B is located east of Edison Street to the Columbia Park Golf Course. A large section of this area has been designated by the WDFW as priority riparian habitat. Priority habitat is established by WDFW as a unique ecosystem with associated species populations which are important to protect and sustain. Some species associated with this riparian habitat are bald eagle, non-game birds and geese. The priority riparian habitat 2B extends the approximate length of Segment B shoreline and south over Columbia Drive to SR 240.

Environmental Feature 3B- Riparian Habitat

Shoreline Segment B that is not designated as priority riparian habitat also contains important riparian habitat. Non- priority riparian habitat is important along the Columbia River shoreline because of the salmon and steelhead species as well as many other important aquatic ecosystem components. The physical characteristics of the non-priority riparian habitat in Segment 3B are steep slopes (<15%) with riprap and small amounts of vegetation.

Environmental Feature 4B- Wetland Areas

Three wetland areas are also included in the priority riparian habitat. Two of these wetlands are located on the Columbia River shoreline and the other is located on the south side of Columbia Drive. The two wetlands located on the Columbia River shoreline are associated wetlands and therefore directly effected by Shoreline Master Program regulations for shoreline area 4B. Water sources for these wetlands are unknown but these areas are ephemeral (observation, 2004) in that they dry out in summer months when there is less precipitation and the water table is lower. These wetlands contain thick vegetation comprised of native and non-native plant species. Some non-native species are aggressive invaders such as Russian olive, but even these species provide habitat for various important aquatic, avian and amphibian species. Avian species such as the bald eagle can overwinter in trees like the Russian olive. Also, plant species like Russian olive can provide shade and allocthonous input (i.e., leaves, branches, and woody debris) that may benefit aquatic species such as salmon and steelhead. Wetland area (Area 4B) appears to have the best functioning shoreline habitat, compared with other Kennewick shoreline segments, because it contains more vegetation in or along the shoreline, shallow shoreline slopes and less riprap (Pictures 8 and 9).

Picture 8- Environmental Feature Area 4B - Wetland Shoreline (Segment B)



Picture 9- Environmental Feature Area 4B - Wetland Shoreline (Segment B)



Shoreline Segment C- Map Exhibit 3c

Environmental Feature 1C- Columbia River (Main Channel) Aquatic Fish Habitat

This segment provides mainstem aquatic habitat similar to that describes as environmental Feature 1A.

Environmental Feature 2C- Riparian Habitat

The Columbia Park Golf Course and driving range are located near the shoreline on the south side of Columbia Drive. The key ecological feature of this segment is the Columbia River shoreline. The physical characteristics of shoreline segment 2C are small amounts of vegetation, steep shoreline slopes (<15%) and riprap (Picture 10). Area 2C is owned by the City of Kennewick and most of the area is leased to a private company which operates Columbia Park Golf Course. Currently, there are no written maintenance plans for the golf course and Columbia Park which would include information about pesticide/ herbicide types, buffers, pesticide/herbicide application and irrigation. The park and golf course are in close proximity to riparian habitat along the Columbia River shoreline (Picture 11).

Environmental Feature 3C- Riparian Habitat- Golf Course East to US395 Blue Bridge

Shoreline in Segment C has riparian habitat which is important for salmon and steelhead as well as other Columbia River species. The physical characteristics of the riparian habitat in Area 3C (golf course to Blue Bridge) are steep slopes (<15%) with riprap and small amounts of vegetation.

Environmental Feature 4C- Aquifer Recharge Area

An aquifer recharge area is located from the east side Columbia Park Golf Course to approximately North Jean Street (on the east side of US395/Blue Bridge). Existing shoreline features in the aquifer recharge area include the Columbia Park Pond and channel, Columbia Park east boat launch, US395 Blue Bridge and levee west.

Area 4C contains two Ranney collectors 4 and 5. Ranney collector 4 is located on the Columbia River shoreline west of Columbia Park Pond channel and Ranney collector 5 is east of Columbia Park Pond on Riverside Drive. According to the U.S. Environmental Protection Agency a Ranney Collector is defined as a “water collector that is constructed as a dug well from 12 to 16 feet (3.5 to 5 m) in diameter that has been sunk as a caisson near the bank of a river or lake. Screens are driven radially and approximately horizontally from this well into the sand and the gravel deposits underlying the river” (Environmental Protection Agency, 2005). These wells currently supply the City of Kennewick with 60 percent of resident water use and the Columbia River provides the other 40 percent. In 2002 the Washington State Department of Health classified Ranney collector 5 as GWI (groundwater under the influence of surface water). The classification of GWI was due to microscopic particulates in water samples and because of this the City must meet more strict State and Federal water quality regulations. Modifications made to the wells have reduced the possibility of contamination. The water quality in Area 4C is

important to aquatic species in Columbia Park Pond and channel as well as residents in the City of Kennewick.

Environmental Feature 5C- Columbia Park Pond and Channel

Columbia Park Pond is an associated wetland with the Columbia River shoreline. It is not within the 200 feet Shoreline Master Program boundary, but it is connected with the Columbia River by a wastewater channel. The Columbia Park Pond has recently become an important rearing habitat for coho salmon. The Zintel Canyon Creek (ZCC), which once ran through a separate concrete channel, now carries irrigation wastewater through Columbia Park Pond and out into the Columbia River. This modification was made because ZCC runoff came from the Yakima River and falsely attracted salmon from the Columbia River up into the channel for spawning. The ZCC was not suitable habitat for salmon spawning/rearing due to water temperature, sedimentation, fish passage barriers, and debris. Water is now diverted through Columbia Park Pond and screens are in place to keep adult coho salmon (but not fry) from entering the park. Consistent water flow through the pond and channel helps improve the water quality (temperature and sediment load) and decrease park maintenance (screen cleaning). There is also an approximate 30 feet vegetation buffer along the channel which improves water quality and habitat for riparian species. The Columbia Park Pond and channel is used by coho fry as well as other resident pond species.

Picture 10- Environmental Features Area 2C - Golf Course Shoreline (Segment C)



Picture 11- Environmental Features Area 2C - Driving Range in close proximity to Columbia River (Segment C)



Shoreline Segment D- Map Exhibit 3d

Environmental Feature 1D- Columbia River (Main Channel) Aquatic Fish Habitat

This segment provides mainstem aquatic habitat similar to that describes as environmental Feature 1A.

Environmental Feature 2D- Clover Island Eddy

Environmental Feature Area 2D is the aquatic habitat between Clover Island and the levee shoreline where the two marina locations reside. The portion of the Columbia River between Clover Island and the levee has low water velocity due to the causeway that connects Clover Island to the shore. Water is blocked at the causeway and consequently flows around Clover Island. The “backwater” that flows from the main channel into the marina area deposits fine silt sediment over existing substrate. Columbia River underwater habitats with slow water velocity have a high probability of containing fine silt and milfoil, which do not appear to support juvenile salmonidss (HDR, 1997). Temperature may also be higher in the lower velocity water in the Clover Island marina area. Therefore, this area has different and more degraded habitat conditions compared with the main channel of the Columbia River.

Environmental Feature 3D- Aquifer Recharge Area

The aquifer recharge area is located from the east side Columbia Park Golf Course to approximately North Jean Street (on the east side of US395/Blue Bridge). Existing shoreline features in the aquifer recharge area include the Columbia Park Pond and channel, Columbia Park east boat launch, US395 Blue Bridge and levee west.

Environmental Feature 4D- Levee West

This segment of levee lines the Columbia River shoreline from the US395 Blue Bridge to US397 Cable Bridge. The levee west section is separated by the North Washington Street causeway that connects Clover Island with the shore. Levee Area 4D is at 360 feet MSL compared to the ordinary high water mark at 340 feet MSL. Area 4D is heavily covered in riprap, steep, and contains no vegetation (besides a small amount of weeds) (Pictures 12 and 13). Riprap in the levee, as well as other sections, degrades habitat for salmon species. The large pieces of riprap create hiding places for predators that prey on juvenile salmonidss. Also, the riprap replaces riparian vegetation along the shoreline which would produce habitat for salmon food (macroinvertebrates or insects). Vegetation along the Columbia River shoreline would increase allocthonous input (i.e., small branches, leaves, etc.), shade, diversity in habitat structure, aesthetics, shoreline stability and near shore water quality.

Picture 12- Environmental Features Area 4D - Levee shoreline directly across from Clover Island (Segment D)



Environmental Feature 5D- Clover Island

Clover Island shoreline is similar to the levee segments in that it has steep slopes covered with riprap. There are a few more trees and general vegetation along the shore, but not a substantial amount (Picture 14). Area 5D is separated from other shoreline segments because of Clover Island's multiple uses and their affect on ecological function in the Columbia River. For instance, there is more boat and automobile traffic associated with the island because of the Port of Kennewick offices, restaurant, hotel and marinas. Traffic affects ecological function through noise, accidental fuel spills and contaminated stormwater runoff. Currently there are no priority habitats on Clover Island however the island is located near important riparian and wetland habitats. Future development on Clover Island could affect migrating salmon and steelhead as well as other aquatic species and waterfowl. However, development coupled with habitat improvements could have net benefits.

Clover Island stormwater runoff from parking lots and roads is mostly contained in dry wells. There are some uncontrolled sources of possible pollution such as North Washington Street, gravel parking lots and landscaped areas at the hotel and Port of Kennewick Offices (Parametrix, 1995). There is a possibility that stormwater runoff from these areas could carry grease, oil, lead, metals, suspended sediment, fertilizer, pesticides and herbicides into the Columbia River (Parametrix, 1995). Other potential sources of contamination from Clover Island are boat washing practices, fuel storage/ disposal sites and fueling on or near the water.

Picture 13- Environmental Features Area 5D - East End of Clover Island (Segment D)



Environmental Feature 6D- Duffy's Pond and Drainage Area

Duffy's pond is owned and maintained by the USACE. The pond is on the south side of the levee and contains a pump that discharges pond water into the Columbia River. Water flows into Duffy's pond from a stormwater runoff channel located south of the levee and beginning west of the pond at the Blue Bridge (US395). A residential area surrounds Duffy's pond on the south/landward side (Picture 15). Water quality, associated species and pond/ channel functions are unknown. Area 6D, Duffy's pond, is listed as priority urban natural open space with important habitat for shorebirds, waterfowl, upland birds and furbearing animals (Washington Department of Fish and Wildlife, 2000).

Picture 14- Environmental Features Area 6D - Residential Area on the south side of Duffy's Pond (Segment D)



Shoreline Segment E- Map Exhibit 3e

Environmental Feature 1E- Columbia River (Main Channel) Aquatic Fish Habitat

This segment provides mainstem aquatic habitat similar to that describes as environmental Feature 1A.

Environmental Feature 2E- Clover Island Eddy

Environmental Feature Area 2E is the downriver piece of aquatic habitat described as environmental Feature 2D. The portion of the Columbia River between Clover Island and the levee has low water velocity due to the causeway that connects Clover Island to the shore. Water is blocked at the causeway and consequently flows around Clover Island. This area has different and more degraded habitat conditions compared with the main channel of the Columbia River.

Environmental Feature 3E- Levee East

This segment of levee lines the Columbia River shoreline from the US397 Cable Bridge to the City of Kennewick Urban Growth Boundary (South Verbena Street). Levee Area 3E is at 360 feet MSL compared to the ordinary high water mark at 340 feet MSL. Segment 3E is heavily covered in riprap, steep, and contains no vegetation (besides a small amount of weeds).

Picture 15- Environmental Features Area 3E - Levee Section East of Clover Island and Cable Bridge (Segment E)



8.0 Future Demands and Use

Descriptions of future shoreline use are provided in several documents, including the City of Kennewick Comprehensive Plan (applies to the total shoreline area), Columbia Park Master Development Plan, Bringing Back the Magic of the River, City of Kennewick Downtown Revitalization Strategy and Clover Island Master Plan (Draft 2003).

City of Kennewick Comprehensive Plan

The Kennewick Comprehensive Plan has specific goals which pertain to the Columbia River Shoreline. These goals revolve around transportation, environment and growth. The document focuses on environmental resources by making critical areas protection a priority. Kennewick would like to see adequate environmental protection without diminishing public access to the Columbia River and other water resources.

The Kennewick Columbia River shoreline is a Shoreline of Statewide Significance which involves the protection of State and local economic and ecologic shoreline resources. Shorelines of Statewide Significance (SSWS) are given a use preference list by the Washington Department of Ecology. Preference is given in order: recognize and protect the state-wide interest over the local interest, preserve the natural character of the shoreline, result in long term over short term benefit, protect the resources and ecology of the shoreline, increase public access to publicly owned areas of the shoreline, and increase recreational opportunities for the public in the shoreline. The overall goals of Kennewick's Comprehensive Plan address preserving the natural and ecological character of the shoreline as well as enhancing public and recreational access to the river.

Land use (both existing and future) are important considerations for designation of shoreline areas, and in the evaluation of current and potential environmental values of shorelines segments. The uses previously described in the environmental features description of Kennewick's shoreline were developed from on-site observations. Future land use can best be described by land use designations in the City's Comprehensive Plan and in the related City Zoning Code. There are shown in Exhibits 4A through 4E.

The Comprehensive Plan concentrates on access to the river by boat, land, railway and air. The City considers boat access to the River as very important for recreation and business. Boats currently access the river from two boat launches in Columbia Park, two marinas on Clover Island and a barge loading dock. The mainstem Columbia River offsite Kennewick is navigable and provides a commercial navigation access to Richland and provides a commercial navigation access to Richland (upriver), Pasco (across the river), and other ports on the Lower Snake River.

Future development of railway transportation will be important in the tracks that travel over the Columbia River into an industrial area southeast of Clover Island. The industrial area and rail bridge are in close proximity to the shoreline, and development or enhancement of this area should be considered in the Shoreline Master Program regulations. The City of Kennewick Comprehensive Plan provides guidance in the expansion of railway activities, including the possibility of light rail development on existing railway infrastructure (City Comprehensive

Plan). Currently, the railway bridge and industrial area are important for the transportation of goods through the City of Kennewick. Burlington Northern and the Santa Fe railway have approximately 3-6 through trains daily along this rail corridor.

Columbia Park Master Development Plan

(David Evans and Associates, 2000)

The Columbia Park Master Development Plan calls for expanding on the existing Park by creating more public access to the river by boat, bike and foot. The Plan considers the addition of an amphitheater, riparian vegetation enhancement, floating stage, beach cove, waterfront promenade, grass shoreline and fishing pier. Some other design considerations are adding surrounding vegetation around waterfowl pond and an expansion of the Columbia Park Golf Course/Driving Range. The City of Kennewick would like the additions in Columbia Park to work with the existing natural environment and be biologically as well as culturally beneficial. This plan identifies several potential improvements but stops short of identifying a recommended improvement plan. It provided the City with a conceptual starting point for potential improvements.

Bringing Back the Magic of the River

(Urban Design Assistance Team, 2003)

The City of Kennewick revolves around the Columbia River in aesthetics, navigation, recreation business and location. Yet, much of Kennewick is disconnected from the Columbia River visually and physically because of the levees and their height. The UDAT (Urban Design Assistance Team) report titled “Bringing Back the Magic of the River” addresses this separation by incorporating the river into a future development design for the City of Kennewick. The vision makes the river the focal point of the City by reducing the levee height, creating more public access to the river, increasing residences along the shore and improving riparian habitat. The existing levee becomes islands, inlets and protected habitat for fish and water fowl. A new lower levee is located further landward from the existing levee, and contains public access to the river with apartment/ condo residences along it (Figure 1). Although the UDAT report is specifically for shoreline development between the Blue Bridge (US395) and the Cable Bridge (US397), other City of Kennewick shoreline development projects follow similar guidelines in restoration and development.

Figure 1- Potential Future Development for the Kennewick Shoreline between the Cable and Blue Bridge



Residential Site Plan



Residential Area Development

Downtown Revitalization Strategy
(Tom Hudson Company, 1998)

The downtown revitalization strategy establishes the core downtown perimeters as Washington Street, First Avenue, Dayton and the railroad property. The downtown core area will become the center of the City of Kennewick, where people will come to shop, play and conduct business. A core central business district will create a connection point for city transportation like railway and bus transit. Also, other improvements would involve recruiting community-oriented businesses, improving building aesthetics, increasing landscaping, lighting, parking and signage.

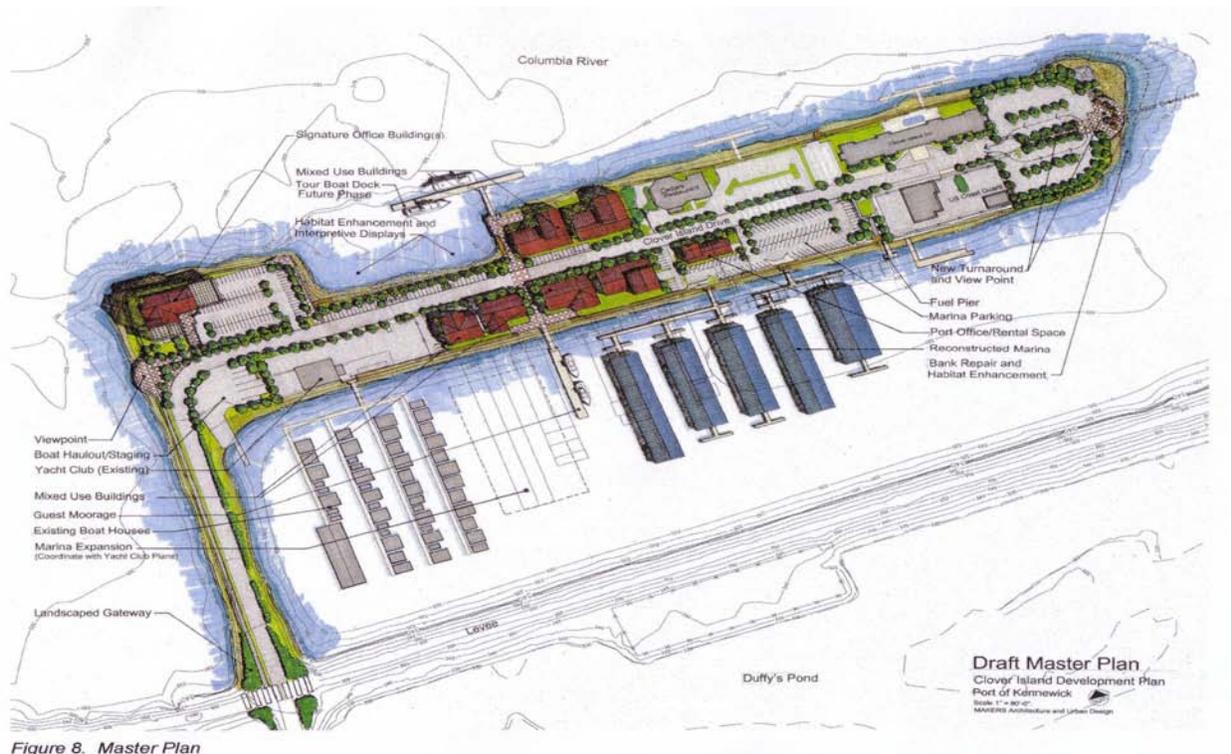
Improvements made to the downtown core would help to connect downtown with Clover Island, Columbia Riverfront, Columbia Drive, surrounding neighborhoods, employment areas and a city center complex.

Clover Island Master Plan

(MAKERS architecture and urban design, 2003)

Clover Island Master Plan (2003) addresses creating more facilities on the island, including condos, apartments, office space, retail and food stores, a café, marine retail and boat moorage. Additionally, the aesthetics of the Island would be enhanced with pathways, plazas, landscaping and public Columbia River viewpoints (Figure 2). The focus is on connecting the City to the river by bringing residents and tourists to the new facilities and enhanced waterfront. Clover Island would develop these new amenities on the existing island foot print. River habitat around Clover Island will be improved by added upland and riparian vegetation, cobble filled riprap and the construction of aquatic habitat within the Clover Island “notch.” The “notch” is an indent on the north side of Clover Island which once served as a part of the Kennewick’s water filtration system. Construction of Clover Island additions would be done in consultation with state and federal agencies to avoid negatively impacting waterfowl, migrating salmon/steelhead species and resident fish.

Figure 2- Clover Island Draft Master Plan



9.0 Restoration Plan

9.1 Degraded Columbia River Shoreline Areas (West to East)

Adjacent Columbia River Shoreline (Columbia Park Shoreline Area)

One specific restoration prospect along the Kennewick shoreline is removing or altering the concrete/asphalt riprap used to stabilize the shoreline during high water and wave action (Picture 16). Removing the riprap and planting vegetation will provide stability for the shoreline as well as beneficial habitat for riparian species. Filling the riprap with gravel is also an option that would improve juvenile salmonids habitat by diminishing predator hiding. As previously mentioned in environmental features 4D and 3E, riprap degrades shoreline habitat conditions by increasing predator hiding and decreasing macro-invertebrate populations. Filling or removing riprap and planting the shoreline with riparian vegetation would generally increase riparian species use, specifically juvenile salmonids activity. Also, changing the current shoreline slope to be less steep would provide valuable rearing and feeding habitat for different species.

Picture 16- Riprap



Columbia River Park Invasive Species Removal

Removal of non-native vegetation is another way to improve habitat conditions along the shoreline. There are species of non-native plants such as Russian olive that are invading the more natural areas of Columbia Park and taking the place of native vegetation. Typically, non-native plants provide less-preferred habitat for most native species. Sudden removal of any invasive species is not recommended because many times these plants become substitute habitat for species of birds and other terrestrial animals. A gradual removal of invasive plants and re-growth of natives is more beneficial for species which depend on that habitat (Personal Communication with WDFW, 2004).

Columbia Park and Golf Course Maintenance Plan for Pesticide and Herbicide Use

Currently, there is no maintenance plan for Columbia Park and the Columbia Park Golf Course that addresses pesticide and herbicide use. A maintenance plan which states the types of pesticides/herbicides used provides buffers between chemical application areas and the river, and describes safe application procedures would protect shoreline ecological resources. The absence of a plan creates a possibility of degrading the ecological resources of a shoreline of statewide significance which includes associated salmon, steelhead, upland and riparian vegetation and waterfowl. Additionally, salmon and steelhead (specifically federally listed species) can be harmed by certain herbicides/ pesticides. In 2004, federal courts ordered the Environmental Protection Agency (EPA) to provide salmon and steelhead with buffer protection from aerial (100 yards) and ground (20 yards) applications of pesticides (EPA, 2004). This court action is under review, however the Columbia River shoreline area is part of this law suit and planning for protection of these species is advised.

Adjacent Columbia River Shoreline (Levee Areas)

One way to improve and restore the Kennewick Shoreline ecologically and culturally is to reduce the levee height and slope along the Columbia River (Levee Segment West and East). The USACE has approved a reduction in levee height that would connect Kennewick residents with the shoreline visually and physically. Along with a reduction in levee height, a decline in levee slope would change the existing habitat by creating valuable hiding and feeding space for salmonids as well as other aquatic species. Both levee height and slope reduction can be addressed and constructed at the same time. The City has recently let a contract to begin reducing levee height.

Also, removing the riprap and planting native vegetation will provide stability for the shoreline as well as beneficial habitat for riparian species. Filling the riprap with gravel is also an option that would improve juvenile salmonids habitat by diminishing predator hiding. As previously mentioned in environmental features 4D and 3E, riprap degrades shoreline habitat conditions by increasing predator hiding and decreasing macro-invertebrate populations. Salmon and other aquatic species rely on macro-invertebrates for food. Macro-invertebrate preferred habitat consists of riparian vegetation and allocthonous (such as leaves, branches, etc.) input that riprap does not provide. Filling or removing riprap and planting the shoreline with riparian vegetation would generally increase use of the area by riparian species and juvenile salmonids.

Clover Island Causeway

The causeway that joins Clover Island with the Kennewick shoreline blocks water flow so that it flows around Clover Island and then eddies into the Clover Island Marina area. The slow moving water carries fine sediment which settles onto the cobble substrate. Fine sediment and calm water creates an area with milfoil that is not beneficial for juvenile salmon habitat. Additionally, the lower water velocity can raise water temperature along the shoreline which does not benefit most aquatic species. Opening causeway to allow some river flow through the Clover Island backwater would create higher water velocity and overall better aquatic habitat.

Clover Island Run-off/ Pollution Control (Landscaping, Gravel Parking Lots and N. Washington Street)

Currently, there are three possible pollution sources on Clover Island: the landscaping areas near the hotel and Port offices, gravel parking lots and North Washington Street. The pollutants from these areas can degrade water quality and species associated with a Shoreline of Statewide Significance (SWSS). Other pollution concerns for Clover Island are boat washing practices, fuel storage/disposal sites and fueling on or near the water. Possible pollutants include grease, oil, lead, metals, suspended sediment, fertilizer, pesticides and herbicides (Parametrix, 1995). Planning for pollution protection on Clover Island is important for shoreline ecological health especially since the Port of Kennewick is planning to make Clover Island a destination for more boats, automobiles, residents and tourists.

9.2 Restoration Opportunities

There are six distinct restoration opportunities along the Kennewick shoreline. Several of these restoration opportunities may apply to one degraded shoreline area. For example, the Columbia River shoreline (Columbia Park) could benefit from a gradual shoreline slope, riparian vegetation and removing/filling riprap. The six restoration opportunities are:

- lower levee height
- gradual shoreline slope
- add riparian vegetation
- remove or fill riprap
- add native upland vegetation and remove invasive non-native species
- Clover Island causeway removal (or modification to allow water flow)

9.3 Restoration Priority and Possible Funding

In the future, these restoration opportunities should be applied to the Kennewick shoreline. Although all of these projects are important they can be categorized as high priority, medium priority, and low priority according to the level of ecological benefit for the shoreline as shown in Table 5.

Priority Descriptions:

- High Priority - Project could prevent further degradation of the shoreline environment from its current condition.
- Medium Priority - The restoration project affects a large portion of the Kennewick shoreline and will greatly improve the shoreline environment (includes wildlife habitat, water quality, public access, etc.).
- Low Priority - The restoration project affects a smaller portion of the Kennewick shoreline (compared with Medium Priority), but will improve the shoreline environment (includes wildlife habitat, water quality, public access, etc.).

Additionally, prioritizing the projects helps in the decision of when and how the projects will be planned and funded. All of these restoration projects need funding and planning which can be found in different organizations such as Pacific Coastal Salmon Recovery Fund, Bonneville Power Administration (Environment, fish and wildlife) (BPA), Columbia Basin Trust, Land and Water Conservation Fund, Urban Parks and Recreation Recovery, Rivers and Trails Conservation Assistance Program or NOAA Restoration Center. Table 5 describes the degraded restoration project/ area, restoration opportunities with the project, level of priority and possible funding sources. These are also portrayed on Exhibit 5.

Table 5
Restoration Opportunities

Restoration Project/Area (Map Panel)	Restoration Opportunities	Level of Priority	Possible Funding/Planning Resources
Adjacent Columbia River Shoreline (Columbia Park Shoreline Area)	1. Create Gradual Shoreline Slope 2. Riparian Vegetation Addition 3. Remove/Fill Riprap	Medium Priority	Pacific Coastal Salmon Recovery Fund, BPA, NOAA Restoration Center, Columbia Basin Trust
Columbia Park Invasive Species Removal	4. Addition of Upland Native Plants 5. Remove Invasives	Low Priority	Urban Parks and Recreation Recovery, Rivers and Trails Conservation Assistance Program, Columbia Basin Trust
Columbia Park and Golf Course Maintenance Plan for Pesticide/Herbicide Use	6. Name Pesticides/Herbices 7. Establish Buffer Zones 8. Name Application Procedures/Permits	High Priority	
Adjacent Columbia River Shoreline (Levee Areas)	9. Lower Levee 10. Create Gradual Shoreline Slope 11. Riparian Vegetation Addition 12. Remove/Fill Riprap	Medium Priority	Pacific Coastal Salmon Recovery Fund, BPA, Rivers and Trails Conservation Assistance Program, NOAA Restoration Center, Columbia Basin Trust, Urban Parks and Recreation Recovery, Land and Water Conservation Fund
Clover Island Causeway	13. Remove Causeway 14. Build a Bridge to Connect Island with Shoreline with Shoreline	Low Priority	Pacific Coastal Salmon Recovery Fund, NOAA Restoration Center, Columbia Basin Trust
Clover Island Run-off/Pollution Control	15. Contain Current Pollution Sources 16. Plan for Run-off/Population Control with the New Additions on Clover Island	High Priority	

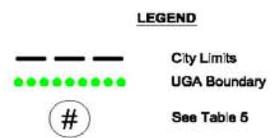
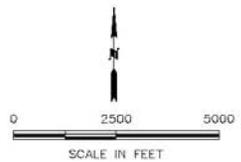
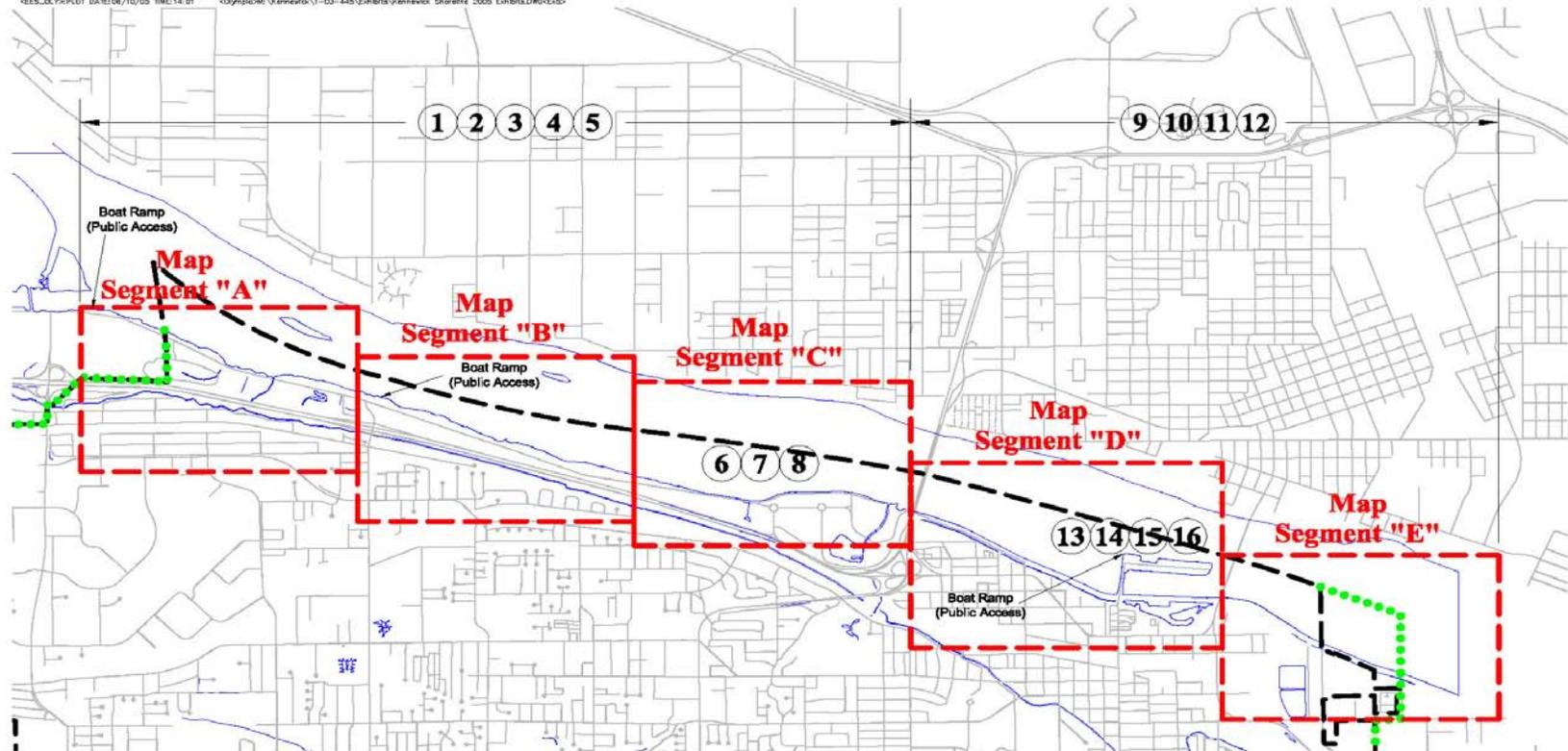


EXHIBIT 5
Kennewick
Shoreline Study
Restoration Opportunities
June 2005
HDR | ees

9.4 Existing Kennewick Shoreline Restoration Projects and Funding

There are three Kennewick shoreline restoration projects that are currently in a planning phase along the Columbia River. First, the Columbia Park Master Development Plan has identified areas for enhancing native riparian and upland vegetation along the Columbia River. According to the Kennewick Capital Improvement Program (2004-2009) funding for this would be provided sometime in the future (post 2009). The second restoration opportunity is the levee height reduction. Levee reduction work began in 2004 with funding sources including Kennewick Park Development Fund, Capital Improvement Fund, public, IAC grant and DNR grant (trees) (Capital Improvements Program, 2004). The third restoration project is the vegetation and fish habitat construction on Clover Island. Funding and restoration dates are unknown for this project.

10.0 Recommendations - Preliminary Environmental Designations

Table 6 Summary of Land Use and Ecological Function within General Shoreline Map Segments			
Segment	Boundaries	Existing Land Use Within Boundaries	Ecological Function Within Segment Boundaries
Columbia River Aquatic- All Shoreline Segments (A-E)	Aquatic Habitat within the City of Kennewick Urban Growth Boundaries	Docks, Boats and Mooring Space	Migrating Salmon and Steelhead Species/Waterfowl
Park A- Shoreline Segment A	West Side of Columbia Park Beginning at the City of Kennewick Urban Growth Boundary and East to Edison	Columbia Park Camp Ground and Duck Pond	Shoreline Riparian Habitat, Kiwanis Wastewater Channel
Park B- Shoreline Segment B	East from Edison Street to the West end of Columbia Park Golf Course	Columbia Park and Audubon Nature Trail	Shoreline Priority/Non-priority Riparian Habitat and Wetland Areas
Park C- Shoreline Segment C	East from the Columbia Park Golf Course to the Blue Bridge (US395)	Columbia Park Golf Course and Family Fishing Pond/Channel	Shoreline Riparian Habitat, Aquifer Recharge Area and Associated Wetland and Fish Habitat in the Fishing Pond/Channel
Levee West- Shoreline Segment D	Blue Bridge (US395) East to the Cable Bridge (US397)	Levee, Clover Island, Residential Area and Businesses	Priority Urban Natural Open Space- Duffy's Pond, Drainage Area, Aquifer Recharge Area and Degraded Shoreline Habitat with Riprap, Steep Slopes and Small Amounts of Vegetation
Levee East- Shoreline Segment E	Cable Bridge (US397) to South Verbena Street	Levee and Rural/Industrial Area	Degraded Shoreline Habitat with Riprap, Steep Slopes and Small Amounts of Vegetation

Based upon the results of this study, the following are the preliminary shoreline designations for the City of Kennewick, as described below and in Exhibit 6.

Columbia River Aquatic- **Aquatic**- It is possible to combine Aquatic Designation with any other shoreline classification (e.g., High Intensity or Urban Conservancy) if water use/ restoration warrants it. Protection of migrating Salmon and Steelhead habitat is important in this shoreline designation.

Park A - Urban Conservancy Environment- Park A is open space which is suitable for water-related/ enjoyment uses. It is also feasible for the City of Kennewick to retain existing ecological function in Park A and restore degraded shoreline.

Park B - Urban Conservancy Environment- Park B is open space which is suitable for water-related/ enjoyment uses. It is also feasible for the City of Kennewick to retain existing ecological function in Park B and restore degraded shoreline. Protection of the Wetlands and priority habitat in Park B is important for various species and the Audubon Nature Trail.

Park C - Urban Conservancy Environment- Park A is open space which is suitable for water-related/ enjoyment uses. It is also feasible for the City of Kennewick to retain existing ecological function in Park A and restore degraded shoreline. Water quality should be protected in this aquifer recharge area as well as sensitive habitat along the Columbia Park Pond channel.

Levee West - Urban Conservancy Environment- Urban Design Assistance Team plans involve opening the shoreline to public park uses and restoring riparian functions. Ecological restoration and recreation would be the focus of Levee West planning and classification. Clover Island is a separate classification from Levee West.

Clover Island - High Intensity- The existing condition of this shoreline would be classified as high intensity because of the commercial, transportation and water-dependant uses associated with the Island. The focus of this classification would be to restore previously degraded ecological function without diminishing commercial/ water-dependant uses.

Levee East - Urban Conservancy Environment- Levee East has diminished amounts of ecological function but it has potential for restoration by bringing the levee height down, etc. This area does not have a designated future growth plan.

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City of Kennewick Shoreline Restoration Plan

**A Requirement of the Shoreline Management Act
Chapter 90.58 RCW**

**Final Draft
June 2009**



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1.0 Introduction

The Shoreline Management Act (chapter 90.58 RCW) was enacted in 1971 to provide for the management and protection of shorelines of the state by regulating development in the shoreline area. The goal of the Act is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The Act requires cities and counties to adopt a Shoreline Master Program (SMP) under rules established by the Washington Department of Ecology (Ecology) to regulate shoreline development and accommodate "all reasonable and appropriate uses" consistent with "protection against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life... and public rights of navigation."

Ecology adopted the 2003 Shoreline Management Act Guidelines (chapter 173-26 WAC) (Guidelines) which require local government review and updates of SMPs. A key feature of the Guidelines is the requirement that local governments include within their SMP a "real and meaningful" strategy to address restoration of shorelines. The Guidelines require that the policies in a SMP must promote restoration of impaired shoreline ecological functions.

This report documents the work completed by the City of Kennewick (City) and the Community Advisory Committee to assess the existing conditions of the City's shorelines and develop a restoration plan that meets the requirements of the Guidelines, as part of the City's Shoreline Master Program update.

1.1 Definitions

The term "restoration" is defined in the Guidelines as follows (WAC 173-26-020(27)):

"...the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including but not limited to re-vegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions."

The Guidelines require that SMPs include "goals, policies and actions for restoration of impaired shoreline ecological functions" (WAC 173-26-201(2)(f)). The term "ecological functions" is defined as follows (WAC 173-26-020(11)):

"...the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem."

1.2 Purpose

The Guidelines are designed to assure that SMPs include goals, policies and regulations that will result in "no net loss of ecological functions necessary to sustain shoreline natural resources and to plan for restoration of ecological functions where they have been impaired" (WAC 173-26-201(2)(c)).

As such, the Guidelines require that SMP restoration plans consider the following subjects (WAC 173-26-201(2)(f)):

- (i) Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration (Section 2);
- (ii) Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions (Section 3);
- (iii) Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals (Section 3);
- (iv) Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs (Section 4);
- (v) Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals (Section 4);
- (vi) Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals (Section 4).

This report includes the required elements and provides a foundation for the ongoing restoration of the City's shoreline.

2.0 Shoreline Existing Conditions

This section describes the existing condition of the Kennewick shoreline. The City's shoreline is comprised of the Columbia River shoreline and 200 feet landward within the Kennewick city limits and urban growth boundaries. Exhibit 1 provides an overview of the City's shoreline area. Identified on the exhibit are the shorelines designations, wetlands, streams and protected and unprotected shoreline conditions. The protected areas, which includes approximately 80% of the shoreline, is either levee or rip-rap hardened shore. The unprotected areas, primarily in the center and west end of the park, are areas where shore sloughing occurs. Sloughing is caused by rapid fluctuations in pool level based upon McNary Dam operations, by boat wave action, and in some areas by limited vegetation.

The Columbia River shoreline in the City of Kennewick has experienced a series of alterations that have significantly reduced and modified riparian function and values. The McNary Dam was built between 1947 and 1954, causing significant physical changes to the Columbia River and Kennewick Shoreline. The creation and filling of Lake Wallula changed the Columbia River's depth, path, and velocity. Additionally, the pool level from current operations can fluctuate up to 5 feet between minimum and maximum operating levels of 335 and 340 feet above sea level (USACE 2007). This can impact the Kennewick shoreline, particularly in areas where the shoreline is unprotected.

All of the designated shoreline within the City of Kennewick is publicly-owned, except for narrow sections of private land ownership east of the Blue-Bridge, according to the City of Kennewick parcel map (see Appendix). All of the narrow sections of private land within

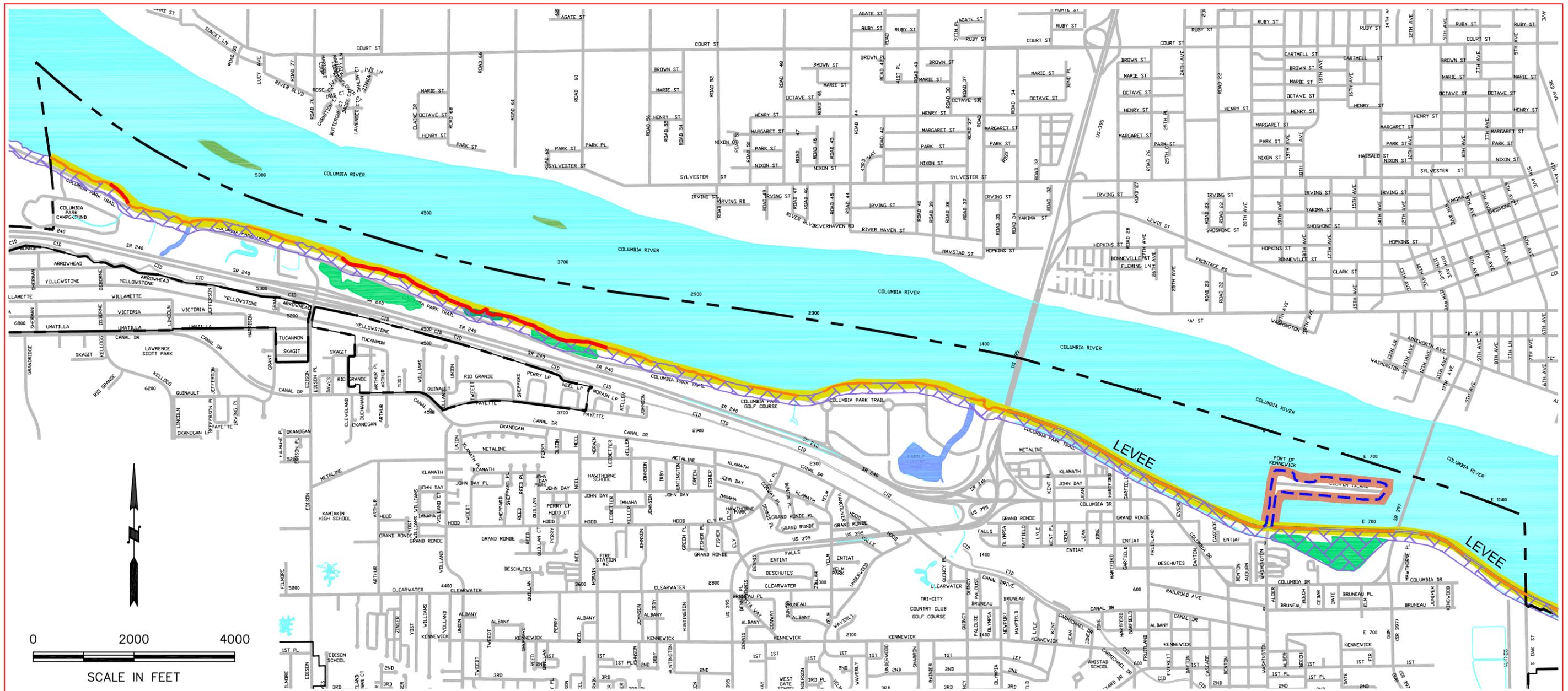


EXHIBIT 1

City of Kennebec Shoreline Management Program

2009



-  Shoreline Management Area 200'
-  Wetlands
-  Riparian 75' Buffer
-  Rivers, Streams and Ponds
-  Shore Unprotected (Unarmored)
75' Buffer with Stormwater Treatment
-  Shore Protected (Armored)
50' Buffer
-  Island Shore Protected (Armored)
25' Buffer
-  City Limits/UGA Boundary
-  Roads
-  Urban Conservancy
-  Shoreline Residential High Intensity

the 200' shoreline management area between the Blue Bridge and Clover Island are controlled by the USACE for its drainage facilities.

Land use is managed as active-use park (Columbia Park), as a public port facility (Clover Island), or as a flood control levee and drainage system. The City's shoreline is highly altered from natural conditions. A significant portion of the shoreline is Columbia Park. Columbia Park includes a golf course, an Audubon nature center with trails, camp ground facilities, playgrounds and other park functions. Columbia Park provides an important public access to the shoreline and the Columbia River. Annual festivals, including boat races and fairs are held at the park.

Clover Island is a man-made island that was originally constructed from dredge spoils. It houses the Port of Kennewick offices and associated facilities. The port maintains two marinas that provide private and public access to the shoreline.

The flood control levee, drainage facilities, and Duffy's Pond, located south and downstream Clover Island, is owned and maintained by the U.S. Army Corps of Engineers (Corps). Duffy's pond collects drainage and stormwater that is then pumped to the Columbia River over the flood control levee.

Habitat functions along the City of Kennewick shoreline are primarily associated with aquatic life, although waterfowl are also common in the shoreline area. Aquatic habitat types include shallow, near-shore environments along the Columbia River, off channel habitats (i.e., family fishing pond), and perennial to seasonal small waterways. Aquatic habitats are utilized by rearing juvenile Chinook, mosquito fish, and smallmouth bass.

Riparian habitat functions are limited throughout this stretch of the river by active recreation use, by ongoing maintenance activities associated with the federal levee system, and by the artificial nature of the pool operation by the federal agencies. These operations have led to shoreline erosion problems, invasive species issues and other impacts that are difficult to control at the local level.

2.1 Degraded Shoreline Areas

The habitat functions of the City's shoreline are somewhat impaired (HDR Memorandum March 2007). Much of the shallow near-shore environment along the Columbia River consists of a rip-rap bank with a gravelly cobble substrate and no properly functioning riparian growth. During average and high pool elevation periods, the inundated rip-rap may promote use by smallmouth bass and other predatory species over the more desirable salmonid species. Three small tributary drainages to the Columbia River are accessible to fish and appear to be used by rearing Chinook salmon (M. Witter, HDR Engineering personal observation May, 2006). Currently, only the family fishing pond and the irrigation waste way near the Kiwanis building are accessible by Columbia River fish. Both of these waterways are used by rearing Chinook. Two other tributary drainages (the duck pond and the campground spring fed stream) are inaccessible to fish from the Columbia River. The presence of a persistent population of *Gambusia* (mosquito fish) in the spring-fed stream suggests a perennial groundwater source for this stream.

Waterfowl (i.e., Canada geese, mallard ducks) and passerine birds are also present in the shoreline area. Canada geese are most commonly found feeding and rearing their young in mowed areas of green grasses near the Columbia River shoreline. Passerine birds (i.e., crow, common house sparrow) are regularly identified in treed areas where vegetative growth consists of mature cottonwood, willow, or elm.

Shoreline vegetation (riparian growth) along the Columbia River varies from un-vegetated along the levee to heavily-vegetated near the wetland areas of Columbia Park. The dominant riparian vegetation along the rip-rapped portion of the shoreline is coyote willow and reed canary grass, which are typically kept mowed or cut. Some riparian areas along the Columbia River are not actively managed and riparian growth consists primarily of mature coyote willow, Russian olive, and cottonwood.

Riparian growth along the smaller waterways and wetland areas is typically less disturbed and consists of various native and non-native species including reed canary grass, coyote willow, Russian olive, weeping willow, cottonwood, and elm. The largest exception is the "Duck Pond" where vegetation is largely absent.

Riparian growth along the Columbia River is generally minimal, but where left to grow to maturity, it would serve as near shore habitat for rearing juvenile salmon. Riparian vegetation also acts to protect the shoreline from wave action. Well developed root systems help to hold saturated soils in place during fluctuations in pool elevation. Along shorelines of the smaller water ways, riparian growth protects banks from erosion during periods of higher streamflow and holds soil in place along reaches with steep banks. Along the Columbia River shoreline and the shorelines of the smaller waterways, erosion from foot and vehicle traffic is much reduced in areas where riparian growth is left unmanaged.

2.2 Land Use Policies

The City has set forth goals and policies for the future development of the shoreline in its Comprehensive Plan, Zoning Code, and draft SMP. The City completed a Shoreline Inventory and Assessment, as required by the Guidelines (WAC 173-26-201(3)(c)), in July 2005. Based on this assessment, the City has categorized areas of the shoreline using environment designations as required by the Guidelines (WAC 173-26-201(3)(f)) and has drafted policies and regulations for development within these environment designations (draft Kennewick Municipal Code 18.60.070). The environment designations for the City's shoreline are defined as follows:

- **Aquatic Environment** – the purpose of the "aquatic" environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark. Functions of the aquatic environment include aquatic habitat, public access and recreation. The aquatic environment that exists today is much different from the aquatic environment prior to the construction of McNary dam. The lake-like environment combined with the hardening of the shoreline and near-shore aquatic environment in many areas to prevent erosion, has limited habitat function. Much of the shallow near-shore environment along the Columbia River consists of a rip-rap bank with a gravelly cobble substrate and no properly functioning riparian growth. During average and high pool elevation periods, the inundated rip-rap may promote use by smallmouth bass and other predatory species over the more desirable salmonid species.
- **High-Intensity Environment** – the purpose of the "high-intensity" environment is to provide for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded. The high-intensity environment designation has been applied only to Clover Island. Functions of the high-intensity environment include water-oriented commercial and industrial, and residential uses, public access and recreation.

- **Urban Conservancy Environment** – the purpose of the "urban conservancy" environment is to protect and restore ecological functions of open space, flood plain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses. The urban conservancy environment designation has been applied to all shoreline areas landward of the ordinary high water mark with the exception of Clover Island and the area east of the Clover Island Causeway. Functions of the urban conservancy environment include riparian and upland habitat, aquifer recharge, drainage and water quality, public access and recreation.

Planning activities specific to certain uses of the shoreline have also been undertaken. These efforts include the Columbia Park Master Development Plan and the Clover Island Master Plan. These plans are described below.

Columbia Park Master Development Plan

The primary goal of the Columbia Park Master Development Plan (David Evans and Associates, 2000) is to create more public access to the river by boat, bike, and foot. The plan considers the addition of an amphitheater, riparian vegetation enhancement, floating stage, beach cove, waterfront promenade, grass shoreline and fishing pier. The City has concluded that some of these considered developments will not be pursued, such as the floating stage and waterfront promenade. Other design considerations include riparian planting near a waterfowl pond, and expansion of the golf course. The City intends to blend these improvements into the existing natural environment to provide ecological and cultural benefits.

Clover Island Master Plan

The Port of Kennewick Clover Island Master Plan adopted by the City in December 2008 includes plans for Clover Island development that add to the existing water dependent uses, and public access and view opportunities via a mix of high-intensity water-oriented and non-water oriented commercial, multi-family residential, and transportation uses, while providing additional public access, improved aesthetic quality, enhanced aquatic and nearshore ecological functions and maintaining specified view corridors. The plan includes aesthetic and public access enhancements such as pathways, plazas, landscaping and Columbia River viewpoints. The goal of the plan is to encourage public access and recreation by enhancing public facilities on the waterfront. The plan includes ecological improvements such as riparian planting and shoreline stabilization measures.

2.3 Existing Ecological Restoration and Enhancement Activities

The Shoreline Inventory and Assessment identified the following shoreline restoration projects that are in various stages of planning and development. These projects include:

- The Columbia Park Master Development Plan includes projects which would enhance native riparian and upland vegetation along the Columbia River. According to the Kennewick Capital Improvement Program (2004-2009) funding for this would be provided by the public sometime in the future.
- Plans to reduce the height of the levee, while maintaining the critical flood control function of the levee, are underway. Levee reduction work began in 2004 with funding sources including Kennewick Park Development Fund and Capital Improvement Fund and public grants (Capital Improvements Program, 2004).

- Native vegetation and buffers were established for the channel from the Columbia River to the family fishing pond, and native vegetation riparian plantings have been completed around the fishing pond.

3.0 Shoreline Restoration Plan

Based on the information provided in the Shoreline Inventory and Assessment, which was augmented with field investigation and analysis and guidance from Ecology, goals and objectives for restoration were developed, and restoration projects and programs identified, recognizing the limited overall potential of improving habitat function and value due to the impaired existing habitat conditions. Accordingly modest restoration goals have been developed. The restoration goals and objectives include:

- **Protect and enhance shorelines** – use shoreline stabilization techniques such as planting native vegetation and bioengineering to improve the condition of shoreline areas that are free of rip-rap.
- **Protect and enhance sensitive areas, and improve water quality** – protect wetlands and other sensitive areas by establishing riparian buffers and limiting access.
- **Protect and enhance aquatic habitat, and improve water quality** – improve habitat conditions to promote salmonid rearing, and reconnect channels where possible, and improve water quality conditions.

These goals and objectives are described in more detail below.

Based upon these goals and objectives, the City has identified the following restoration projects, and the desired eco-function to be met through these restoration projects. These projects have been prioritized into Tier 1 and Tier 2 projects. Tier 1 are high priority projects that the City hopes to implement within the first ten years of program implementation. Tier 2 is medium priority, longer term projects that the City hopes to implement within 20 years of implementation.

Tier 1 Projects (10 Year Implementation)

- 1) Revegetate and expand riparian zone with native vegetation, and evaluate feasibility of channel restoration.
- 2) Protect shoreline from future erosion through soft and/or hard engineering solutions. Restore shoreline to more natural state, using passive management techniques (i.e. “no mow areas”) to impede shoreline erosion.
- 3) Maintain and enhance plant diversity through the planting of additional native vegetation.
- 4) Enhance aquatic and riparian habitat where feasible to provide better near shore habitat and attract a greater number of migratory birds.
- 5) Complete 50% of Clover Island aquatic and riparian habitat enhancement.¹
 - Riparian and nearshore aquatic habitat enhancement are part of the Clover Island master plan, and will accompany new development and redevelopment. The nearshore environment enhancement includes improving substrate, large

¹ Habitat enhancement is tied to development, and will be completed within 12 months of individual development projects.

woody debris, and refugia to “properly functioning²” aquatic condition for salmonids (Chinook and steelhead salmon) for designated areas around the island.

- Riparian enhancement consists of removing concrete along the shoreline and enhancing riparian vegetation through native plantings. Appropriate erosion controls will be put in place during riparian enhancement activities.
- All enhancement work will be conducted consistent with federal, state and local regulatory requirements.

Tier 2 Projects (20 Year Implementation)

- 6) Reconnect channel to Columbia River and enhance riparian function through planting native vegetation
- 7) Reconnect channel to Columbia River and establish riparian vegetation.
- 8) Relocate road away from shoreline to protect water quality and reduce noise impacts from vehicular traffic.
- 9) Explore feasibility of reconnecting Duffy’s Pond to the Columbia River to improve water quality conditions.
- 10) Complete 100% of Clover Island aquatic and riparian habitat enhancement.

The proposed locations of shoreline restoration activities are identified in Exhibit 2.

3.1 Protect and Enhance Shorelines

Shoreline Areas without Rip-rap

- These areas typically have a gravel/cobble river bed that forms a shallow sloped beach with softer soil that usually creates an over-steepened bank near the normal high water mark. During high pool elevation periods, over steepened banks of soft material become saturated and are subjected to wave action from storms and boating activities. These areas have an increased likelihood of eroding, a situation which could be improved by stabilizing the bank.

Two primary bank stabilization techniques are:

- **Natural (Vegetative) Shoreline Stabilization:** This is a non-structural preventative approach that focuses on 1) developing a shoreline buffer with a no-mow policy, 2) restricting public access to designated areas, and 3) planting native vegetation to prevent erosion.
- **Bioengineering:** The method entails using specially designed native vegetative plantings for shoreline stabilization. This technique usually includes reshaping of bank material and use of all natural materials.

² According to NOAA Fisheries, “Properly functioning condition [PFC] is the sustained presence of natural habitat forming processes in a watershed that are necessary for the long-term survival of the species through the full range of environmental variation. PFC, then, constitutes the habitat component of a species’ biological requirements” (NMFS 1999)

Vegetative Bank Stabilization

Protective measures for stream banks can be grouped into three categories: vegetative plantings, soil bioengineering systems, and structural measures. They are often used in combination. Vegetative plantings may be used alone for bank protection on small streams and on locations having only marginal erosion, or it may be used in combination with structural measures in other situations.

Considerations in using vegetation for protection include:

- Conventional plantings require establishment time; bank protection is not immediate.
- Maintenance may be needed to replace dead plants, control disease, or otherwise ensure that materials become established and self-sustaining.
- Establishing plants to prevent undercutting and bank sloughing in a section of bank below base flow elevation is often difficult.
- Establishing plants in coarse gravelly material may be difficult.
- Protection and maintenance requirements are often high during the plant establishment period.

Woody vegetation, which is seeded or planted as rooted stock, is used most successfully above base flow on properly sloped banks and on the flood plain adjacent to the banks. Vegetation should always be used behind revetments and jetties in the area where sediment deposition occurs, on the banks above base flow, and on slopes protected by cellular blocks or similar type materials. Vegetative Bank Stabilization could be used within Columbia Park for areas that have low bank and are not close to existing or planned structures or utilities.

Bioengineered Bank Stabilization

Bioengineering is a system that uses living plant materials as structural components. Adapted types of woody vegetation (shrubs and trees) are initially installed in specified configurations that offer immediate soil protection and reinforcement. In addition, bioengineered systems create resistance to sliding or shear displacement in a stream bank as they develop roots or fibrous inclusions. Environmental benefits derived from woody vegetation include diverse and productive riparian habitats, shade, organic additions to the stream, cover for fish, and improvements in aesthetic value and water quality.

Exhibit 3 shows examples of potential bioengineered bank stabilization techniques.

Under certain conditions, bioengineered installations work well in conjunction with structures to provide more permanent protection and healthy function, enhance aesthetics, and create a more environmentally acceptable product. Bioengineered systems normally use un-rooted plant parts in the form of cut branches and rooted plants. This technique includes living systems, such as: brush mattresses, live stakes, joint plantings, vegetated geo-grids, branch packing, and live fascines.

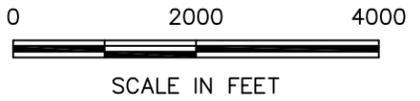
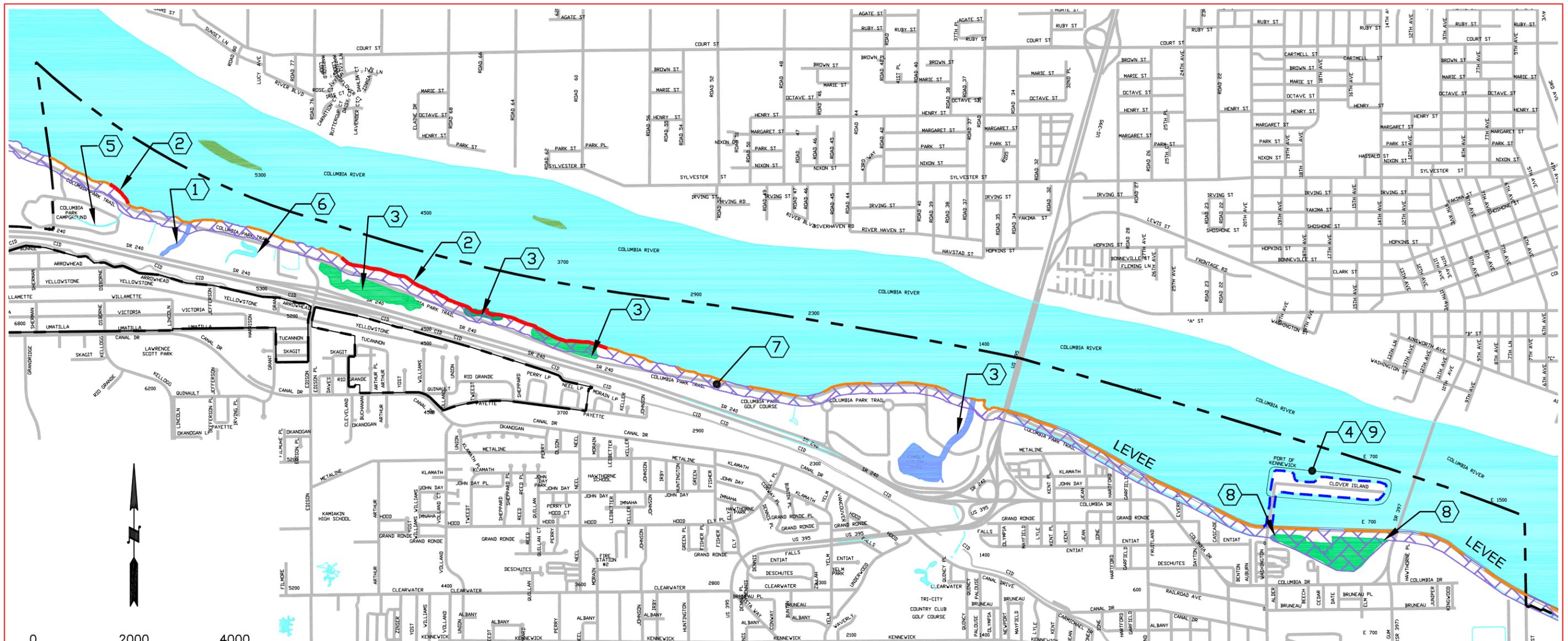


EXHIBIT 2

City of Kennewick Shoreline Restoration Plan

2009



- Shoreline Management Area 200'
- Wetlands
- Riparian 75' Buffer
- Rivers, Streams and Ponds
- Shore Unprotected (Unarmored) 75' Buffer with Stormwater Treatment
- Shore Protected (Armored) 50' Buffer
- Island Shore Protected (Armored) 25' Buffer
- City Limits/UGA Boundary
- Roads

Tier 1 Projects (10 Year Implementation)

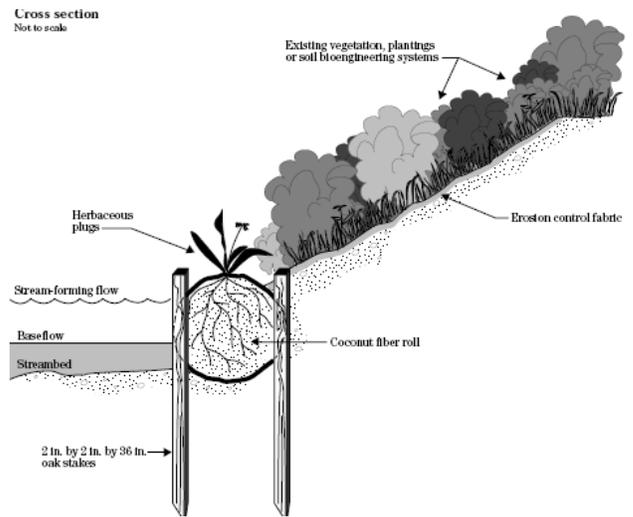
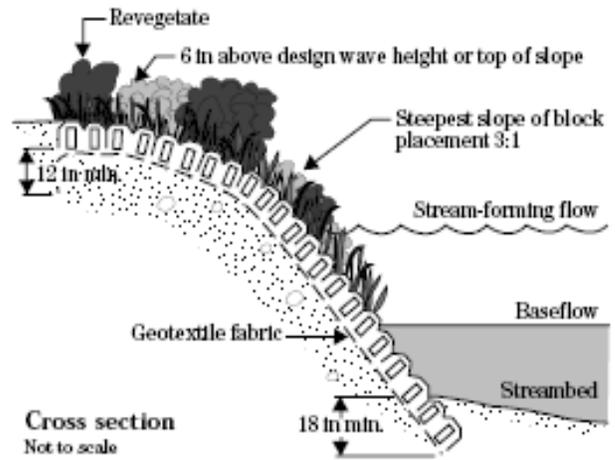
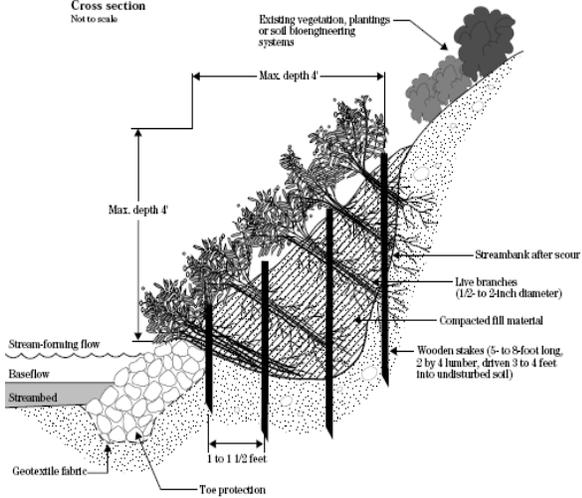
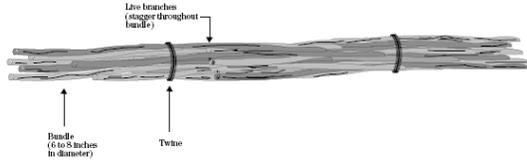
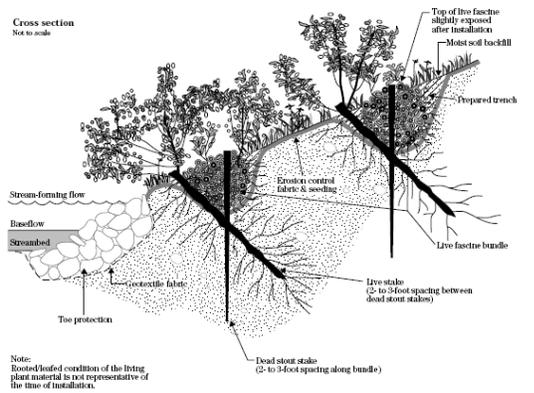
- ① Revegetate and expand riparian zone with native vegetation, and evaluate feasibility of channel restoration.
- ② Protect shoreline from future erosion through soft and/or hard engineering solutions. Restore shoreline to more natural state, using passive management techniques (i.e. "no mow areas") to impede shoreline erosion.
- ③ Maintain and enhance plant diversity through the planting of additional native vegetation.
- ④ Enhance 50% of aquatic and riparian habitat to properly functioning condition for substrate, large woody debris and refugia consistent with Clover Island Master Plan.

Tier 2 Projects (20 Year Implementation)

- ⑤ Reconnect channel to Columbia River and enhance riparian function through planting native vegetation
- ⑥ Reconnect channel to Columbia River and establish riparian vegetation.
- ⑦ Relocate road away from shoreline to protect water quality and reduce noise impacts from vehicular traffic.
- ⑧ Explore feasibility of reconnecting Duffy's Pond to the Columbia River to improve water quality conditions.
- ⑨ Enhance 100% of aquatic and riparian habitat to properly functioning condition for substrate, large woody debris and refugia consistent with Clover Island Master Plan.

Disclaimer: This map is intended to be used as a reference. It does not provide all restoration options nor show all areas where restoration may be feasible. All data presented should be considered approximate in location due to variances in spatial accuracy of source data.

Exhibit 3. Bioengineered Bank Stabilization Techniques



Many sites require some earthwork before soil bioengineered systems are installed. A steep undercut or slumping bank, for example, may require grading to a 3:1 or flatter slope. Although bioengineered systems are suitable for most sites, they are most successful when installed in locations that promote riparian growth. Bioengineering techniques could be used along unprotected shorelines within Columbia Park and away from existing or planned structures or utilities. If this technique was used in conjunction with standard structural stabilization methods, such as energy dissipating rocks or bulkheads, it could also be employed adjacent to structures within the park.

None of these techniques are appropriate for the Corps of Engineers levee system. Vegetation (particularly tree roots) is considered by the Corps and others to potentially compromise levee strength and is strictly prohibited.

Shoreline with Rip-rap

These shoreline areas are completely or mostly armored with various hard materials, such as basalt boulders, broken concrete, or broken asphalt. During high pool elevation periods, these areas are more stable and less susceptible to erosion from wave action. However, in some areas the softer upland soils have been eroded away and the rip-rap has slid out of place. The rip-rapped shoreline areas within Columbia Park occur mostly within the high use areas of the park and the rip-rap serves to protect existing structures and utilities. Because of these risks, hardened shorelines within the park will be maintained. The port facility and the Corps of Engineers levee system are also composed of rip-rap. These hardened shorelines will be maintained. Clover Island hardened shoreline will be removed and native riparian vegetation will be enhanced.

3.2 Protect and Enhance Sensitive Areas, and Improve Water Quality

Within the City of Kennewick shoreline area, wetlands and limited function streams have been identified within Columbia Park or at Duffy's Pond. The wetland and adjacent upland buffer habitats within Columbia Park are disconnected from each other, and in some instances are poorly connected to the aquatic shoreline habitat associated with the Columbia River.

Techniques that might be used to accomplish the protection and enhancement of these areas include:

- Establish and maintain riparian or vegetated corridors between wetland areas and the river to provide for riparian function and provide water quality benefits;
- Establish wetland buffers that are then planted with native plant species adjacent to wetlands within the shoreline zone;
- Control invasive species found within identified wetland habitats and plant native species within the wetlands
- Plant native riparian vegetation at the Columbia River shoreline and in the riparian areas associated with other small drainages within Columbia Park; and
- Limit public access to designated areas outside of identified wetlands or their buffers.

3.3 Protect and Enhance Aquatic Habitat, and Improve Water Quality

The primary function that aquatic habitat associated with the City of Kennewick shoreline serves for aquatic species, specifically anadromous fish, is as rearing habitat for out migrating juvenile salmon. The City of Kennewick's goal for protecting and enhancing aquatic habitat along the City of Kennewick shoreline is, therefore, to promote and enhance this juvenile salmon rearing function. Juvenile salmon currently rear along the Columbia River shoreline, as well as several small open channel drainages within Columbia Park. Key species that use these waters for rearing and/or out-migration include Chinook, steelhead, and coho.

Existing limiting factors for juvenile salmon rearing include:

- Absence of riparian growth along much of the Columbia River shoreline;
- Rip-rap along the Columbia River shoreline that may promote predation of rearing and out-migrating juveniles; and
- Low quantity of off channel habitat that meets preferred salmonid rearing requirements.

Aquatic habitat for rearing juvenile salmonids could be protected or enhanced through the following techniques:

- Increase available habitat by eliminating passage barriers to perennial drainage ways within Columbia Park;
- Enhance instream habitat quality and quantity by reconfiguring and reconnecting off channel habitat to meet salmonid rearing requirements;
- Create new off-channel aquatic habitat;
- Establish riparian buffers where possible for all City shorelines using native vegetation;
- Protect and enhance water quality by creating and implementing drainage maintenance / pollution control plans for Clover Island and Columbia Park and Golf Course consistent with the Stormwater Manual for Eastern Washington (Ecology 2004); and
- Limit public access to designated areas outside of identified wetlands and streams.

Potential features that will need future protection based upon implementation of the actions in the City of Kennewick Shoreline Restoration Plan are:

- Columbia Park campground drainage (upon stream connection to the Columbia River)
- Duck pond (upon connection to the Columbia River)
- Clover Island habitat enhancement.

4.0 Implementation

The City has developed several mechanisms to ensure implementation of the restoration plan. These include:

- The City staff will request funding from the City Council through the City's Capital Improvement Plan (CIP) for activities identified in the restoration plan.
- Grants and loans will be sought, as applicable, for the implementation of the restoration plan. Potential funding sources are identified in Table 4-1.
- Provisions in the SMP that connect habitat enhancement to development on Clover Island, where enhancements are completed within 12 months of development completion.

Implementation of the shoreline restoration plan will occur over a 30-year time frame. Goals and benchmarks for implementation are as follows:

- 10 Year Goal – Update park planning documents to incorporate restoration plan. Implement Tier 1 restoration/enhancement projects. Collect additional information for updating baseline conditions described in this plan and the Shorelines Inventory and Assessment report (HDR/EES 2005) as part of efforts to monitor ecological functions over the long-term. This plan will help the City establish the scientific basis for shoreline mitigation requirements and will serve as an adaptive management tool for future improvements
- 20 Year Goal – Through the CIP or as mitigation implement aquatic habitat improvements, monitor results, and enhance existing wetland habitats. Implement Tier 2 restoration projects.
- 30 Year Goal – Maintain ecological functions through land management and reporting.

The City will conduct a review of progress in the implementation of the restoration plan every five years. The City will prepare a report for the City Council as part of this review, summarizing the progress to date and plans for implementation over the next five years.

Table 4-1				
Excerpts from the Phase 4 Committee Report to the Legislature Listing of Grant and Loan Programs				
Agency	Agency Type	Funding Type	Funding Name	Description
Federal				
U.S. Department of Agriculture-Natural Resources Conservation Service		Technical Assistance	<u>Plant Materials Program</u>	This program develops cost effective solutions for soil and water conservation problems through research and engineering of new or improved plant materials. This is a research and development program.
U.S. Department of Commerce-Economic Development Administration		Grant/Loan	Economic Adjustment Program	To assist state and local interests from the results of industrial or corporate restructuring, natural disaster, reduction in defense expenditures, depletion of natural resources, or new Federal laws or requirements. Planning, project implementation, and revolving loan funds are the three types of grant activities.
U.S. Department of Energy		Technical Assistance	<u>Center of Excellence for Sustainable Development</u>	To provide communities with expert consultation on sustainable development, and to help them link to the other public and private programs.
U.S. Environmental Protection Agency		Grant	Growth Management Program	Grants may be used to improve housing stock, provide community facilities, make infrastructure improvements, environmental improvement projects (including drinking water, wastewater, and solid waste projects), and expand job opportunities by supporting the economic development of the communities.
State				
Washington State Department of Ecology		Grant	<u>Community Litter Cleanup Program</u>	Help communities clean up roadside litter and illegal dumps. Eligible projects: Picking up roadside litter; cleaning up illegal dumps.
Washington State Department of Ecology		Grant	<u>Public Participation Emergency Grants</u>	NA
Washington State Department of Ecology		Grant	<u>Public Participation Grants</u>	Helps groups educate and involve the public on waste issues to benefit the environment. Eligible projects: Activities that educate and involve the public in hazardous waste site cleanups and waste reduction/prevention.
Washington State Department of Ecology		NA	<u>Water Resources</u>	NA
Department of Ecology		Grant	Terry Husseman Sustainable School Awards	For K-12 schools to promote environmentally sustainable curriculum programs.
Department of Ecology		Grant/Loan	Centennial Clean Water Fund Program/ Clean Water Act Section 319 Nonpoint Source Program/ Washington State water Pollution Control Revolving Fund Program	Application for loans and grants are accepted from any local public body, as well as certain other groups in Washington State. Eligible public bodies include any Washington State county, city, town, conservation district, or other political subdivision, municipal or quasimunicipal corporation, or any Tribe recognized by the federal government. The list of projects proposed in FY 2007 will help improve and protect Washington State's surface and ground water by implementing actions identified in Washington's Water Quality Management Plan to Control Nonpoint Sources of Pollution.
Washington State Department of Fish and Wildlife		Grant	Salmon Recovery Funding	Citizen groups, called Lead Entities, to determine limiting factors analysis and other watershed assessments or studies to identify and prioritize projects that benefit salmon habitat within a defined geographic area. 21 Lead Entities have been approved statewide.
Washington State Department of Fish and Wildlife		Grant	Volunteer Cooperative Fish and Wildlife Enhancement Program	Grants to individuals and organizations to implement volunteer fish and wildlife enhancement projects at the local level. Grants are available for goods and services, travel, equipment and other necessary support for performing a volunteer project. Grants are approved for habitat enhancement and restoration, fish and wildlife research, education, facility development, and certain projects for production of fish and wildlife.
Washington State Department of Natural Resources		Technical Assistance	Urban and Community Forestry Program	To educate citizens and decision-makers about the economic, environmental, psychological, and aesthetic benefits of trees and to assist local governments, citizen groups, and volunteers in planting and sustaining healthy trees and vegetation.

References

- David Evans and Associates, 2000. Columbia Park Master Development Plan. Prepared for the City of Kennewick. 2000.
- HDR, 2007. Memorandum on Columbia River, McNary Pool – Riparian Buffer
- HDR / EES, 2005. City of Kennewick Shoreline Inventory and Assessment. Prepared for the City of Kennewick. July 2005.
- Kennewick Municipal Code, 2005. Draft Shoreline Master Program, KMC Chapter 18.92. November 2005.
- M. Witter, HDR Engineering, personal observation, May, 2006.
- MAKERS Architecture and Urban Design, 2003. Clover Island Master Plan. Prepared for the Port of Kennewick. 2003.
- Revised Code of Washington, 1971. Shoreline Management Act, Chapter 90.58 RCW.
- U.S. Army Corps of Engineers, 2007. See <http://www.nww.usace.army.mil/html/offices/op/t/navdata/Nav%20LockData.html>
- U.S. Department of Commerce, National Oceanic and Atmospheric Conditions National Marine Fisheries Service, 1999. Memorandum to NMFS/NWR staff regarding habitat approach.
- Washington Administrative Code, 2003. Shoreline Master Program Guidelines Chapter 173-26 WAC.
- Washington State Department of Ecology, September 2004. Stormwater Management Manual for Eastern Washington, publication number 04-10-076.

City of Kennewick Shoreline Cumulative Impact Assessment

**A Requirement of the Shoreline Management Act
Chapter 90.58 RCW**

**Final Draft
June 2009**



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Appendix – Land Ownership

1.0 Introduction

The Shoreline Management Act (chapter 90.58 RCW) was enacted in 1971 to provide for the management and protection of shorelines of the state by regulating development in the shoreline area. The goal of the Act is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The Act requires cities and counties to adopt a Shoreline Master Program (SMP) under rules established by the Washington Department of Ecology (Ecology) to regulate shoreline development and accommodate "all reasonable and appropriate uses" consistent with "protection against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life... and public rights of navigation."

Ecology adopted the 2003 Shoreline Management Act Guidelines (chapter 173-26 WAC) (Guidelines) which require local government review and updates of SMPs. A key feature of the Guidelines is the requirement that local governments evaluate and consider cumulative impacts of development in the shoreline jurisdiction. The Guidelines require that the policies in a SMP must "achieve no net loss of ecological functions that would result from future shoreline development and uses that are reasonably foreseeable" and requires an "assessment of how proposed policies and regulations cause and avoid such cumulative impacts."

The Guidelines require that SMP goals, policies and regulations "achieve no net loss of ecological functions" of the shoreline (WAC 173-26-201(3)(d)(iii)). The term "ecological functions" is defined as follows (WAC 173-26-020(11):

"...the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem."

The Guidelines require local governments to "evaluate and consider cumulative impacts of reasonably foreseeable future development on shoreline ecological functions and other shoreline functions fostered by the policy goals of the act." The cumulative impacts evaluation must consider the following subjects (WAC 173-26-186(8)(d)):

- (i) Current circumstances affecting the shorelines and relevant natural processes (Section 2);
- (ii) Reasonably foreseeable future development and use of the shoreline (Section 3); and
- (iii) Beneficial effects of any established regulatory programs under other local, state, and federal laws (Section 5).

This report documents the work completed by the City of Kennewick (City) and the Citizens Advisory Committee to develop a cumulative impact assessment that meets the requirements of the Guidelines, as part of the City's Shoreline Master Program update.

2.0 Shoreline Existing Conditions

This section describes the existing condition of the Kennewick shoreline. The City's shoreline is comprised of the Columbia River shoreline and 200 feet landward within the Kennewick city limits and urban growth boundaries. Exhibit 1 provides an overview of the City's shoreline area. Identified on the exhibit are the shorelines designations, wetlands, streams and protected and unprotected shoreline conditions. The protected areas, which includes approximately 80% of the shoreline, is either levee or rip-rap hardened shore. The unprotected areas, primarily in the center and west end of the park, are areas where shore sloughing occurs. Sloughing is caused by rapid fluctuations in pool level based upon McNary Dam operations, by boat wave action, and in some areas by limited vegetation.

The Columbia River shoreline in the City of Kennewick has experienced a series of alterations that have significantly reduced and modified riparian function and values. The McNary Dam was built between 1947 and 1954, causing significant physical changes to the Columbia River and Kennewick Shoreline. The creation and filling of Lake Wallula changed the Columbia River's depth, path, and velocity. Additionally, the pool level from current operations can fluctuate up to 5 feet between minimum and maximum operating levels of 335 and 340 feet above sea level (USACE 2007). This can impact the Kennewick shoreline, particularly in areas where the shoreline is unprotected.

All of the designated shoreline within the City of Kennewick is publicly-owned, except for narrow sections of private land ownership east of the Blue-Bridge, according to the City of Kennewick parcel map (see Appendix). All of the narrow sections of private land within the 200' shoreline management area between the Blue Bridge and Clover Island are controlled by the USACE for its drainage facilities.

Land use is managed as active-use park (Columbia Park), as a public port facility (Clover Island), or as a flood control levee and drainage system. The City's shoreline is highly altered from natural conditions. A significant portion of the shoreline is Columbia Park. Columbia Park includes a golf course, an Audubon nature center with trails, camp ground facilities, playgrounds and other park functions. Columbia Park provides an important public access to the shoreline and the Columbia River. Annual festivals, including boat races and fairs are held at the park.

Clover Island is a man-made island that was originally constructed from dredge spoils. It houses the Port of Kennewick offices and associated facilities. The port maintains two marinas that provide private and public access to the shoreline.

The flood control levee, drainage facilities, and Duffy's Pond, located south and downstream Clover Island, is owned and maintained by the U.S. Army Corps of Engineers (Corps). Duffy's pond collects drainage and stormwater that is then pumped to the Columbia River over the flood control levee.

Existing environmental features within or adjacent to the 200' shoreline management area, starting from the east and going west:

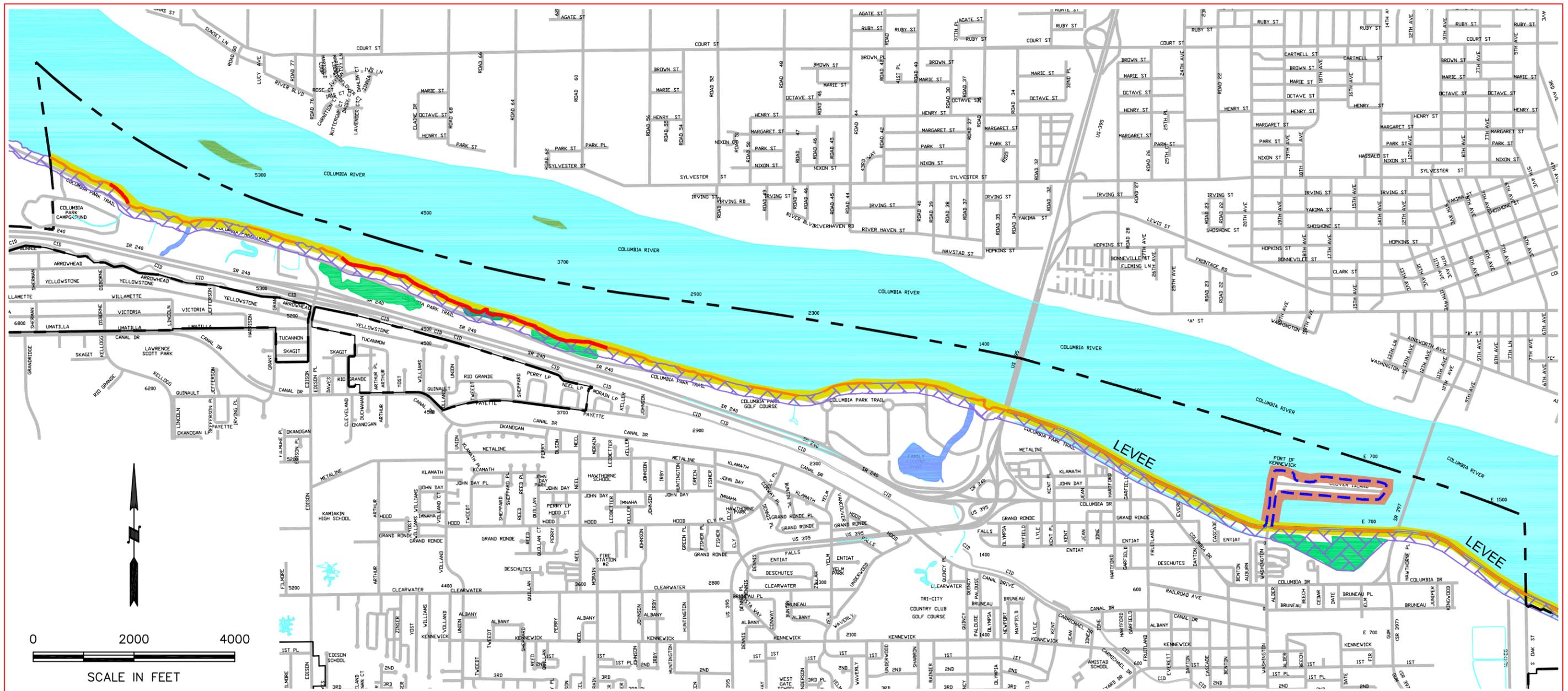


EXHIBIT 1

City of Kennebec

Shoreline Management

Program

2009

HDR

- Shoreline Management Area 200'
- Wetlands
- Riparian 75' Buffer
- Rivers, Streams and Ponds
- Shore Unprotected (Unarmored)
75' Buffer with Stormwater Treatment
- Shore Protected (Armored)
50' Buffer
- Island Shore Protected (Armored)
25' Buffer
- City Limits/UGA Boundary
- Roads
- Urban Conservancy
- Clover Island High Intensity

- Duffy's pond/wetland area
- Inlet to the Family Fishing Pond
- Riverine wetland east
- Riverine wetland west
- Audubon wetland
- Columbia Irrigation District return
- Columbia River – Unarmored shoreline
- Columbia River – Levee and armored shoreline

Habitat functions along the City of Kennewick shoreline are primarily associated with aquatic life, although waterfowl are also common in the shoreline area. Aquatic habitat types include shallow, near-shore environments along the Columbia River, off channel habitats (i.e., family fishing pond), and perennial to seasonal small waterways. Aquatic habitats are utilized by rearing juvenile Chinook, mosquito fish, and smallmouth bass.

Riparian habitat functions are limited throughout this stretch of the river by active recreation use, by ongoing maintenance activities associated with the federal levee system, and by the artificial nature of the pool operation by the federal agencies. These operations have led to shoreline erosion problems, invasive species issues and other impacts that are difficult to control at the local level.

2.1 Degraded Shoreline Areas

The habitat functions of the City's shoreline are somewhat impaired (HDR Memorandum 2007). Much of the shallow near-shore environment along the Columbia River consists of a rip-rap bank with a gravelly cobble substrate and no properly functioning riparian growth. During average and high pool elevation periods, the inundated rip-rap may promote use by smallmouth bass and other predatory species over the more desirable salmonid species. Three small tributary drainages to the Columbia River are accessible to fish and appear to be used by rearing Chinook salmon. Currently, only the family fishing pond and the irrigation waste way near the Kiwanis building are accessible by Columbia River fish. Both of these waterways are used by rearing Chinook. Two other tributary drainages (the duck pond and the campground spring fed stream) are inaccessible to fish from the Columbia River. The presence of a persistent population of *Gambusia* (mosquito fish) in the spring-fed stream suggests a perennial groundwater source for this stream.

Waterfowl (i.e., Canada geese, mallard ducks) and passerine birds are also present in the shoreline area. Canada geese are most commonly found feeding and rearing their young in mowed areas of green grasses near the Columbia River shoreline. Passerine birds (i.e., crow, common house sparrow) are regularly identified in treed areas where vegetative growth consists of mature cottonwood, willow, or elm.

Shoreline vegetation (riparian growth) along the Columbia River varies from un-vegetated along the levee to heavily vegetated near the wetland areas of Columbia Park. The dominant riparian vegetation along the rip-rapped portion of the shoreline is coyote willow and reed canary grass, which are typically kept mowed or cut. Some riparian areas along the Columbia River are not

actively managed and riparian growth consists primarily of mature coyote willow, Russian olive, and cottonwood.

Riparian growth along the smaller waterways and wetland areas is typically less disturbed and consists of various native and non-native species including reed canary grass, coyote willow, Russian olive, weeping willow, cottonwood, and elm. The largest exception is the "Duck Pond" where vegetation is largely absent except in the southern most portion of the pond.

Riparian growth along the Columbia River is generally minimal, but where left to grow to maturity, it would serve as near shore habitat for rearing juvenile salmon. Riparian vegetation also acts to protect the shoreline from wave action. Well developed root systems help to hold saturated soils in place during fluctuations in pool elevation. Along shorelines of the smaller waterways, riparian growth protects banks from erosion during periods of higher streamflow and holds soil in place along reaches with steep banks. Along the Columbia River shoreline and the shorelines of the smaller waterways, erosion from foot and vehicle traffic is much reduced in areas where riparian growth is left unmanaged.

2.2 Land Use Policies

The City has set forth goals and policies for the future development of the shoreline in its Comprehensive Plan, Zoning Code, and draft SMP. The City completed a Shoreline Inventory and Assessment, as required by the Guidelines (WAC 173-26-201(3)(c)), in July 2005. Based on this assessment, the City has categorized areas of the shoreline using environment designations as required by the Guidelines (WAC 173-26-201(3)(f)) and has drafted policies and regulations for development within these environment designations (Intent to Adopt Draft Kennewick Municipal Code 18.68.070).

Table 1 summarizes the various land uses associated with each proposed environment designation.

The proposed environment designations for the City's shoreline are defined as follows:

- **Aquatic Environment** – the purpose of the "aquatic" environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark. Functions of the aquatic environment include aquatic habitat, public access and recreation. The aquatic environment that exists today is much different from the aquatic environment prior to the construction of McNary dam. The lake-like environment combined with the hardening of the shoreline and near-shore aquatic environment in many areas to prevent erosion, has limited habitat function. Much of the shallow near-shore environment along the Columbia River consists of a rip-rap bank with a gravelly cobble substrate and no properly functioning riparian growth. During average and high pool elevation periods, the inundated rip-rap may promote use by smallmouth bass and other predatory species over the more desirable salmonid species.

Table 1. Shoreline Uses

	Clover Island High Intensity	Urban Conservancy	Aquatic
	Permit	Permit	Permit
Boating Facilities			
Water dependent	SDP	SDP	SDP
Water oriented	SDP	CUP	Prohibited
Commercial			
Water dependent	SDP	SDP	SDP
Water-related and water-enjoyment	SDP	SDP	CUP
Non-water oriented	SDP	CUP	Prohibited
Industrial			
Water dependent	Prohibited	Prohibited in ED map Sections A-D/ CUP Section E	Prohibited in ED map Sections A-D/ CUP Section E
Water-related and –water enjoyment	Prohibited	CUP only Section E	CUP
Non-water oriented	Prohibited	CUP only Section E	Prohibited
In-stream Structures	SDP for uses that improve ecological functions. CUP for all other uses	CUP	CUP
Historic, Educational and Recreational			
Water dependent	SDP	SDP	SDP
Water-related and water-enjoyment	SDP	SDP	CUP
Water-enjoyment – walkways and trails	SDP	SDP	CUP
Non-water oriented(5)	SDP	CUP	Prohibited
Multi-Family Residential Development	SDP	Prohibited	Prohibited
Transportation	SDP	SDP	CUP
Motorized (includes transit)			
Capital Facilities and Utilities	SDP	SDP	CUP
All Utilities Water Supply Utilities Signage			
Fill	SDP	SDP	CUP
Dredging			
Disposal of Dredge Material in Shoreline Jurisdiction	CUP	CUP	CUP

1. SDP = Substantial Development Permit
2. CUP = Conditional Use Permit. Uses not specifically identified may be considered through the CUP application process (see 18.68.240).

- **Clover Island High-Intensity Environment** – the purpose of the "high-intensity" environment is to provide for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded. The high-intensity environment designation has been applied only to Clover Island. Functions of the high-intensity environment include water dependent, water-oriented, water enjoyment, and as part of mixed use development, non water-oriented uses, public access and recreation, and habitat enhancement.
- **Urban Conservancy Environment** – the purpose of the "urban conservancy" environment is to protect and restore ecological functions of open space, flood plain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses. The urban conservancy environment designation has been applied to all shoreline areas landward of the ordinary high water mark with the exception of Clover Island. Functions of the urban conservancy environment include habitat, aquifer recharge, drainage and water quality, public access and recreation.

2.3 Park Vegetation Management Activities

The City manages Columbia Park consistent with established best management practices identified in City operational reviews. These practices include:

- No mowing within 50' of the waters edge for the riparian vegetation on the waterway connecting the Family Fishing Pond to the river.
- Use of slow release fertilizer and no application of fertilizer within 50' of the shoreline and other waterbodies.
- Selective removal of trees, allowing trees such as willows and Wood's rose to grow approximately every 50.'
- Raise mower level and angle to maintain riparian vegetation
- No mowing in riparian or river-associated wetlands.

3.0 Shoreline and Adjacent Development

This section provides information about development projects that are anticipated to occur in the City's shoreline jurisdiction, or that could potentially impact the shoreline management area from the surrounding area. The City has determined that these projects constitute all "reasonably foreseeable" development that could occur in the City's shoreline jurisdiction.

Two key documents were relied upon to generate the list of potential future development projects within the park: the Columbia Park Master Development Plan and the Clover Island Master Plan.

Additionally, upland and adjacent activities for the region that could potentially impact the shoreline area are also identified. These include stormwater drainage facilities from upland development (existing and future) that

discharge in the shoreline area, and road and trail improvements in progress or planned along the shoreline area in Richland.

Modest restoration activities are also planned within the shoreline area as described in the City of Kennewick Shoreline Restoration Plan (HDR 2009). See Section 5.1 and Exhibit 2 for a list of proposed restoration activities.

Collectively, these potential future developments may have direct or indirect effects on the shoreline area.

3.1 Columbia Park Master Development Plan

The primary goal of the Columbia Park Master Development Plan (David Evans and Associates, 2000) is to enhance the existing Columbia Park by creating more public access to the river by boat, bike, and foot. This plan should not be considered as an adopted park master plan. Rather, it serves to provide a menu of the potential park enhancement ideas that were considered. The plan considers the addition of an amphitheater, riparian vegetation enhancement, floating stage, beach cove, waterfront promenade, grass shoreline and fishing pier. Of these items, the floating stage and waterfront promenade have been dismissed as not feasible. Since the 2000 plan, additional development ideas for the park have been entertained, including upgrades to the campground on the west end of the park, and other recreational-based commercial activity. Parking lots will accompany many of these developments.

Other potential improvements include riparian planting near the waterfowl (duck) pond, and expansion of the golf course. The City intends to blend these improvements into the existing natural environment to provide ecological and cultural benefits.

3.2 Clover Island Master Plan

The Clover Island Master Plan (MAKERS Architecture and Urban Design, 2003) includes plans for development on Clover Island. The plan includes aesthetic and public access enhancements such as pathways, plazas, landscaping and Columbia River viewpoints. The goal of the plan is to encourage public access and recreation by enhancing public facilities on the waterfront. The plan includes ecological improvements such as aquatic habitat enhancement, riparian planting and shoreline stabilization measures to improve salmonid rearing habitat. The Intent to Adopt Draft Kennewick Municipal Code 18.68 includes development standards that will be met as part of Clover Island redevelopment and build out.

3.3 Stormwater, Road and Trail Improvements

As identified in the Assessment and Inventory Report, the Family Fishing Pond and Duffy's Pond receive upland stormwater drainage. As Southridge Master Plan and other development occurs in Kennewick lands to the south, additional stormwater flow will likely drain into these facilities, particularly the Family Fishing Pond, and then flow to the Columbia through the shoreline management area. Drainage for west Kennewick flows to Amon Creek, west of Columbia Park.

Looking west of Kennewick, Highway 240 between Kennewick and Richland is being upgraded by Washington State Department of Transportation (WSDOT), with lanes being added, new bridges and overpasses, and an improved bicycle/pedestrian trail located along the eastern foot of the upgraded highway. WSDOT has mitigated impacts for the 240 upgrade by revegetating areas in the Yakima River delta, which is enhancing fish and wildlife habitat.

The trail is part of a regional effort to improve the bike path system along the Columbia River throughout the Tri-Cities. The HWY 240 trail upgrades and a Richland proposed upgrade from HWY 240 east to just past the causeway to Bateman Island will complete the loop of trails along the rivershore (HDR 2006), potentially increasing bike traffic through Columbia Park and on Columbia River Trail.

Finally, the road (Columbia River Trail) through Columbia Park will likely be modified in the future. Possible modifications would occur within the existing roadway corridor, or the road could be relocated away from the river.

4.0 Cumulative Impact Assessment

For the cumulative impact assessment, proposed development projects were evaluated in terms of the environment designation and ecological functions associated with the project area. Potential impacts to ecological functions, public access and recreation, and views and aesthetics were considered.

Tables 2 and 3 present a summary of proposed shoreline development projects, the environment designation and shoreline management policies associated with the project location, and potential impacts of the proposed development. Potential impacts are described in detail below.

4.1 Summary of Impacts to Ecological Functions

On a programmatic level, if designed and constructed in a way that adheres to the goals, policies and regulations set forth in the SMP, the anticipated shoreline development projects described above will not result in cumulative impacts sufficient to cause a net loss of ecological functions of the shoreline. At the project level, if a proposed development is determined to have potential impacts to ecological functions, the applicant will be required to demonstrate appropriate mitigation of the potential impacts as part of the permitting process. Planned restoration and enhancement activities such as riparian planting and shoreline stabilization will result in a net benefit, promoting and enhancing the ecological functions of the shoreline by providing and improving habitat, reducing shoreline erosion, and improving water quality.

4.2 Summary of Impacts to Public Access and Recreation

Most of the anticipated development for the shoreline area is oriented toward improving public access to the river and related recreation opportunities, including pedestrian and bicycle trails, natural areas, and viewpoints. These projects are likely to have a positive impact with regard to public access and recreation functions of the shoreline.

Table 2. Cumulative Impact Assessment – Columbia Park

Proposed Development	Environment Designation / Functions	Applicable Shoreline Management Policies	Potential Impacts			Cumulative Impacts to Ecological Functions
			Impacts to Ecological Functions	Impacts to Public Access and Recreation	Impacts to Views and Aesthetics	
Shoreline stabilization / restoration	Urban Conservancy/ Aquatic; functions include habitat, public access, recreation	Shoreline stabilization is allowed in support of ecological restoration projects (KMC 18.60.120(3)(a)(v)(C) and CAO	Project will promote and restore ecological functions	No net loss to public access or recreation	No net loss to views or aesthetics	Positive
Native vegetation plantings	Urban Conservancy; functions include habitat, public access, recreation	Vegetation conservation activities that contribute to ecological functions are allowed (KMC 18.60.110(2)(e)) and CAO	Project will promote and restore ecological functions	No net loss to public access or recreation	No net loss to views; project will improve aesthetics	Positive
Installation of pedestrian and bike trails	Urban Conservancy; functions include habitat, public access, recreation	Recreational uses allowed with no net loss of ecological functions (KMC 18.60.130(3)(e)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and recreation opportunities	Project will enhance public opportunities for views and aesthetics	No Net Loss
Road upgrades	Urban Conservancy/ Aquatic; functions include public access and circulation	Transportation improvements allowed with no net loss of ecological functions (KMC 18.60.130(3)(g)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and circulation	No net loss to views; project will improve aesthetics	No Net Loss
Water-oriented commercial area	Urban Conservancy; functions include habitat, public access, recreation	Commercial uses allowed under conditional permit (Ecology approval required) (KMC 18.60.130(3)(b)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and recreation opportunities	No net loss to views or aesthetics	No Net Loss

Proposed Development	Environment Designation / Functions	Applicable Shoreline Management Policies	Potential Impacts			Cumulative Impacts to Ecological Functions
			Impacts to Ecological Functions	Impacts to Public Access and Recreation	Impacts to Views and Aesthetics	
Boat launch	Urban Conservancy/ Aquatic; functions include habitat, public access, recreation	Boating facilities allowed under conditional permit (Ecology approval required) (KMC 18.60.130(3)(a)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts will be mitigated as necessary	Project will enhance public access and recreation opportunities	No net loss to views or aesthetics	No Net Loss
Road upgrades	Urban Conservancy/ Aquatic; functions include public access and circulation	Transportation improvements allowed with no net loss of ecological functions (KMC 18.60.130(3)(g)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and circulation	No net loss to views; project will improve aesthetics	No Net Loss
Utilities and drainage	Urban Conservancy/Aquatic;	Utilities and drainage facilities allowed under substantial development permit or conditional use permit (Ecology approval required) (KMC 18.60.130(3)(a)) and CAO	Action will occur outside environmentally sensitive areas, and within existing ROW/corridors. Potential impacts will be mitigated as necessary	Projects will maintain utility and drainage functions	No net loss to views or aesthetics	No Net Loss

Table 3. Cumulative Impact Assessment – Clover Island

Proposed Development	Environment Designation / Functions	Applicable Shoreline Management Policies	Potential Cumulative Impacts			Cumulative Impacts to Ecological Functions
			Impacts to Ecological Functions	Impacts to Public Access and Recreation	Impacts to Views and Aesthetics	
Marina expansion	Clover Island High Intensity / Aquatic; functions include commercial and residential development, habitat, public access, recreation	Boating facilities allowed; public access required (KMC 18.60.130(3)(a)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts will be mitigated as necessary	Project will enhance public access and recreation opportunities	No net loss to views or aesthetics	No Net Loss
Habitat enhancement projects	Clover Island High Intensity / Aquatic; functions include commercial and residential development, habitat, public access, recreation	Shoreline habitat and enhancement projects allowed (KMC 18.60.120(3)(f)) and CAO	Project will promote and restore ecological functions	No net loss to public access or recreation	Project will enhance public opportunities for views and aesthetics	Positive
Multi-unit, mixed-use residential building	Clover Island High Intensity; functions include water-oriented commercial and residential development	Multi-unit residential use allowed in mixed-use structures (KMC 18.60.130(3)(f)); buildings subject to height restrictions (KMC 18.60.110(2)(d)) and CAO;	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and recreation opportunities	Project will enhance public opportunities for views and aesthetics	Positive
Water-oriented commercial use in mixed-use building	Clover Island High Intensity; functions include water-oriented commercial and residential development	Water-oriented commercial uses allowed (KMC 18.60.130(3)(b)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts will be mitigated as necessary	Project will enhance public access and recreation opportunities	Project will enhance public opportunities for views and aesthetics	No Net Loss
Pedestrian path (Duffy's Pond)	Clover Island High Intensity/Urban Conservancy; functions include commercial and residential development, habitat, public access, recreation	Recreational uses allowed with no net loss of ecological functions (KMC 18.60.130(3)(e)) and CAO	Action will occur outside environmentally sensitive areas. Potential impacts, anticipated to be minor, will be mitigated as necessary	Project will enhance public access and recreation opportunities	Project will enhance public opportunities for views and aesthetics	No Net Loss

Proposed Development	Environment Designation / Functions	Applicable Shoreline Management Policies	Potential Cumulative Impacts			Cumulative Impacts to Ecological Functions
			Impacts to Ecological Functions	Impacts to Public Access and Recreation	Impacts to Views and Aesthetics	
Riparian planting (Duffy's Pond)	Clover Island High Intensity / Aquatic; functions include commercial and residential development, habitat, public access, recreation	Shoreline habitat and enhancement projects allowed (KMC 18.60.120(3)(f)) and CAO	Project will promote and restore ecological functions	No net loss to public access or recreation	Project will enhance public opportunities for views and aesthetics	Positive
Utilities and drainage	Clover Island High Intensity/Aquatic;	Utilities and drainage facilities allowed under substantial development permit or conditional use permit (Ecology approval required) (KMC 18.60.130(3)(a)) and CAO	Action will primarily occur outside environmentally sensitive areas, and within existing ROW/corridors. Potential impacts will be mitigated as necessary	Projects will maintain utility and drainage functions	No net loss to views or aesthetics	No Net Loss

4.3 Summary of Impacts to Views and Aesthetics

Clover Island development consistent with the proposed standards are likely to have a positive impact with regard to shoreline aesthetics of the shoreline. The identified potential uses are accompanied by enhanced public access and views of the river from existing and planned pathways and viewpoint opportunities. Shoreline views from existing residences near the island are non-existent, as the levee blocks the existing views. Shoreline views from Canal Drive, approximately two miles away, will be slightly diminished (less than 5% reduction) for the Columbia River on the Pasco portion of the shoreline. Skyline impacts will be slightly reduced for residents and businesses just south of Clover Island, where buildings would extend above the existing building rooftops in designated areas.

5.0 Beneficial Shoreline Policies and Programs

This section describes established regulatory programs under local, state and federal laws that may provide benefits to the City's shorelines. These benefits result in a positive cumulative impact to the ecological functions of the City's shoreline.

5.1 Kennewick Shoreline Restoration Plan

The City has prepared a shoreline restoration plan as part of the City's SMP update, as required by the Guidelines (WAC 173-26-186(8)(c)). The plan identifies degraded shoreline areas and impaired ecological functions, sets goals and objectives for restoration, and identifies potential restoration projects and programs to be implemented. The restoration plan is an integral part of the City's SMP. Exhibit 2 summarized the proposed shoreline restoration activities.

5.2 Shorelines Program and Critical Areas Regulations

The Shorelines Program and Shorelines critical areas regulations (Appendix A-2 of the SMP) provides for protection of habitat functions and values through no net loss requirements, and avoidance and mitigation requirements.

5.3 State Environmental Policy Act (SEPA)

The City would typically act as their own Lead Agency under SEPA, which requires the evaluation of potential impacts of development on the natural and built environment, and requires mitigation for adverse impacts. This regulatory requirement will help support the protection of the shoreline environment.

5.4 Endangered Species Act (ESA)

If a proposed action were to potentially impact a Federally listed Threatened or Endangered species, ESA requires that a biological assessment and conservation measures and/or conditions to minimize adverse effects of proposed development. These assessments will be conducted, as necessary, on a project-specific basis. The overall cumulative impacts from anticipated projects are summarized in Tables 2 and 3.

5.5 Clean Water Act (CWA)

Potential near shore or in-water work would require either a Section 404 Permit and/or a Section 401 Permit for compliance with CWA. This review would ensure that proposed projects would be permitted in compliance with the CWA which would help support water quality and ecological functions.

6.0 Conclusions

The Shoreline Management Act requires local governments to strike a delicate balance between protection of the ecological functions of the shoreline environment and utilization and enjoyment of the shoreline area by the public.

The potential conflict of these seemingly disparate goals is noted in the Guidelines (WAC 173-26-176(2)):

“The policy goals for the management of shorelines harbor potential for conflict. The act recognizes that the shorelines and the waters they encompass are “among the most valuable and fragile” of the state’s natural resources... The prohibition of all use of shorelines also could eliminate their human utility and value. Thus, the policy goals of the act relate both to utilization and protection of the extremely valuable and vulnerable shoreline resources of the state. The act calls for the accommodation of “all reasonable and appropriate uses” consistent with “protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life” and consistent with “public rights of navigation.” The act’s policy of achieving both shoreline utilization and protection is reflected in the provision that “permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize... any resultant damage to the ecology and environment of the shoreline area and the public’s use of the water.”

The ongoing monitoring and assessment of cumulative impacts is key to creating and maintaining this balance. It is recommended that the City Planning Department conduct a review this Cumulative Impact Assessment and the Shoreline Restoration Plan every five years. In addition, the City may consider the potential impacts of shoreline development in adjacent jurisdictions on the ecological functions of the City’s shoreline, and solicit feedback from the City Council. This recommendation is carried forth in the City’s SMP (KMC 18.68.270).

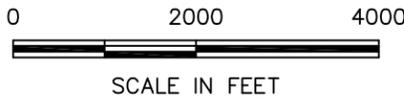
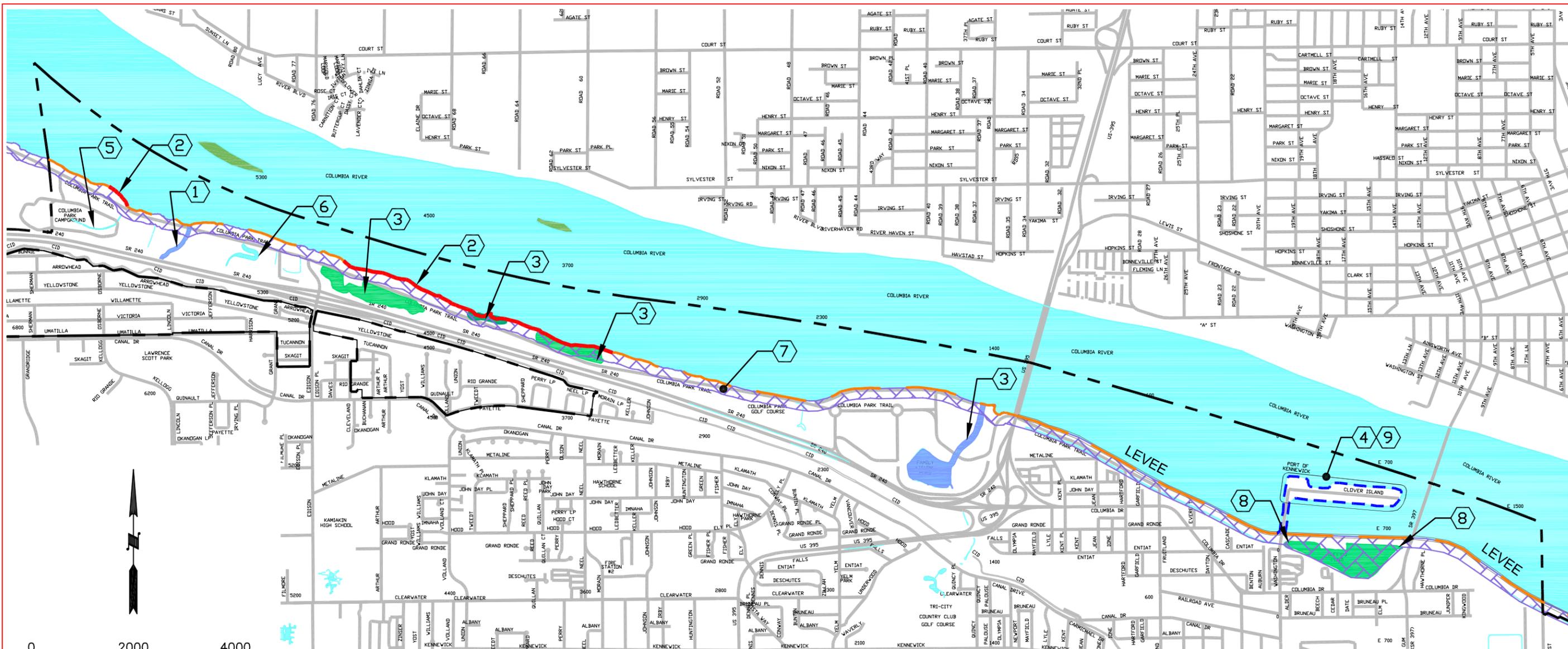
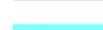


EXHIBIT 2

City of Kennewick Shoreline Restoration Plan

2009



-  Shoreline Management Area 200'
-  Wetlands
-  Riparian 75' Buffer
-  Rivers, Streams and Ponds
-  Shore Unprotected (Unarmored)
75' Buffer with Stormwater Treatment
-  Shore Protected (Armored)
50' Buffer
-  Island Shore Protected (Armored)
25' Buffer
-  City Limits/UGA Boundary
-  Roads

Tier 1 Projects (10 Year Implementation)

-  1) Revegetate and expand riparian zone with native vegetation, and evaluate feasibility of channel restoration.
-  2) Protect shoreline from future erosion through soft and/or hard engineering solutions. Restore shoreline to more natural state, using passive management techniques (i.e. "no mow areas") to impede shoreline erosion.
-  3) Maintain and enhance plant diversity through the planting of additional native vegetation.
-  4) Enhance 50% of aquatic and riparian habitat to properly functioning condition for substrate, large woody debris and refugia consistent with Clover Island Master Plan.

Tier 2 Projects (20 Year Implementation)

-  5) Reconnect channel to Columbia River and enhance riparian function through planting native vegetation
-  6) Reconnect channel to Columbia River and establish riparian vegetation.
-  7) Relocate road away from shoreline to protect water quality and reduce noise impacts from vehicular traffic.
-  8) Explore feasibility of reconnecting Duffy's Pond to the Columbia River to improve water quality conditions.
-  9) Enhance 100% of aquatic and riparian habitat to properly functioning condition for substrate, large woody debris and refugia consistent with Clover Island Master Plan.

Disclaimer: This map is intended to be used as a reference. It does not provide all restoration options nor show all areas where restoration may be feasible. All data presented should be considered approximate in location due to variances in spatial accuracy of source data.

References

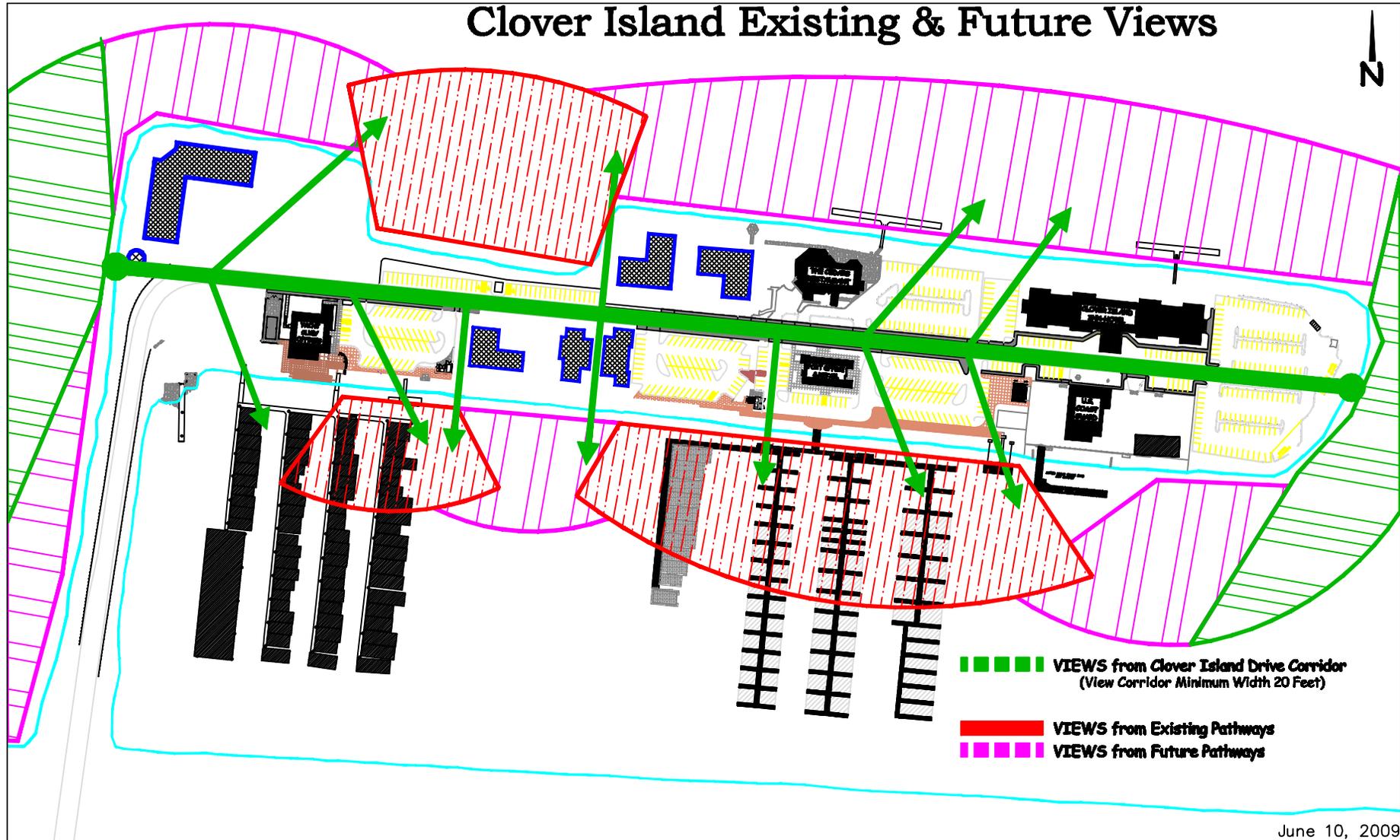
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- HDR, 2006. City of Richland Wye Levee Trail Improvement Project, Biological Assessment. August 2006.
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- HDR, 2007. Memorandum on Columbia River, McNary Pool – Riparian Buffer.
- HDR / EES, 2005. City of Kennewick Shoreline Inventory and Assessment. Prepared for the City of Kennewick. July 2005.
- Kennewick Municipal Code, 2005. Draft Shoreline Master Program, KMC Chapter 18.60. November 2005.
- MAKERS Architecture and Urban Design, 2003. Clover Island Master Plan. Prepared for the Port of Kennewick. 2003.
- Revised Code of Washington, 1971. Shoreline Management Act, Chapter 90.58 RCW.
- Washington Administrative Code, 2003. Shoreline Master Program Guidelines Chapter 173-26 WAC.

Clover Island High Intensity Special Area Plan Standards

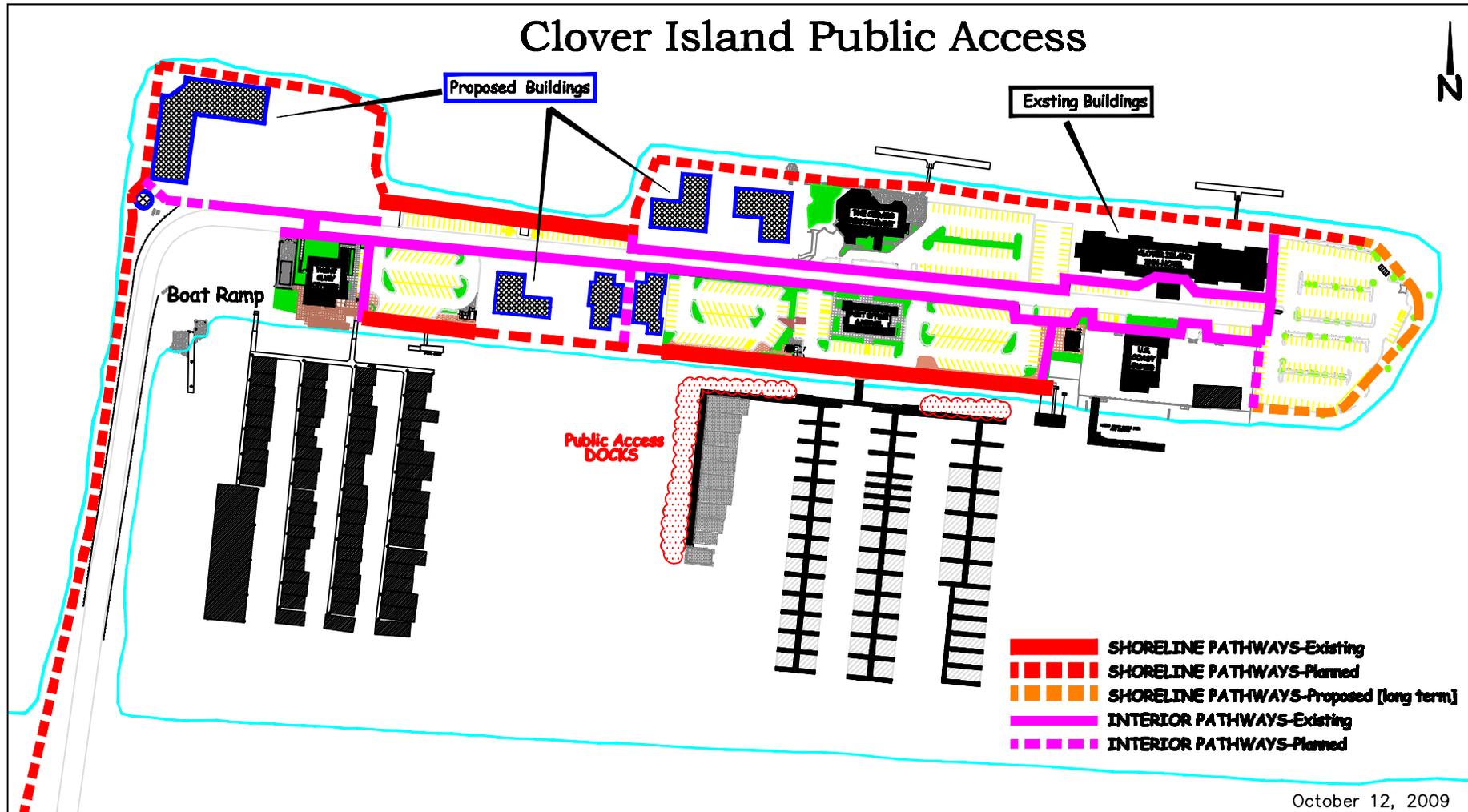
Appendices

- Appendix A-6-1: Map of Clover Island Existing and Future Views
- Appendix A-6-2: Map of Clover Island Public Access
- Appendix A-6-3: Map of Clover Island Building Heights by Development Site
- Appendix A-6-4: Clover Island Aquatic and Riparian Habitat Enhancement

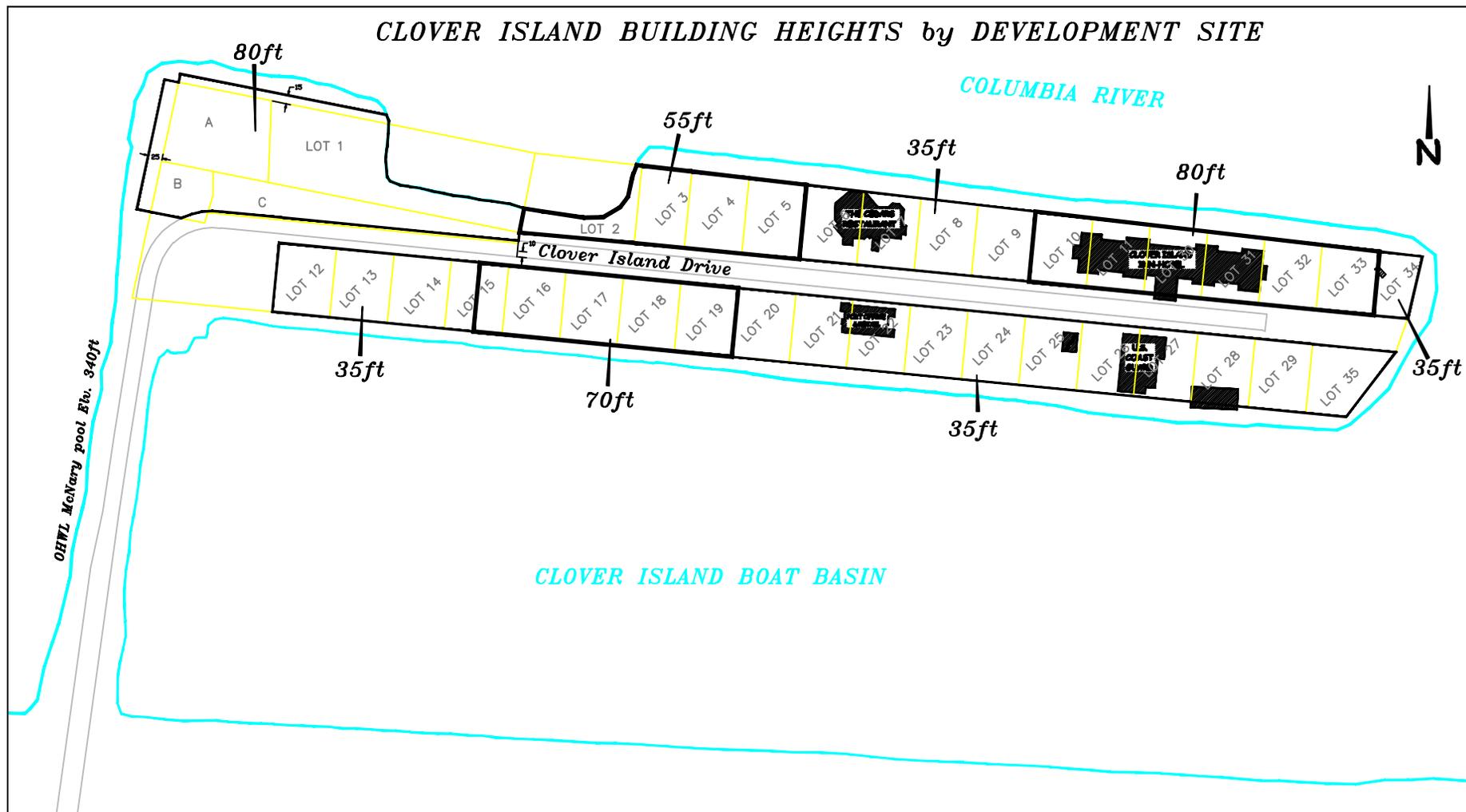
Clover Island Existing & Future Views



Clover Island Public Access



CLOVER ISLAND BUILDING HEIGHTS by DEVELOPMENT SITE



Clover Island Aquatic and Riparian Habitat Enhancement

Construction

- Protect Columbia River from transporting silt and debris downstream by placing floating turbidity barriers or curtains placed in water at the outer limits of the affected shore areas for construction activities below the OHWM
- Restrict loose material from entering Columbia River by constructing silt fence in compliance with the Stormwater Management Manual for Eastern Washington
- Minimize or avoid construction impacts from turbidity or accidental discharge of petroleum or waste products during construction by:
 - No-in water construction activities except as specified in applicable federal and state biological and hydrologic permits
 - Other construction related BMPs as specified in applicable federal and state biological and hydrologic permits
- All waste materials such as construction debris, silt, excess dirt or overburden shall be deposited above the limit of flood waters in an approved upland disposal site.
- Any hazardous material spills or indication of fish distress or kill shall be immediately reported to the City and applicable federal and state agencies, including Washington Department of Ecology. Operations shall cease until approval for resumption is granted by the applicable federal and state permitting agencies. Notification of resumption approval by these agencies shall be provided to the City.
- Boulders, metal frameworks and concrete structures deployed on the river bed and bank shall be of sufficient specifications that, then in combination with the engineering proposed, prevent them from being washed away by 100-year flows. Ballasting and anchoring of trees and brush piles are excluded from this provision (see discussion below).
- Fill placed within the wetted perimeter along the northern side of the island must first be screened to comprise by weight less than 1% fine sand or smaller particles.

Enhance Aquatic and Riparian Habitat Structure

Fill and shoreline stabilization measures shall:

- Maintain and enhance shoreline slope both above and below OHWM from current baseline of ½:1 and 1:1 to 2:1 or 3:1, with exceptions of maintaining 1:1 slope for island areas where waterward slope doesn't support a more gradual slope.
- Remove concrete from existing riparian area. Crushed concrete can be used as fill base for riparian habitat slope enhancement.
- Constructs below 344' MSLE must be curvilinear landward arcs in planform and the waterward built surfaces below 344' shall be buffered and occluded with anchored brush piles and/or

ballasted rootwads, which must provide substantial functional cover for juvenile salmonids and for wave energy dissipation.

- Place anchored large woody debris root wads on average every 75 meters, with clustering consistent with habitat objectives specified in applicable federal and state permits.

Vegetation Planting, Monitoring and Maintenance

Development and Shoreline Modification proposals shall:

- Develop a Planting Plan, proposing both aquatic and riparian species. Aquatic and riparian vegetation planting plan shall be implemented using plant species specified in Table 1. Plant substitutions may be allowed for plant availability or survival problems, so long as plants are similar in size and growth habit and approved by a qualified biologist familiar with the vegetation planting plan. A minimum of ½ of the aquatic vegetation plantings shall be integrated with woody debris root wads to improve survival chances.
- Develop a five year monitoring & maintenance plan. For riparian revegetation, the applicant shall assure 100 percent survival of trees and shrubs during the first two years of monitoring, and 100 percent survival of trees and 80 percent survival of shrubs during the final three years of monitoring. For aquatic plant maintenance, the applicant shall promote aquatic planting survival rates by monitoring invasive non-native plant species and contacting the Department of Ecology’s Environmental Assessment Program and Washington Department of Fish and Wildlife for assistance in removing invasive aquatic plant species. The applicant shall monitor aquatic vegetation planting success and adjust methods over time, as appropriate, to improve survival and habitat conditions.
- Maintaining terrestrial plants during the five-year monitoring period consistent with specified survival standards, including removal of dead or dying plants, weeding of non-native invasive species, and irrigation. Maintenance shall not include application of toxic chemicals or pruning, except to maintain proscribed view corridors.
- Maintain and designate approximately 20 percent of the river frontage on the west and north sides of the Island (including the Notch) for increased overhanging vegetation by marking areas where thinning and topping of native vegetation shall not occur.

Table 1 – Plant Species to be used for revegetation and bank stabilization along enhanced shorelines

Red Maple <i>Acer rubrum</i>	Japanese Red Barberry <i>Berberis thunbergii</i> “ <i>Atropurpurea</i> ”
Serviceberry <i>Amelanchier sp.</i>	Golden Current <i>Ribes aureum</i>
Paper Birch <i>Betula papyrifera</i>	Shrubby Penstemon <i>Penstemon fruticosus</i>
Rocky Mountain Juniper <i>Juniperus scopulorum</i>	Tall Oregon Grape <i>Mahonia aquifolium</i>
Smooth Sumac <i>Rhus glabra</i>	Dwarf Oregon Grape <i>Mahonia nervosa</i>
Pacific Willow	Morning Light Miscanthus

<i>Salix lucida ssp. lasiandra</i>	<i>Miscanthus sinensis</i>
Red-Osier Dogwood <i>Cornus stolonifera</i>	Blue Oat Grass <i>Helictotrichon sempervirens</i>
Anthony Waterer Spirea <i>Spiraea X bumalda</i>	White Rockrose <i>Cistus sp.</i>
Karl Foerster Feather Reed Grass <i>Calamagrostis x acutiflora</i>	Kinnikinick <i>Arctostaphylos uva-ursi</i>
Dwarf Blueosier Willow <i>Salix purpurea</i>	Lawn-hydroseed from local supplier
Russian Sage <i>Perovskia atriplicifolia</i>	Huckleberry <i>Galussacia baccata</i>
Coyote willow <i>Salix exigua</i>	Nebraska Sedge <i>Carex nebraskensis</i>
Common Spike-Rush <i>Eleocharis palustris</i>	Hardstem Bulrush <i>Scirpus acutus</i>
Three-Square Bulrush <i>Scirpus americanus</i>	Softstem bulrush <i>Scirpus validus</i>
Common Cattail <i>Typha latifolia</i>	

Appendix A-6-5

Clover Island High Intensity Environment Uses⁽¹⁾ Table
Home occupation
Residences, multifamily
Residences, caretaker
Alcoholic beverage sale (packaged)
Accessory uses
Banks and financial institutions
Barbers, beauty shops, tanning salons, and body art
Bars
Boat and watercraft building, sales, repair and rental, commercial
Boat marinas
Boating fuel stations
Commercial amusement and recreation
Espresso stands (sidewalk)
Essential public facilities and utilities
Float plane moorage (upon FAA approval)
Offices, including professional offices, agencies and services
Photographic studios
Public/quasi public facilities and services
Restaurants
Retail uses such as boutique theme shops and gift shops
Schools, private
Towers, antennas, and supporting structures, including amateur radio towers, 55 feet or less
Transient accommodations (including hotels and motels)
<i>(1) Allowed When Consistent with Shorelines Master Program “Mixed Use” Provisions</i>

CHAPTER 18.66

FLOOD DAMAGE PREVENTION

SECTION:

- 18.66.010: Purpose
- 18.66.020: Definitions
- 18.66.030: General Provisions
- 18.66.040: Administration
- 18.66.050: Variance and Appeal Procedure
- 18.66.060: Standards for Flood Hazard Reduction

18.66.010: Purpose: Floods are inimical to the public health, safety, and welfare. This Chapter is intended to prevent flood damage and maintain community eligibility in the National Flood Insurance Program. It is also intended to minimize public and private losses due to flood conditions in specific areas by provision designed: to protect human life and health; to minimize expenditure of public money and costly flood control projects; to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; to minimize prolonged business interruptions; to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard; to help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; to ensure that potential buyers are notified that property is in an area of special flood hazard; and to ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 5180 Sec. 1, 2007)

18.66.020: Definitions:

- (1) “Accessory Structure” means nonresidential structures such as garages, sheds, garden buildings, pole buildings, grain bins, and barns, which are considered normal for farming or ranching activities.
- (2) “Appeal” means it requires a review of the interpretation of any provision of this Chapter, or a request for a variance.
- (3) “Area of Shallow Flooding” is designated AO or AH Zone on the Flood Insurance Rate Map (FIRM), has a base flood depth ranging from one to three feet, no clearly defined channel, an unpredictable and indeterminate path and evidence of velocity flow. AO is characterized as sheet flow and AH indicates ponding.
- (4) “Area of Special Flood Hazard” is land with a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.
- (5) “Base Flood” is the flood with a one percent chance of being equaled or exceeded in any given year, also referred to as the “100-Year Flood.” Designation on maps always includes the letters A or V.
- (6) “Basement” means any area of the building having its floor sub-grade (below ground level) on all sides.
- (7) “Best Available Information” means information from Federal, State or other sources that has been generated using technically defensible methods or is based on

reasonable historical analysis and experience in the absence of official Flood Insurance Rate Map data.

(8) “Breakaway Wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

(9) “Critical Facility” means a facility for which even a slight chance of flooding would be too great. Critical facilities include, but are not limited to, schools, hospitals, police, fire and emergency response installations, nursing homes, installations which produce, use or store hazardous materials or hazardous waste.

(10) “Development” is any man-made change to real estate such as buildings, mining, dredging, filling, grading, paving, excavating or drilling operations or storage of equipment and materials located within the area of special flood hazard.

(11) “Development Permit” means a flood-prone area development permit, as established in 18.66.040(1).

(12) “Elevated Building” means for insurance purposes, a non-basement building, which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

(13) “Existing Manufactured Home Park or Subdivision” means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted flood plain management regulations.

(14) “Expansion to an existing Manufactured Home Park or Subdivision” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

(15) “Flood or Flooding” is a general and temporary, partial or complete inundation of normally dry land caused by overflowing inland waters or the unusual and rapid accumulating of runoff of surface waters from any source.

(16) “Flood Insurance Rate Map (FIRM)” is the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones for the community.

(17) “Flood Insurance Study” is the official report of the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

(18) “Flood Protection Elevation” means to or above the base flood elevation.

(19) “Floodway” is the channel of a river or other watercourse and the adjacent land necessary to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

(20) “Lowest Floor” is the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure used only for parking of vehicles, building access or storage in an area other than a basement is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements found in Section 18.66.060(2)(a).

(21) “Manufactured Home” is a structure, transportable in one or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when connected to the required utilities. The term “manufactured home” does not include a recreational vehicle.

(22) “Manufactured Home Park or Subdivision” is a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

(23) “New Construction” means structures for which the “start of construction” commenced on or after the effective date of this ordinance.

(24) “New Manufactured Home Park or Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted flood plain management regulations.

(25) “Recreational Vehicle” means a vehicle which is built on a single chassis; 400 square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a light duty truck; and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

(26) “Special Flood Hazard Area” is an area subject to a base or one hundred year flood; areas of special flood hazard are shown on a flood hazard boundary map or flood insurance rate map as Zone A, AO, A1-30, AE, A99, AH, VO, VI-30, VE, or V.

(27) “Start of Construction” is the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement within 180 days after the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; the installation of streets or walkways; excavations for basements, footings, piers, or foundations or the erection of temporary forms; nor the installation of accessory buildings, such as the garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

(28) “Structure” is a walled and roofed building including a gas or liquid storage tank that is principally above ground.

(29) “Substantial Damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

(30) “Substantial Improvement” is any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either before the improvement or repair is started or if the structure has been damaged and is being restored, before the damage occurred. A “substantial improvement” occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not it affects the external dimensions of the structure. A “substantial improvement” does not include an improvement to comply with health, sanitary, or safety codes that have been identified by the local code enforcement official and which are the

minimum necessary to assure safe living or to a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

(31) “Variance” means a grant of relief from the requirements of this Chapter, which permits construction in a manner that would otherwise be prohibited by this Chapter.

(32) “Water Dependent” means a structure for commerce or industry, which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operation. (Ord. 5180 Sec. 1, 2007)

18.66.030: General Provisions:

(1) Lands to which this Chapter Applies. This Chapter applies to all areas of special flood hazards within the City. It is an overlay zone imposed in addition to the provisions of the Zoning districts in which it is located.

(2) Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Insurance Administration in a report entitled “Flood Insurance Study - City of Kennewick, Washington,” completed in May, 1981, and revised in September of 1989, and any revision thereto, with accompanying Flood Insurance Rate Maps, and any revision thereto, is hereby adopted by reference. The Study and Maps are on file at the Department of Planning. Areas within Benton County which are annexed to the City, are within such areas, if shown upon studies and maps prepared by the Federal Insurance Administration for Benton County. Areas of special flood hazard will be shown on the Kennewick Zoning Map.

(3) Compliance. No structure or land may be constructed, located, extended, converted, or altered without full compliance with the terms of this Chapter. Violations of the provisions of this Chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction, be punished in accord with KMC 18.54. Nothing herein contained shall prevent the City of Kennewick from taking such other lawful action as is necessary to prevent or remedy any violation.

(4) Greater Restriction Applies. This Chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. If this Chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, the more stringent prevails.

(5) Interpretation. In the interpretation and application of this Chapter, all provisions are minimum standards and liberally construed in favor of the City's regulatory powers; and deemed neither to limit or repeal any other powers granted under State statutes.

(6) Warning and Disclaimer of Liability. The degree of flood protection established by this Chapter is reasonable for regulatory purposes and based on scientific and engineering research. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This Chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This Chapter does not create liability on the part of the City of Kennewick, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this Chapter or any administrative decision, or variance made thereunder. (Ord. 5180 Sec. 1, 2007)

18.66.040: Administration:

(1) Development Permit Required. A Flood-Prone Area Development Permit must be obtained before construction or development begins within any area of special flood hazard established in Section 18.66.030(2). The permit will be for all structures, including manufactured homes, as set forth in Section 18.66.020 and all other development including filling and other activities, also as set forth in Section 18.66.020.

(2) Application. Application for a development permit must be made on forms furnished by the Planning Director and include all information required for any other development application with which it may be filed. The application must include a copy of the construction drawings and elevations, in duplicate, of a site plan (one copy, if no larger than 8½" x 14") drawn to scale and showing lot lines and dimensions of existing and proposed structures, landscaping, fences or walls, ground elevations of the area, proposed fill or grading, storage of materials, drainage facilities, and any other information deemed necessary by the Director. Specific information must show precisely the elevation, in relation to mean sea level, of the lowest floor (including a basement) of existing and proposed structures, the elevation, in relation to mean sea level to which any non-residential structure has been flood-proofed. A certificate by a professional engineer registered in the State of Washington that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in Section 18.66.060, and a description of the extent to which any watercourse will be altered or relocated is required.

(3) Designation of the Director. The Planning Director shall administer and implement this Chapter. He or she may require proof that conditions of approval and the standards of this Chapter have been met or that certification be provided and, if not forthcoming, may revoke the development permit and require that development discontinue or the structure be vacated. When the first floor of a residential structure is required to be elevated, as provided in Section 18.66.060, the Planning Director will require that the applicant submit a statement from a professional surveyor indicating the elevation to which the first floor was actually constructed.

(4) Review. Duties and responsibilities of the Planning Director shall include, but not be limited to:

- (a) Review all development permits to determine that the permit requirements of this Chapter have been satisfied. If they are located in the floodway, assure that the encroachment provisions of Section 18.66.060(2)(f) are met and that all necessary permits have been obtained;
- (b) Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local government agencies from which prior approval is required (i.e. Section 404 wetlands permits from the U.S. Army Corps of Engineers);
- (c) If base flood elevation data has not been provided by the Flood Insurance Administration, in accordance with Section 18.66.030(2) basis for establishing the areas of special flood hazard, the Planning Director shall obtain, review and use any base flood elevation and floodway data available from a Federal, State or other source, in order to administer Section 18.66.060(2) Specific Standards, and Section 18.66.060(2)(c) Floodways;
- (d) Where base flood elevation is provided through the Flood Insurance Study or is required by this Chapter, obtain, record, and maintain the records of the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, whether or not the

- structure contains a basement; and the flood proofing certification required in Section 18.66.060 (2)(a) and (b), including the actual elevation in relation to mean sea level;
- (e) For all new or substantially improved nonresidential flood-proofed structures: Verify and record the actual elevation in relation to mean sea level, and maintain the flood-proofing certifications required in Section 18.66.040(2);
 - (f) Alteration of Watercourses. Notify adjacent communities and the Department of Ecology, prior to any alteration or relocation of a watercourse, submit evidence of such notification to the Federal Insurance Administration, and require that the watercourse be maintained so that its flood carrying capacity is not diminished;
 - (g) Make interpretations where needed of the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions);
 - (h) If the conditions of this Chapter or any permit are not met, revoke the permit and cause the vacation or demolition of any nonconforming structure; and
 - (i) Maintain for public inspection all records pertaining to the provision of this Chapter. (Ord. 5204 Sec. 17, 2007: Ord. 5180 Sec. 1, 2007)

18.66.050: Variance and Appeal Procedure:

- (1) Board of Adjustment. The Board of Adjustment shall hear and decide appeals from decisions of the Planning Director and requests for variances. The procedure and requirements for a variance or appeal shall be in accord with Chapter 18.51 and 54.
- (2) Consideration of the Board.
 - (a) In passing upon applications, the Board of Adjustment shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Chapter, and:
 - (i) The danger that materials may be swept onto other lands to the injury of others;
 - (ii) The danger to life and property due to flooding or erosion;
 - (iii) The susceptibility of the proposed facility and its contents to flood damage and the affect of such damage on the owner;
 - (iv) The importance of the services provided by the proposed facility to the community;
 - (v) The necessity of a waterfront location to the facility, where applicable;
 - (vi) The availability of alternative locations which are not subject to flooding or erosion damage;
 - (vii) The compatibility of the proposed use with existing and anticipated development;
 - (viii) The relationship of the proposed use to the Comprehensive Plan and flood plane management program;
 - (ix) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (x) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the affects of wave action, if applicable, expected at the site; and

- (xi) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- (b) Generally, variances may be issued for the new construction or substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the items in Section 18.66.050(2)(a) have been fully considered. As the lot size increases, the technical justification necessary for issuance of a variance increases.
- (c) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
- (d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (e) The Board may attach such conditions to a variance as it deems necessary to further the purposes of this chapter.
- (f) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the remainder of this Section.
- (g) Other variances may be approved by the Board upon:
 - (i) No increase in flood levels during the base flood discharge will result;
 - (ii) The variance is the minimum necessary, considering the flood hazard, to afford relief;
 - (iii) There is good and sufficient cause for the granting of the variance;
 - (iv) A failure to grant the variance will result in exceptional hardship to the applicant;
 - (v) Granting of the variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing laws or ordinances;
 - (vi) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants or their economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the Flood Hazard Regulations should be quite rare;
 - (vii) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except Section 18.66.050(2)(b), and otherwise complies with Section 18.66.060.
- (3) Responsibilities of the Director.
 - (a) Any applicant to whom a variance is granted will be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the costs of flood insurance may be commensurate with the increased risk.

- (b) The Planning Director will maintain records of all appeal actions and report any variances to the Federal Insurance Administration upon request. (Ord. 5180 Sec. 1, 2007)

18.66.060: Standards for Flood Hazard Reduction:

(1) GENERAL STANDARDS. In all areas of special flood hazards the following standards apply:

- (a) Anchoring.
 - (i) All new construction and substantial improvements must be anchored to prevent flotation, collapse, or lateral movement.
 - (ii) All manufactured homes must be anchored to prevent flotation, collapse, or lateral movement by providing the over-the-top and frame ties to ground anchors. Over-the-top ties must be provided at each of the four corners of the mobile home with two additional ties per side at intermediate locations, but mobile homes less than 50 feet long need have only one additional tie per side. Frame ties must be provided at each corner of the home with five additional ties per side. All components of the anchoring system must be capable of carrying a force of 4,800 pounds. Any additions to the mobile home must be similarly anchored.
 - (iii) An alternative method of anchoring may be used provided it complies with the standards contained in FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook; incorporated herein by reference.
- (b) Construction Materials and Methods. All new construction and substantial improvements must be constructed with materials and utility equipment and by methods and practices that resist and minimize flood damage.
- (c) Mechanical Equipment and Utilities.
 - (i) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
 - (ii) All new and replacement water supply systems must be designed to eliminate or minimize the infiltration of flood waters into the system;
 - (iii) All new and replacement sanitary sewage systems must be designed to minimize or eliminate infiltration from and discharge into flood waters; and
 - (iv) On-site waste disposal systems must be located and designed to avoid impairment or contamination during flooding; and
 - (v) Water wells shall be located on high ground that is not in the floodway.
- (d) Subdivision Proposals.
 - (i) All the subdivision proposals must have public utilities and facilities such as sewer, gas, electrical, water systems, and adequate drainage located and constructed which will minimize flood damage.
 - (ii) Base flood elevation data must be provided for subdivision proposals and other proposed developments which contain at least 50 lots or five acres (whichever is less).

- (e) Review of Building Permits. The Planning Director shall obtain, review and reasonably utilize the best available information as criteria for requiring that new construction, substantial improvements, or other development in Zone “A” conform to applicable provisions of this Chapter. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 18.66.040(4)(c)), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Residential and commercial structures in unnumbered “A” Flood Hazard Zones must be elevated with their lowest floor at least two feet above grade. Failure to elevate at least two feet above grade in unnumbered “A” Zones may result in higher insurance rates. All applicants for building permits within special flood hazard areas are encouraged to elevate the lowest floor at least one foot above the base flood level. Elevating to at least one foot above the base flood will further substantially reduce the damage potential in the event of a 100-year flood; and, will have a lessening effect on the fees or rates for required flood insurance.
- (2) SPECIFIC STANDARDS. In all areas of special flood hazards where base flood elevation data has been provided, as set forth in Section 18.66.030(2) or 18.66.040(4)(d), the following standards apply:
 - (a) Residential Construction.
 - (i) New Construction and substantial improvement of any residential structure must have the lowest floor, including basement, elevated one foot above the base flood elevation. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must be certified by a registered professional engineer or must meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided; the bottom of all openings shall be no higher than one foot above grade; and openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit automatic entry and exit of floodwaters.
 - (ii) Manufactured Homes. All manufactured homes to be placed or substantially improved within Zones A1-A30, AH, and AE on the community’s FIRM on sites: outside of a manufactured home park or subdivision in an expansion to an existing manufactured home park or subdivision, in a new manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation collapse and lateral

movement. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision with A1- A30, AH, and AE on the community's FIRM that are not subject to the above manufactured home provisions be elevated so that either: the lowest floor of the manufactured home is elevated one foot above the base flood elevation, or the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

- (iii) Residential structures that contain fully enclosed areas below the base flood level must meet the same standards for such areas as described in 18.66.060(2)(b)(i).
- (b) Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure must either have the lowest floor, including basement, and attendant utility and sanitary facilities, elevated one foot above the base flood elevation; or flood-proofed so that below one foot above the base flood level the structure is watertight with walls substantially impermeable to the passage of water, has structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy, be certified by a registered professional engineer that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications, and plans. Such certifications shall be provided to the official as set forth in Section 18.66.040(2).
 - (i) Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in Section 18.66.060(2)(a)(i).
 - (ii) Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood proofed level (a building flood-proofed to the base flood level will be rated as one foot below that level).
- (c) Floodways. Located within areas of special flood hazard established in Section 18.93.030(2) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provision apply:
 - (i) Encroachments are prohibited, including fill, new construction, substantial improvements and other development; unless a registered, professional civil engineer certifies that the encroachments will not increase flood levels during the occurrence of the base flood discharge.
 - (ii) Construction or reconstruction of residential structures is prohibited within designated floodways except for (1) repairs, reconstruction, or improvements to a structure which do not increase the ground flood area; and (2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either before the repair, or reconstruction is started, or if the

structure has been damaged and is being restored, before the damaged occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50 percent.

- (iii) If Section (c) (i) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

- (d) Standards for shallow flooding areas (AO Zones). Shallow flooding areas appear on Flood Insurance Rate Maps as AO zones with depth designations. The base flood depths in these zones range from one to three feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:
 - (i) New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified).
 - (ii) New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (I) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - (II) Together with attendant utility and sanitary facilities, be completely flood-proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer.
 - (iii) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
 - (iv) Recreational Vehicles. Recreational vehicles placed on sites within Zones A, A1-30, and AE in the community's FIRM either must: be on site for fewer than 180 consecutive days, or be fully licensed and ready for highway use, be on its wheels or jacking system, be attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or meet the requirements of Section 18.66.060(2)(a)(ii) and the elevation and anchoring requirements for manufactured homes.

- (e) Critical Facilities. Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year flood plain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the level of the base flood elevation (100-year) at the site or to the height of the 500- year event, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Flood-proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Ingress and egress routes, elevated to or above the base flood elevation, shall be provided to all critical facilities to the extent possible.
- (f) Encroachments. The cumulative effect of any proposed development, where combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point. (Ord. 5180 Sec. 1, 2007)

CHAPTER 18.72

CLEARING AND GRADING

SECTION:

- 18.72.010: Applicability
- 18.72.020: Review Process
- 18.72.030: Review Criteria
- 18.72.040: Conformance with Planning Directors Approved Plan Required
- 18.72.050: Final Approval
- 19.72.060: Other Requirements/Non City Review
- 18.72.070: Inspection and Enforcement Authority
- 18.72.080: Expiration and Extensions
- 18.72.090: Transferability of Permit

18.72.010: Applicability: No person shall do any excavation or grading without first obtaining a Land Use Clearing and Grading Permit issued by the Department of Community Planning under the provisions of Chapter 18.42, except:

- (1) An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit.
- (2) An excavation and/or fill, which does not exceed a total of one hundred (100) cubic yards and does not obstruct a drainage course.
- (3) An excavation and/or fill reviewed and approved as part of a building permit.
- (4) Excavations for water wells or tunnels or installation of service utilities by public and private utilities.
- (5) Cemetery graves. (Ord. 5180 Sec. 1, 2007)

18.72.020: Review Process: For excavation or grading in excess of one hundred (100) cubic yards, the Planning Director shall review, approve, disapprove, or approve with conditions, the location of the site and its effect on the surrounding area.

(1) Grading Plan: A 22-inch by 34-inch plan at a maximum scale of one inch to 100 feet or at a scale approved by the Community Planning Department, clearly indicating the following:

- (a) Graphic scale and north arrow;
- (b) Dimensions of all property lines, easements, and abutting streets;
- (c) Location and dimension of all on-site structures and the location of any structures within 15 feet of the subject property or which may be affected by the proposed work;
- (d) Accurate existing and proposed contour lines drawn at 5-foot intervals, or less, intervals showing existing ground and details of terrain and area drainage to include surrounding off-site contours within 100 feet of the site;
- (e) Location of natural drainage systems, including perennial and intermittent streams, the presence of bordering vegetation, and flood plains.
- (f) Setback areas and any areas not to be disturbed;
- (g) Finished contours drawn at five-foot intervals as a result of grading;

- (h) Proposed drainage channels and related construction with associated underground storm drainage lines sized and connections shown; and
- (i) General notes addressing the following (may be listed on cover sheet):
 - (i) Area in square feet of the entire property.
 - (ii) Area of work in square feet.
 - (iii) The number of cubic yards of soil to be added, removed, or relocated.
 - (iv) Type and location of fill origin and destination of any soil to be removed from site.
 - (v) If known, finished floor elevation(s) of all structures, existing and proposed. (Ord. 5204 Sec. 18, 2007; Ord. 5180 Sec. 1, 2007)

18.72.030: Review Criteria: To grant a land use permit under the provisions of Chapter 18.42, the Planning Director shall make a determination that:

(1) Compatibility of Proposed Use: The proposed activity would not be unreasonably detrimental to the surrounding area. The Planning Director shall consider, but is not limited to, the following:

- (a) Size and location of the activity;
- (b) Traffic volume and patterns;
- (c) Screening, landscaping, fencing and setbacks;
- (d) Unsightliness, noise and dust;
- (e) Surface drainage;
- (f) Temporary and permanent erosion control. (Ord. 5180 Sec. 1, 2007)

18.72.040: Conformance with Planning Director's Approved Plan Required: In the event that a permit is granted, excavation, removal or fill shall be permitted only in accordance with the plan approved by the Planning Director. Rehabilitation shall take place in accordance with the approved plan and in a logical sequence so that satisfactory conditions shall be maintained on the premises. Rehabilitation shall be done in stages compatible with continuing operations. The Planning Director may require the drafting of rehabilitation plans by a licensed landscape architect. (Ord. 5180 Sec. 1, 2007)

18.72.050: Final Approval: After the applicant has completed the approved amount of excavation, fill, or other activity, the final grading of the site, site stabilization, and the applicant or another developer begins to develop or construct a new use on the site, the Community Planning Department may give final approval provided reasonable progress is occurring on the construction or new use. (Ord. 5180 Sec. 1, 2007)

18.72.060: Other Requirements/Non City Review: Issuing a permit under this Section does not relieve the holder from requirements of other government agencies. Review by other interested City, County, State and Federal organizations may be required. (Ord. 5180 Sec. 1, 2007)

18.72.070: Inspection and Enforcement Authority: The Community Planning Department shall have jurisdiction of the activities regulated in this Section after a special permit has been granted by the Planning Director. For inspection purposes, any duly authorized member of this Department shall have the right and is empowered to enter upon any premises at reasonable hours where activities regulated by this Section are occurring. This

Division is empowered to issue orders, grant, renew, and revoke such licenses as are provided for in accordance with this Section. (Ord. 5180 Sec. 1, 2007)

18.72.080: Expiration and Extensions: The special permit shall be null and void if the applicant has not begun activity within six (6) months after the granting of the permit, unless the Planning Director grants an extension of time. Special permits are valid until the approved plans have been satisfactorily completed. (Ord. 5180 Sec. 1, 2007)

18.72.090: Transferability of Permit: The special permit is transferable to other persons, firms and corporations, and the special permit shall continue with the activity on the site unless a new special permit is granted. (Ord. 5180 Sec. 1, 2007)

CHAPTER 18.24

SIGNS

SECTION:

- 18.24.010: Purpose
- 18.24.020: Definitions
- 18.24.030: Sign Table
- 18.24.040: General Provisions
- 18.24.050: Regulation by Sign Type
- 18.24.060: Administration
- 18.24.070: Permit Applications
- 18.24.080: Nonconforming Signs
- 18.24.090: Change In Use

18.24.010: Purpose: The purpose of this Chapter is to improve business in Kennewick; increase the City's attractiveness; promote a business person's right to identify their business through reasonable and effective methods; encourage the design and placement of signs in a manner which promotes the noticeability of Kennewick's scenic views and emphasizes Kennewick's street-side landscaping; minimize the dangerous conflicts between unregulated signage and traffic-control devices; minimize the distraction to motorists, bicyclists, and pedestrians from signs because of their shape, motion and competition for attention; and promote and protect the health, safety, property values, and general welfare of the citizens of Kennewick. (Ord. 5180 Sec. 1, 2007)

18.24.020: Definitions:

- (1) "Auxiliary Sign." Auxiliary sign is a sign that provides information such as direction, time and temperature displays, hours of operation, or warning; auxiliary signs are intended for the convenience of the public. An auxiliary sign may include the business name and/or logo, but may not include its product or services.
- (2) "Awning." Awning is a covering structure that projects horizontally from, and is attached to a building. An awning provides protection from the weather for persons or properties underneath it.
- (3) "Awning Sign." Awning sign is a nonilluminated or illuminated sign which is usually painted or screen printed onto the surface of an awning and which does not extend vertically or horizontally beyond the limits of the awning.
- (4) "Banner Sign." Banner sign is a sign made of lightweight material such as cloth, paper or flexible plastic with or without a rigid frame.
- (5) "Business." Business means any person, partnership, association, corporation, joint venture, or similar group whether operating for profit or not, and any governmental agency.
- (6) "Canopy." Canopy is an ornamental or protective roof-like structure that may be attached or detached from the main building and usually providing protection from the elements to objects or people underneath. Structures over gas pump islands and over entrances of theaters or hotels are both examples of canopies.

(7) “Common Ownership.” Common ownership means groups of two (2) or more businesses when such businesses are located on one or more parcels of land or share public parking or maintenance facilities or when they conduct advertising on a regular basis; or when they function as a single entity in practical or business matters.

(8) “City, State, Federal, and Community Sponsored Events.” City, State, Federal, and Community Sponsored Events are nonprofit events or activities open to the public and associated with common interests or characteristics of the community. Examples of such events are: the elections, Water Follies, Benton-Franklin Fair and Rodeo, Little League Baseball, 4th of July parades or celebrations, and the like.

(9) “Construction Sign.” Construction sign is a sign installed in conjunction with construction or remodeling of a building.

(10) “Copy.” Copy is the medium by which the message or idea of a sign is communicated.

(11) “Development Sign.” Development sign is a sign, which through symbols or names identifies a development. Signs advertising residential or commercial properties “For Sale” or that identify an apartment complex, are examples of development signs.

(12) “Directional Sign.” Directional sign is an off-premise sign that directs attention by name and/or logo to a business, group of businesses, or a business area.

(13) “Electronic Message Sign or Center.” Electronic message sign or center is a sign on which differing copy is shown through an electronic or electrically controlled device, which may also display time and temperature or other messages.

(14) “Freestanding Sign.” Freestanding sign is a single or multiple face sign attached to or supported by columns, uprights, braces, standards, or other type of base in or on the ground and not attached to the building.

(a) “Temporary, Freestanding Sign.” Temporary, freestanding signs are signs which can be moved from structure to structure, or site to site, and which are not anchored to the ground in accord with the International Building Code. Examples of such signs are “grass-hopper” signs, sandwich board/A-frame signs, small price signs, and similar portable signs.

(b) “Permanent, Freestanding Sign.” Permanent, freestanding signs are anchored to the ground in accord with the International Building Code. The method of anchoring may need to be confirmed by a professional engineer, as determined by the Building Inspector.

(15) “Graphic Sign.” Graphic sign is a window sign or a sign, which is an integral part of a building's facade. The sign may be painted, carved, or permanently imbedded.

(16) “Integrated.” Integrated means a sign in which all elements of the sign are incorporated into a single design, but including attachments or projections not part of a single motif.

(17) “Mobile Sign.” Mobile sign is any sign mounted on a vehicle, trailer, or boat; or fixed or attached to a device for the purpose of transporting from site-to-site. This definition includes all vehicles placed or parked for the purpose of drawing attention to a service, product, object, person, organization, institution, business, event, location or message, but not signs or lettering installed on vehicles, trailers or boats operating during the normal course of business.

(18) “Monument Sign.” Monument sign is a freestanding sign, not over six feet high and attached to the ground for a minimum of 66 percent of the length of the sign.

(19) “Off-Premises Signs.” Off-premises signs are signs that advertise a service, product, object, person, organization, institution, business, event, location or message that is

not available on the property upon which the sign is located. This includes mobile signs if their placement constitutes an off-premises sign.

(20) “Pictorial Sign.” Pictorial sign is a sign that conveys the service, product, or activity of a site without words, company or product emblem, or numbers or letters. Pictorial signs display a message through color, shape, and spatial relations, and are appropriate in context and taste with recognized standards of the community. Colored neon tubing and murals are examples of appropriate medium for display of a pictorial sign.

(21) “Political Sign.” Political sign is a sign promoting or publicizing candidates for public office or issues that are to be voted upon in a primary, general, or special election.

(22) “Product-Sponsored Sign.” Product-sponsored sign is a sign, which identifies, displays or attracts attention to a product sold or available, but may or may not identify the on-site organization, institution, person, object, business service or event.

(23) “Projecting Sign.” Projecting sign is a sign, other than a wall sign, which is attached to and projects more than eighteen inches (18”) from a structure, usually in a perpendicular manner. Projection defined as the distance by which a sign extends over public property or beyond the building line.

(24) “Readerboard Sign.” Readerboard sign is a sign on which copy is designated so that it can be changed manually. It usually consists of a panel on which individual letters or pictorials are mounted, or displayed.

(25) “Rooftop Sign.” Rooftop sign is a sign erected over or on the roof of a building, and is wholly or partially supported by the building.

(26) “Sign.” Sign is any object, device, display, structure or part thereof, situated indoors or out which is used to identify, display, advertise, direct or attract attention to an object, person, organization, institution, business, product, service, event, location or message by any means including words, letters, figures, designs, symbols, fixtures, colors, illumination, or projected images.

(27) “Sign Area.” Sign area is the smallest circle(s), triangle(s) or rectangle(s), which will enclose the individual actual sign face. The supporting structure, which does not contain any part of the sign face, is not included in this definition. If a sign has back-to-back display faces, the area of only one face will be considered the sign area. If a sign has more than one face, all areas, which can be viewed simultaneously will be considered the sign area.

(28) “Sign Height.” Sign height is the distance from the grade, or the top of the curb of the nearest street to the top of the sign or any projection thereon, whichever is higher.

(29) “Street Frontage.” Streets, alleys, or public rights of way parallel to the property line used to compute the area of the sign(s) intended to be located in such a manner to have primary exposure on that street or right of way.

(30) “Subdivision Directional Sign.” Subdivision directional sign is a sign advertising the direction to a subdivision by naming the subdivision and furnishing a directional arrow.

(31) “Temporary Sign.” Temporary sign is a sign intended for use for a short period of time. Examples of such signs include: grand opening signs, open house signs, special sale signs, sandwich board/A-frame signs, small price signs, pennants, and other similar signs. Banner signs are specifically excluded from this definition.

(32) “Wall Sign.” Wall sign is a sign mounted parallel to a building facade or vertical building surface, which does not extend beyond the edge of any wall or surface to which it is mounted. Wall signs project no more than eighteen inches (18”) from the surface.

(33) “Window Sign.” Window sign is a sign located on or within three feet of a window of a building, and visible from the exterior of a building. Window signs are graphic signs unless they qualify as auxiliary signs. (Ord. 5180 Sec. 1, 2007)

18.24.030: Sign Table: Signs shall comply with the applicable standards of Table A.

SIGN TABLE A

	Maximum Height	Maximum Sign Area Per Sign	Maximum Permitted Number Of Signs	Special Considerations
Freestanding single business	60'	Based on height of sign 0'-30' ht. up to 150 sq. ft .31'-50' ht. up to 300 sq. ft 51'-60' ht. up to 400 sq. ft	2 per frontage	Grandfather all existing signs prior to passage of ordinance
Freestanding group of businesses	60'	90 sq. ft. per business or the same maximum area per freestanding sign as the single business requirement, whichever is greater.	Based on frontage 0'-200' = Up to 2 signs 201'-400' = Up to 4 signs 401'-600' = Up to 5 signs over 601' = Up to 6 signs	
Wall	Not beyond the top or ends of wall	25% of applicable wall area	See 18.24.040(1)	
Projecting	Not more than 5" above or beyond the attaching wall	75 square feet or 1/2 frontage whichever is greater	See 18.24.040(1)	
Graphic-window	Maximum building height	33% of applicable wall area or applicable window area		
Pictorial	Maximum building height	33% of applicable wall area		
Awning	18' or 2	25% of available		

	stories	wall area		
Banner	None	None	See 18.24.060.2(i)	
Off-premises (existing)	30'	125 square feet	See 18.24.050(7)	Grandfather existing off premises signs except bill boards
Temporary	None	None	See 18.24.050(13)	
Rooftop		See 18.65.050(1)	One	Grandfather existing signs prior to passage of ordinance

(Ord. 5180 Sec. 1, 2007)

18.24.040: General Provisions:

(1) Number: Each permitted use within a commercial or industrial district may have a total of two (2) freestanding signs per street frontage and any combination but not to exceed four (4) of the following signs: projecting, wall, graphic, or pictorial. Auxiliary signs are permitted if the combined square footage of such auxiliary signs does not exceed the allowed total of the user's other permitted signs. Auxiliary signs located on windows or entirely within a structure are permitted without limitation.

(2) Area, Height, and Lighting: Sign area, height, and lighting are regulated by the standards contained in Table A.

(3) Structure: The structural components of signs are regulated by the currently adopted edition of Uniform Sign Code.

(4) Electrical: The electrical components of signs are regulated by the currently adopted edition of the National Electric Code. All electrical signs must bear the U.L. label.

(5) Illumination: The illumination of signs must be shielded, shaded, reduced or directed so that the light remains on the property and does not constitute a nuisance by distracting pedestrians and motorists. Strobe or strobe-like devices are prohibited from use where they are visible from the exterior of a building or location. Illumination of outdoor signs must comply with Chapter 15.26 KMC.

(6) Maintenance: All signs shall be maintained in a state of security and repair. If a sign is not so maintained, it must be removed or repaired within 30 days of notification by the Department. The owner, his agents, or assigns, are responsible for such maintenance and compliance with this Section.

(7) Sight Obstructions: All signs must be in conformance with Chapter 13.12 and Section 18.27.060 of the Kennewick Municipal Code (view obstruction and clearance triangle).

(8) Removal: When a business or business site is vacated, the applicable freestanding, wall, projecting, auxiliary, and street signs face must be removed within thirty (30) days of notification by the Department.

(9) Freestanding: All freestanding signs must be integrated. (Ord. 5180 Sec. 1, 2007)

18.24.050: Regulation by Sign Type:

(1) **Awning Signs:** Awning copy is exempt from this Section if no more than 100% of the maximum, available freestanding sign area is used for such copy. If more than 100% is used for the awning copy, then the other sign or signs for which the business is entitled must be reduced by an area equal to that exceeding 100% of the available freestanding sign area.

(2) **Commercial and Industrial - Development/Sale Signs:** Signs advertising commercial or industrial sites or properties "For Sale" or "For Rent" must be placed wholly on the applicable property and may not exceed 32 square feet in sign area. The height of such signs are limited to 10 feet overall. Any such sign greater than 16 square feet in area must obtain a building permit and be installed to the approval of the Building Inspector.

(3) **Construction Signs:** Construction signs are allowed until occupancy of the applicable building or completion of the structure or remodeling, whichever occurs first.

(4) **Directional Signs:** Direction signs may be permitted in "C" or "I" zones after approval of a Land Use Permit for a Conditional Use in accord with Section 18.42.100. The criteria for approval for such land use permits for conditional uses (variances) will be as follows: The business, group of businesses or business area must not have arterial street frontage available for free standing signage; special circumstances are necessary because of the location, size, shape or topography of the property of the business, group of businesses or business area to provide it with signage privileges typical of other properties in the vicinity or zoning district; the design of the directional sign can be conditioned to account for aesthetics, lighting, safety, compatibility with surrounding properties, and other factors necessary to meet the purpose (18.24.010) of this Chapter. Directional signs shall be further conditioned by the following:

- (a) The directional sign must be located as close to the business, group of businesses, or business area as is practical.
- (b) A single business is limited to one directional sign. Groups of businesses and business areas are limited to two directional signs.
- (c) The preferred means to implement directional signage shall be ground mounted or monument style signs. In cases where this is impractical, the maximum height is limited to 20 feet.
- (d) Directional signs shall be limited to a maximum area of 32 square feet.
- (e) If applicable the directional signs shall further the goals and guidelines of any adopted neighborhood or sub area plan and/or overlay zone.

(5) **Electronic Message Signs or Centers:** Electronic message signs or centers are regulated per its applicable sign type, i.e., freestanding or wall-mounted.

(6) **Existing Off-Premises Signs in all Districts:** All existing off-premises signs installed in conjunction with a building permit as of the effective date of the ordinance codified herein are considered conforming, except billboards which are considered nonconforming. Such signs must be brought into full compliance with provisions of Section 18.24.040 herein for height, area, lighting, structural, and electrical regulations and Sign Table "A" of this Chapter. All existing off-premises temporary signs not installed with a building permit must be brought into full compliance with this Chapter within 180 days of notification by the Department.

(7) **Off-Premise Signs for Community Sponsored Events.** Off-Premise signs associated with community sponsored events on property other than the event site shall be exempt from this Chapter but must be approved by the Department of Planning for sight

visibility and structural safety. Such signs are allowed for no more than 14 days prior to the event and must be removed within three days of the conclusion of the event season.

(8) Signs For City, State, Federal and Community Sponsored Events: Signs associated with City, State, Federal or community sponsored events shall be exempt from this Chapter but must be placed to not obstruct sight visibility and be structurally safe.

(a) Such signs must be removed within seven days following the event. It is the responsibility of the candidate and campaign chairmen to remove political signs, and event chairman in the case of nonpolitical events.

(b) Event signs are not allowed on public property or buildings, sidewalks, public roads, utility poles, or public facilities. However event signs will be allowed in the space between the curb and sidewalk provided there is no traffic visibility obstruction, and the abutting owners' permission has been granted.

(9) Product-Sponsored Signs: All outdoor product-sponsored signs must devote at least 75% of the sign area to the on-site business.

(10) Prohibited Signs: Except as provided elsewhere, the following signs are prohibited in all districts: off-premises signs, except as provided in subsection 18.24.050(7) above; off-premises mobile signs; abandoned signs; signs imitating or resembling official traffic or government signs or signals; signs attached to trees, utility poles, public benches, light poles or any other public property or right of way; and other signs not permitted by this Chapter. Signs on public transit benches and shelters and on and within public transit vehicles, when installed in conformance with a City franchise, are exempt from this Chapter.

(11) Readerboard Signs: Readerboard signs are regulated per applicable sign type, i.e., freestanding or wall-mounted. Portable reader board signs are regulated as temporary signs and a building permit is required for each location.

(12) Residential Properties - Development/Sale Signs: Signs advertising residential properties "For Sale," "Rent," or "Sold" must be placed wholly on the applicable property, and shall not exceed eight square feet in sign area. The height of such signs is limited to eight feet. If the property is not on an arterial street, a single directional sign may be placed at the nearest arterial with the permission of the owner upon whose property the directional sign is placed, and the directional sign can be no larger than six square feet. Any manufactured home park or multi-family residence containing at least five living units may have one freestanding sign per abutting street frontage, which shall not exceed 10 feet in height, or 32 square feet in area and must not move or give the illusion of movement. All development signs in residential areas shall be lit only by existing surrounding lights or by lights shining directly onto the sign. Signage in the single-family subdivisions and multi-family developments must be in conformance with Chapter 18.24.

(13) Rooftop Signs: Rooftop signs are only allowed in CG, CC, IL, or IH zoning districts after approval of a land use permit for conditional uses in accord with 18.42.110 KMC. The criteria for approval of such land use permits for conditional uses will be based on the following:

(a) The property requesting the rooftop sign must not have street frontage available for freestanding signage;

(b) Wall signs would be inadequate because of restricted visibility from arterial street frontage;

(c) Any approved rooftop sign must be consistent with the sign table.

(14) Signs Advertising a Group of Businesses: A group of two or more businesses when located on one land parcel of common ownership or abutting land parcels so as to

function as if of common ownership, which are located along a major or minor arterial as designated on the comprehensive plan, shall comply with Sign Table A of this Chapter to determine allowed freestanding signage along said arterial frontage.

(15) Subdivision Directional Signs: Signs may display the direction to a subdivision by naming the subdivision and furnishing a directional arrow. The sign may not display the name of a realtor or developer, and must be removed within 24 months of its installation. The sign area is limited to 16 square feet, and sign height is limited to six feet overall height. The location of such signs must be approved by the City, and any subdivision utilizing such signs is limited to a maximum of three of these directional signs.

(16) Temporary Signs: Temporary signs are allowed for a maximum of 60 days within any calendar year. They may be placed for no more than 20 consecutive days and they must be removed for 30 days. Banners are specifically exempt from this Section. (Ord. 5180 Sec. 1, 2007)

18.24.060: Administration:

(1) Administration of this Chapter is the responsibility of the Department of Planning. The owners, their assign, or agents are responsible for compliance with the requirements contained in this Chapter.

(2) All signs must comply with the requirements of this Chapter. All sign owners must obtain a building permit prior to installation, with the exception of the following:

- (a) Exempt signs as listed in:
 - (i) Home occupations and signs for family day care homes.
 - (ii) Subsection 18.24.050(8): City, State, Federal and community sponsored events.
 - (iii) Subsection 18.24.050(12): Residential properties-development/sale signs.
 - (iv) Subsection 18.24.050(15): Subdivision directional signs.
- (b) Signs four square feet or less in area.
- (c) Development and "For Sale" or "For Rent" signs.
- (d) Changing sign copy, when such change consists of relettering, replacing or changing the sign face, repainting, cleaning, or other similar and nonstructural changes.
- (e) Seasonal and holiday decorating within an appropriate holiday season.
- (f) Official public notices or signs relating to an emergency.
- (g) National, State or local governmental unit flags.
- (h) Construction signs.
 - (i) Banners.
 - (j) Window signs.
 - (k) Auxiliary signs.
 - (l) Signs that are required by law.
- (m) Signs installed in conjunction with new structure; provided that the construction of the structure is regulated by a current building permit, and the sign complies with this Chapter.
- (n) Signs relaying information or warning such as "No Trespassing", "No Dumping", "Private", provided such signs do not exceed 16 square feet in area. (Ord. 5180 Sec. 1, 2007)

18.24.070: Permit Applications: Applications for building permits for signs shall contain the name of the sign owner and user of the sign; address of the property in which the sign is located; location of the sign structure on such property; drawings of the sign showing design, dimensions, structural calculations and method of lighting, if applicable, and other pertinent information necessary to ensure compliance with this Chapter. Fees for freestanding, wall, projecting, awning and rooftop signs shall be in accord with the fee schedule of the International Building Code; fees for all other signs will be twenty dollars (\$20.00). (Ord. 5180 Sec. 1, 2007)

18.24.080: Nonconforming Signs: All signs must be in conformance with this Chapter on or before June 30, 2000, except as provided in Section 18.24.030 Sign Table A, under special conditions. Nonconforming signs in existence as of the adoption date of this Section which can be defined as temporary must be in full compliance with the requirements of this Section within one year of such adoption date. (Ord. 5180 Sec. 1, 2007)

18.24.090: Change in Use: Any change in building use or classification requiring submittal of a land use permit for site plan approval, KMC 18.42.110; or any new sign structure installation will be cause of applicable signage to conform with provisions of this Section. Copy modifications are exempt. (Ord. 5180 Sec. 1, 2007)

CHAPTER 4.08

STATE ENVIRONMENTAL POLICY ACT

SECTION:

- 4.08.010: State Environmental Policy Act
- 4.08.020: Additional Definitions
- 4.08.030: Designation of Responsible Official
- 4.08.040: Lead Agency Determination
- 4.08.050: Transfer of Lead Agency Status to a State Agency
- 4.08.060: Time for Making Threshold Determinations
- 4.08.070: Use of Environmental Review
- 4.08.080: Applicant's Request for Review
- 4.08.100: Categorical Exemptions and Threshold Determinations
- 4.08.110: Categorical Exemptions
- 4.08.120: Use of Exemptions
- 4.08.130: Environmental Checklist
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- 4.08.200: Environmental Impact Statements
- 4.08.210: Preparation of EIS
- 4.08.220: Additional Elements to be Covered in an EIS
- 4.08.300: Commenting
- 4.08.310: Public Notice
- 4.08.320: Consulted Agency Responsibilities for the City
- 4.08.400: Existing Environmental Documents
- 4.08.410: SEPA and Agency Decisions
- 4.08.420: Substantive Authority
- 4.08.430: Appeals
- 4.08.440: Notice
- 4.08.500: Definitions
- 4.08.510: Categorical Exemptions
- 4.08.520: Agency Compliance
- 4.08.530: Environmentally Sensitive Areas
- 4.08.540: Fees
- 4.08.550: Forms

4.08.010: State Environmental Policy Act:

- (1) The City of Kennewick adopts this ordinance under the State Environmental Policy Act (SEPA), RCW 43.21C.120, and the SEPA rules, WAC 197-11-904.
- (2) The SEPA rules, Chapter 197-11 WAC, must be used in conjunction with this Ordinance.
- (3) The City adopts the following sections of chapter 197-11 of the Washington Administrative Code by reference:
 - 197-11-040 Definitions.
 - 197-11-050 Lead Agency.
 - 197-11-055 Timing of the SEPA process.
 - 197-11-060 Content of environmental review.

- 197-11-070 Limitations on actions during SEPA process.
- 197-11-080 Incomplete or unavailable information.
- 197-11-090 Supporting documents.
- 197-11-100 Information required of applicants.

(Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.020: Additional Definitions: In addition to those definitions in WAC 197-11-700 through 799, the following terms have the meanings described unless the context indicates otherwise:

- (1) "Department" means any division, subdivision or organizational unit of the City.
- (2) "SEPA Rules" means chapter 197-11 WAC as now or hereafter adopted.
- (3) "Early Notice" means the City's notice to an applicant that it considers a determination of significance likely for his proposal (mitigated DNS procedures). (Ord. 3644 Sec. 1, 1996: Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.030: Designation of Responsible Official: The Director of Planning is the Responsible Official if the City is lead agency. He will make threshold determinations, determine the scope and supervise the preparation of EIS'S, and perform any other necessary or proper task to carry out this Chapter. (Ord. 3661 Sec. 2 (part), 1995: Ord. 2873 Sec. 1 (part), 1984: Ord. 2814 Sec. 3, 1984: Ord. 2486 Sec. 1, 1980)

4.08.040: Lead Agency Determination:

- (1) Any department receiving or initiating a proposal must prepare an environmental checklist. The Responsible Official will determine the lead agency in accord with WAC 197-11-050 and WAC 197-11-922 through WAC 197-11-940; unless the lead agency has been previously determined or he is aware that another agency is in the process of determining the lead agency.
- (2) If the City is the lead agency, the department receiving or initiating a proposal will forward the application to the Responsible Official who will make the threshold determination and, if an EIS is necessary, supervise its preparation.
- (3) If the City is not the lead agency, the department must use and consider the DNS or the final EIS of the lead agency in making decisions on its proposal. No department will prepare or require a DNS or EIS in addition to that prepared by the lead agency unless required by WAC 197-11-600. The City may conduct supplemental environmental review under WAC 197-11-600.
- (4) If the City receives a lead agency determination which appears inconsistent with WAC 197-11-922 through 197-11-940, it may object to the determination. The objection must be made to the agency originally making the determination. If not resolved within fifteen days, the Responsible Official may petition the Department of Ecology for a lead agency determination.
- (5) Departments may make agreements as to lead agency status or shared lead agency duties, but the Responsible Official and any affected department must approve the agreement.
- (6) Any department taking a license application must obtain sufficient information to identify other agencies which may have jurisdiction over the proposal. (Ord. 2873 Sec. 1 (part), 1984)

4.08.050: Transfer of Lead Agency Status to a State Agency: The Responsible Official may transfer lead agency status over a private project to the State agency with jurisdiction appearing first on the priority list of WAC 197-11-936. The City will remain an agency with jurisdiction. The Responsible Official must send notice of the transfer together with all relevant information on the proposal to the State agency. He will also give notice of the transfer to the private applicant and all other agencies with jurisdiction. (Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.060: Time for Making Threshold Determinations: The following time limits (expressed in calendar days) apply to all private projects and proposals by other agencies:

(1) Categorical Exemptions. The City will identify categorical exemptions within seven days of receiving a complete application.

(2) Threshold Determination. The City will make a threshold determination which can be based solely upon the environmental checklist within forty-five days of receiving an adequate application and completed checklist. (Ord. 3644 Sec. 2, 1996; Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.070: Use of Environmental Review: City staff will submit DNS's and EIS's along with all recommendations to advisory and final bodies such as the Planning Commission and City Council. (Ord. 2873 Sec. 1 (part), 1984)

4.08.080: Applicant's Request for Review: If the City's only action is issuance of a Building Permit or other license requiring detailed project plans and specifications, the applicant may request in writing that the City conduct its environmental review before he submits his plans and specifications. (Ord. 2873 Sec. 1 (part), 1984)

4.08.100: Categorical Exemptions and Threshold Determinations: The City adopts the following sections of the Washington Administrative Code by reference:

197-11-300 Purpose of this part.

197-11-305 Categorical exemptions.

197-11-310 Threshold determination required.

197-11-315 Environmental checklist.

197-11-330 Threshold determination process.

197-11-335 Additional information.

197-11-340 Determination of non-significance (DNS).

197-11-350 Mitigated DNS.

197-11-355 Optional DNS Process.

197-11-360 Determination of significance (DS)/initiation of scoping.

197-11-390 Effect of threshold determination.

(Ord. 5014 Sec. 1, 2003; Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.110: Categorical Exemptions:

(1) The following types of construction are categorically exempt except when undertaken in any part on lands covered by water:

(a) The construction or location of any residential structures of two dwelling units or less.

(b) The construction of a barn, loafing shed, farm equipment storage building, produce storage or packing structure, or similar agricultural structure in an

agricultural zone, covering 30,000 square feet or less, and to be used only by the property owner or his agent in farming the property. This exemption does not apply to feed lots.

- (c) The construction of an office, school, commercial, recreational, service or storage building with 4,000 square feet of gross floor area, or less, and with associated parking facilities designed for twenty automobiles or less.
- (d) The construction of a parking lot designed for twenty automobiles or less.
- (e) Any landfill or excavation of 500 cubic yards or less throughout the total lifetime of the fill or excavation; and any fill or excavation classified as a class I, II or III forest practice under RCW 76.09.050 or regulations thereunder.

(2) If the Responsible Official believes that special circumstances warrant further environmental review, he may so direct even for categorically exempt projects. (Ord. 3644 Sec. 3, 1996: Ord. 2873 Sec. 1 (part), 1984)

4.08.120: Use of Exemptions:

(1) Each department receiving an application for a license or making a proposal, will determine if it is exempt. Its determination is final and not subject to review and none of the procedural requirements of this chapter apply. No environmental checklist is required for exempt proposals.

(2) Each department will properly define each proposal and identify the licenses required (WAC 197-11-060). If a proposal includes exempt and nonexempt actions, the City will determine the lead agency even if the license is exempt.

(3) The City may authorize exempt actions before nonexempt so long as there is no significant adverse impact on the environment and choices are not limited, but may withhold approval which might lead to modification of the physical environment which would serve no purpose if nonexempt action were not approved, or might financially burden a private applicant if nonexempt action were not approved. (Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.130: Environmental Checklist:

(1) A completed environmental checklist must be filed with all license applications unless exempt, but a checklist is not needed if the City and applicant agree that an EIS is required or SEPA compliance has been completed or initiated by another agency. The City will use the environmental checklist to determine the lead agency and make the threshold determination.

(2) The applicant must complete the environmental checklist. The City will assist as necessary. The department making a proposal must complete the environmental checklist.

(3) The City and not the private applicant will complete the environmental checklist if the City has technical information that is unavailable to the applicant or the applicant has previously given inaccurate information. The costs of preparing the checklist must be paid by the applicant before final approval. (Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.140: Mitigated DNS - Early Notice:

(1) As provided in this section and in WAC 197-11-350, the Responsible Official may issue a determination of non-significance (DNS) based on conditions he attaches to the proposal or on changes to, or clarifications of, the proposal made by the applicant.

(2) An applicant may request early notice of the likelihood of a DS. His written request must be made after his application and environmental checklist but before the City's actual threshold determination.

(3) The Responsible Official will respond within fifteen working days indicating whether the City considers issuance of a DS likely and, if so, the areas of concern. The applicant may change or clarify his proposal to mitigate the indicated impacts and revise his environmental checklist or license application.

(4) The City will assist in identifying the impacts to the extent necessary to formulate mitigating measures.

(5) If an applicant submits a changed or clarified proposal or a revised environmental checklist, the City will base its threshold determination on the changed or clarified proposal within fifteen days.

(a) If the proposal includes sufficient, specific, mitigating measures, the City will issue and circulate a determination of non-significance.

(b) The City will make the threshold determination if the proposal does not include sufficient, specific, mitigating measures.

(c) Proposed, mitigating measures must be in writing and specific. For example, proposals to "control noise" or "prevent storm water runoff" are inadequate. Proposals to "muffle machinery to X decibel" or "construct 200 feet storm water retention pond at Y location" are adequate.

(d) Mitigating measures may be incorporated in the DNS by reference to agency reports, studies or other documents.

(6) A mitigated DNS is subject to a fifteen-day comment period and public notice.

(7) Mitigating measures incorporated in a DNS become conditions of the license and will be enforced accordingly.

(8) The City's Early Notice is not a determination of significance. Discussion on clarifications or changes to a proposal, as opposed to a written request for early notice, do not bind the City to consider the clarifications or changes in its threshold determination. (Ord. 2873 Sec. 1 (part), 1984)

4.08.200: Environmental Impact Statements: The City adopts the following sections of the Washington Administrative Code by reference:

197-11-400 Purpose of EIS.

197-11-402 General requirements.

197-11-405 EIS types.

197-11-406 EIS timing.

197-11-408 Scoping.

197-11.410 Expanded Scoping.

197-11-420 EIS preparation.

197-11-425 Style and size.

197-11-430 Format.

197-11-435 Cover letter or memo.

197-11-440 EIS contents.

197-11-442 Contents of EIS on non-project proposals.

197-11-443 EIS contents when prior non-project EIS.

197-11-444 Elements of the environment.

197-11-448 Relationship of EIS to other considerations.

197-11-450 Cost-benefit analysis.

197-11-455 Issuance of DEIS.
197-11-460 Issuance of FEIS.

(Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.210: Preparation of EIS:

(1) The preparation of draft and final EIS's and SEIS's is the responsibility of the Department of Planning under the direction of the Responsible Official.

(2) The draft and final EIS or SEIS will be prepared by the City, the applicant, or by a consultant selected by the City or the applicant. If the Responsible Official requires an EIS and someone other than the City will prepare the EIS, he will notify the applicant immediately after making the threshold determination.

(3) The City may require an applicant to provide information it does not possess and make specific investigations, but the applicant need not supply information that is not required by this chapter or that is being requested from another agency. This does not apply to information the City may request under another ordinance or statute.

(4) Unless extraordinary circumstances dictate a longer time, and the applicant is in agreement, a DEIS shall be prepared within 120 days of a DS. If the DEIS is found to be inadequate after the comment period and any review, the Responsible Official may add additional time for correcting or supplementing the FEIS.

(5) Any public hearing required under WAC 197-11-535 shall be to the Responsible Official. Appeals of his decision shall be by closed record appeal to the Zoning Board of Adjustment or as otherwise provided by underlying permit application procedures in accord with Chapter 4.12. (Ord. 3644 Sec. 4, 1996: Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.220: Additional Elements to be Covered in an EIS: The City may require consideration of any or all of the following additional elements as part of an EIS. These elements do not effect threshold determinations.

- (1) Economy.
- (2) Social policy analysis.
- (3) Cost-benefit analysis. (Ord. 2873 Sec. 1 (part), 1984)

4.08.300: Commenting: The City adopts the following sections of the Washington Administrative Code by reference:

- 197-11-500 Purpose of this part.
- 197-11-502 Inviting comment.
- 197-11-504 Availability and cost of environmental documents.
- 197-11-508 SEPA register.
- 197-11-535 Public hearings and meetings.
- 197-11-545 Effect of no comment.
- 197-11-550 Specificity of comments.
- 197-11-560 FEIS response to comments.
- 197-11-570 Consulted agency costs to assist lead agency.

(Ord. 2873 Sec. 1 (part), 1984: Ord. 2486 Sec. 1, 1980)

4.08.310: Public Notice:

(1) When the City issues a DNS or a DS, and no public notice is required for the license or action (4.12.090(11)) it will publish notice in a newspaper of general circulation in the general area where the proposal is located; or notify groups which have expressed interest in a certain proposal or in the type of proposal being considered.

(a) Notice of a DS will indicate the scope of the EIS.

(2) Whenever the City issues a DEIS or SEIS, notice of the availability of those documents will be given in at least one of the following ways:

(a) Posting the property for site-specific proposals;

(b) Publishing notice in a newspaper of general circulation;

(c) Notifying public or private groups which have expressed interest in a certain proposal or in the type of proposal being considered;

(d) Notifying the news media;

(e) Placing notices in appropriate regional, neighborhood, ethnic, or trade journals;
or

(f) Publishing notice in agency newsletters or sending notice from agency mailing lists.

(3) Whenever possible, the City will integrate this notice with other public notices.

(4) The City may require an applicant to give notice at his expense. (Ord. 5014 Sec. 2, 2003; Ord. 2873 Sec. 1 (part), 1984)

4.08.320: Consulted Agency Responsibilities for the City: The Responsible Official will prepare written comments for the City as a consulted agency. He will ensure that responses to consultation requests are specific, prepared timely, and include information from all appropriate departments. (Ord. 2873 Sec. 1 (part), 1984)

4.08.400: Existing Environmental Documents: The City adopts the following sections of the Washington Administrative Code by reference:

197-11-600 When to use existing environmental documents.

197-11-610 Use of NEPA documents.

197-11-620 Supplemental environmental impact statement - Procedures.

197-11-625 Addenda - Procedures.

197-11-630 Adoption - Procedures.

197-11-635 Incorporation by reference - Procedures.

197-11-640 Combining documents.

(Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.410: SEPA and Agency Decisions: The City adopts the following sections of the Washington Administrative Code by reference:

197-11-650 Purpose of this part.

197-11-655 Implementation.

197-11-660 Substantive authority and mitigation.

197-11-680 Appeals.

(Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.420: Substantive Authority:

(1) This Chapter supplements all existing regulations, powers and duties.

(2) The City may attach reasonable, written conditions to any license if the conditions are necessary to mitigate specific, probable, significant, adverse environmental impacts and based on one or more policies in subsection (4) below.

(3) The City may deny a license if it finds that the proposal would result in a probable, significant, adverse environmental impact for which there are no reasonable, mitigating measures and if the denial is based on one or more policies identified in subsection (4) below.

(4) The following policies are the basis for exercising authority under this section:

- (a) The City will use all practicable means to ensure that the State and its citizens:
 - (i) Fulfill their responsibilities to future generations as trustees of the environment;
 - (ii) Provide a safe, healthful, productive, and aesthetically and culturally pleasing environment;
 - (iii) Make the most beneficial use of the environment without degrading it, risking their health or safety, or causing other undesirable or unintended consequences by their actions;
 - (iv) Preserve important historic, cultural, and natural places and things;
 - (v) Maintain a diverse environment; and
 - (vi) Achieve a balance between population and resources permitting high standards of living and a sharing of life's amenities; and
 - (vii) Conserve natural resources.
- (b) Everyone has a fundamental and inalienable right to a healthful environment and a concomitant responsibility to preserve and improve it.
- (c) All City ordinances, rules, policies and actions shall be construed consistently with these policies. (Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.430: Appeals:

(1) Relief from a decision of the Responsible Official is to the Zoning Board of Adjustment if no other review is provided or to review a determination of significance. All other appeals shall be in accord with the proceedings reviewing the underlying permit.

(2) An application for review from a decision of the Zoning Board of Adjustment must be made to the Benton County Superior Court within twenty-one (21) days of issuance unless a different time period applies to the underlying governmental action. Review of procedural decisions must be initiated within ten days. (Ord. 3644 Sec. 5, 1996; Ord. 2873 Sec. 1 (part), 1984; Ord. 2814 Sec. 3, 1984; Ord. 2486 Sec. 1, 1980)

4.08.440: Notice: The City will give public notice whenever it issues a license for which a statute or ordinance establishes a time limit for seeking judicial review. The City or applicant may publish a notice of action pursuant to RCW 43.21C.080. The form of the notice shall be substantially in the form provided in WAC 197-11-990 and published by the City Clerk or applicant pursuant to RCW 43.21C.080. (Ord. 2873 Sec. 1 (part), 1984)

4.08.500: Definitions: The City adopts the following sections of the Washington Administrative Code by reference:

- 197-11-700 Definitions.
- 197-11-702 Act.
- 197-11-704 Action.
- 197-11-706 Addendum.
- 197-11-708 Adoption.

197-11-710 Affected tribe.
197-11-712 Affecting.
197-11-714 Agency.
197-11-716 Applicant.
197-11-718 Built environment.
197-11-720 Categorical exemption.
197-11-722 Consolidated appeal.
197-11-724 Consulted agency.
197-11-726 Cost-benefit analysis.
197-11-728 City.
197-11-730 Decision maker.
197-11-732 Department.
197-11-734 Determination of non-significance (DNS).
197-11-736 Determination of significance (DS).
197-11-738 EIS.
197-11-740 Environment.
197-11-742 Environmental checklist.
197-11-744 Environmental document.
197-11-746 Environmental review.
197-11-748 Environmentally sensitive area.
197-11-750 Expanded scoping.
197-11-752 Impacts.
197-11-754 Incorporation by reference.
197-11-756 Lands covered by water.
197-11-758 Lead agency.
197-11-760 License.
197-11-762 Local agency.
197-11-764 Major action.
197-11-766 Mitigated DNS.
197-11-768 Mitigation.
197-11-770 Natural environment.
197-11-772 NEPA.
197-11-774 Non-project.
197-11-776 Phased review.
197-11-778 Preparation.
197-11-780 Private project.
197-11-782 Probable.
197-11-784 Proposal.
197-11-786 Reasonable alternative.
197-11-788 Responsible official.
197-11-790 SEPA.
197-11-792 Scope.
197-11-793 Scoping.
197-11-794 Significant.
197-11-796 State agency.
197-11-797 Threshold determination.
197-11-799 Underlying governmental action.

(Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.510: Categorical Exemptions:

(1) The City adopts by reference the following sections of the Washington Administrative Code for categorical exemptions, as supplemented in this chapter including KMC 4.08.110 (Flexible thresholds), KMC 4.08.120 (Use of exemptions), and KMC 4.08.530 (Environmentally sensitive areas):

- 197-11-800 Categorical exemptions.
- 197-11-880 Emergencies.
- 197-11-890 Petitioning DOE to change exemptions.

(2) So much of the Washington Administrative Code, Section 197-11-800 as categorically exempts short plats or short subdivisions, in accord with RCW 58.17.060 (see KMC 17.13) is not adopted. (Ord. 3387 Sec. 1, 1992; Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.520: Agency Compliance: The City adopts the following sections of the Washington Administrative Code by reference, as supplemented by KMC 4.08.040 through KMC 4.08.050:

- 197-11-900 Purpose of this part.
- 197-11-902 Agency SEPA policies.
- 197-11-916 Application to ongoing actions.
- 197-11-920 Agencies with environmental expertise.
- 197-11-922 Lead agency rules.
- 197-11-924 Determining the lead agency.
- 197-11-926 Lead agency for governmental proposals.
- 197-11-928 Lead agency for public and private proposals.
- 197-11-930 Lead agency for private projects with one agency with jurisdiction.
- 197-11-932 Lead agency for private projects requiring licenses from more than one agency, when one of the agencies is a city/county.
- 197-11-934 Lead agency for private projects requiring licenses from a local agency, not a city/county, and one or more state agencies.
- 197-11-936 Lead agency for private projects requiring licenses from more than one state agency.
- 197-11-938 Lead agencies for specific proposals.
- 197-11-940 Transfer of lead agency status to a state agency.
- 197-11-942 Agreements on lead agency status.
- 197-11-944 Agreements on division of lead agency duties.
- 197-11-946 DOE resolution of lead agency disputes.
- 197-11-948 Assumption of lead agency status.

(Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.530: Environmentally Sensitive Areas:

(1) The City will designate environmentally sensitive areas under the standards of WAC 197-11-908 and file maps of such areas, together with the exemptions from the list in WAC 197-11-908 that are inapplicable in such areas, with the Department of Planning and the Department of Ecology.

(2) The City will treat proposals located wholly or partially within an environmentally sensitive area no differently than other proposals, in making threshold

determinations. The City will not automatically require an EIS for a proposal merely because it is located in an environmentally sensitive area.

(3) Certain exemptions do not apply on lands covered by water, and this remains true regardless of whether or not the lands covered by water are mapped. (Ord. 3661 Sec. 2 (part), 1995; Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.540: Fees: The following fees will be charged:

(1) Threshold Determination. The City will collect \$25.00 from the proponent before undertaking a threshold determination. The time for making a threshold determination does not begin to run until payment of the fee.

(2) Environmental Impact Statement.

(a) When the City is the lead agency for a proposal requiring an EIS and the Responsible Official determines that the EIS will be prepared by employees of the City, the City will charge and collect a reasonable fee from the applicant to cover its costs. The Responsible Official will advise the applicant of the projected costs and obtain security for them.

(b) When the Responsible Official determines that the City will contract for the preparation of an EIS, he will charge costs directly to the applicant. Consultants will be selected by mutual agreement of the City and applicant after a call for proposals. The Responsible Official will obtain security for the costs.

(c) If a proposal is modified so that an EIS is no longer required, the Responsible Official will refund any fees collected under (a) or (b) of this subsection which remain after incurred costs are paid.

(3) The City will collect a reasonable fee from an applicant to cover the cost of meeting the public notice requirements of this chapter.

(4) The City will not collect a fee for performing its duties as a consulted agency.

(5) The City will charge for copies and for mailing. (Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

4.08.550: Forms: The City adopts the following forms and sections of the Washington Administrative Code by reference:

197-11-960 Environmental checklist.

197-11-965 Adoption notice.

197-11-970 Determination of non-significance (DNS).

197-11-980 Determination of significance and scoping notice (DS).

197-11-985 Notice of assumption of lead agency status.

197-11-990 Notice of action.

(Ord. 2873 Sec. 1 (part), 1984; Ord. 2486 Sec. 1, 1980)

CHAPTER 4.12

PERMIT PROCESS

SECTION:

- 4.12.010: Findings
- 4.12.015: Applicability
- 4.12.020: Definitions
- 4.12.030: Purpose
- 4.12.040: Scope of Review
- 4.12.050: Project Consistency
- 4.12.055: Project Concurrency
- 4.12.060: Note of Complete Application
- 4.12.070: Determining Time Limits
- 4.12.080: Agent
- 4.12.090: Public Notice
- 4.12.100: Permit Procedures

4.12.010: Findings: The City Council finds and declares the following:

(1) As the number of environmental laws and development regulations has increased for land uses and development, so has the number of required land use permits, each with its own separate approval process.

(2) The increasing number of local and state land use permits and separate environmental review processes required by agencies has generated continuing potential for conflict, overlap, and duplication between the various permit and review processes.

(3) This regulatory burden has significantly added to the cost and time needed to obtain local and state land use permits and has made it difficult for the public to know how and when to provide timely comments on land use proposals that require multiple permits and have separate environmental review processes. (Ord. 3642 Sec. 1, 1996)

4.12.015: Applicability: These rules apply to all land use permits under Titles 5, 15, 17, and 18, and to any related regulation implementing these provisions or any other ordinance or law. Unless another department is the primary agency in a permit process, the Director of Planning administers those chapters and may adopt such rules as will assist in administering these provisions. (Ord. 3642 Sec. 1, 1996)

4.12.020: Definitions: Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter.

(1) “Closed record appeal” means an administrative appeal on the record following an open record hearing on a project permit application when the appeal is on the record with no or limited new evidence or information allowed to be submitted and only appeal argument allowed.

(2) “Director” means the Director of Planning unless another department or agency is in charge of the project permit in which case it refers to the chief administrative officer of that department or agency.

(3) “Open record hearing” means a hearing, conducted by a single hearing body or officer that creates the record through testimony and submission of evidence and information.

An open record hearing may be held prior to a decision on a project permit to be known as an “open record predecision hearing.” An open record hearing may be held on an appeal, to be known as an “open record appeal hearing,” if no open record predecision hearing has been held on the project permit.

(4) “Project permit” or “project permit application” means any land use or environmental permit or license required from the City for a project action, including but not limited to building permits, subdivisions, binding site plans, planned unit developments, conditional uses, shoreline substantial development permits, site plan review, permits or approvals required by critical area ordinances, site-specific rezones authorized by a comprehensive plan or subarea plan, but excluding the adoption or amendment of a comprehensive plan, subarea plan, or development regulations except as otherwise specifically included in this subsection.

(5) “Public meeting” means an informal meeting, hearing, workshop, or other public gathering of people to obtain comments from the public or other agencies on a proposed project permit prior to a decision. A public meeting may include, but is not limited to, a design review or architectural control board meeting, a special review district or community council meeting, or a scoping meeting on a draft environmental impact statement. A public meeting does not include an open record hearing. The proceedings at a public meeting may be recorded and a report or recommendation may be included in the local government's project permit application file. (Ord. 3642 Sec. 1, 1996)

4.12.030: Purpose: In enacting sections 4.12.040 and 4.12.050 the City Council intends to establish a mechanism for implementing the provisions of chapter 36.70A RCW regarding compliance, conformity, and consistency of proposed projects with adopted comprehensive plans and development regulations. In order to achieve this purpose the City Council finds that:

(1) Given the extensive investment that public agencies and a broad spectrum of the public are making and will continue to make in comprehensive plans and development regulations for their communities, it is essential that project review start from the fundamental land use planning choices made in these plans and regulations. If the applicable regulations or plans identify the type of land use, specify residential density in urban growth areas, and identify and provide for funding of public facilities needed to serve the proposed development and site, these decisions at a minimum provide the foundation for further project review unless there is a question of code interpretation. The project review process, including the environmental review process under chapter 43.21C RCW and the consideration of consistency, should start from this point and should not reanalyze these land use planning decisions in making a permit decision.

(2) Comprehensive plans and development regulations adopted by the City under chapter 36.70A RCW and environmental laws and rules adopted by the state and federal government have addressed a wide range of environmental subjects and impacts. These provisions typically require environmental studies and contain specific standards to address various impacts associated with a proposed development, such as building size and location, drainage, transportation requirements, and protection of critical areas. When a permitting agency applies these existing requirements to a proposed project, some or all of a project's potential environmental impacts will be avoided or otherwise mitigated. Through the integrated project review process described in subsection (1) of this section, the Director will determine whether existing requirements, including the applicable regulations or plans, adequately analyze and address a project's environmental impacts. Project review should not require additional studies or mitigation under chapter 43.21C RCW where existing regulations

have adequately addressed a proposed project's probable specific adverse environmental impacts.

(3) Consistency should be determined in the project review process by considering four factors found in applicable regulations or plans: The type of land use allowed; the level of development allowed, such as units per acre or other measures of density; infrastructure, such as the adequacy of public facilities and services to serve the proposed project; and the character of the proposed development, such as compliance with specific development standards. This uniform approach corresponds to existing project review practices and will not place a burden on applicants or local government. The City intends that this approach should be largely a matter of checking compliance with existing requirements for most projects, which are simple or routine, while more complex projects may require more analysis.

(4) When an applicant applies for a project permit, consistency between the proposed project and applicable regulations or plan should be determined through a project review process that integrates land use and environmental impact analysis, so that governmental and public review of the proposed project, by development regulations under chapter 36.70A RCW, and by the environmental process under chapter 43.21C RCW run concurrently and not separately.

(5) The project review process should address consistency between a proposed project and the applicable regulations or plan:

- (a) A uniform framework for the meaning of consistency;
- (b) An emphasis on relying on existing requirements and adopted standards, with the use of supplemental authority as specified by chapter 43.21C RCW to the extent that existing requirements do not adequately address a project's specific probable adverse environmental impacts; and
- (c) The identification of three basic land use planning choices made in applicable regulations or plans that, at a minimum, serve as a foundation for project review and that should not be reanalyzed during project permitting. (Ord. 3642 Sec. 1, 1996)

4.12.040: Scope of Review:

(1) Fundamental land use planning choices made in adopted comprehensive plans and development regulations shall serve as the foundation for project review. The review of a proposed project's consistency with applicable development regulations, or in the absence of applicable regulations the adopted comprehensive plan, under section 4.12.050 shall incorporate the determinations under this section.

(2) During project review, the Director or any subsequent reviewing body shall determine whether the items listed in this subsection are defined in the development regulations applicable to the proposed project or, in the absence of applicable regulations the adopted comprehensive plan. At a minimum, such applicable regulations or plans shall be determinative of the:

- (a) Type of land use permitted at the site, including uses that may be allowed under certain circumstances, such as planned unit developments and conditional and special uses, if the criteria for their approval have been satisfied;
- (b) Density of residential development in urban growth areas; and
- (c) Availability and adequacy of public facilities identified in the comprehensive plan, if the plan or development regulations provide for funding of these facilities as required by chapter 36.70A RCW.

(3) During project review, the Director shall not reexamine alternatives to or hear appeals on the items identified in subsection (2) of this section including issues of code interpretation.

(4) The Director may determine that the requirements for environmental analysis and mitigation measures in development regulations and other applicable laws provide adequate mitigation for some or all of the project's specific adverse environmental impacts to which the requirements apply.

(5) Nothing in this section limits the authority of the City to approve, condition, or deny a project as provided in its development regulations adopted under chapter 36.70A RCW and in its policies adopted under RCW 43.21C.060. Project review shall be used to identify specific project design and conditions relating to the character of development, such as the details of site plans, curb cuts, drainage swales, transportation demand management, the payment of impact fees, or other measures to mitigate a proposal's probable adverse environmental impacts, if applicable. (Ord. 3642 Sec. 1, 1996).

4.12.050: Project Consistency:

(1) A proposed project's consistency with development regulations adopted under chapter 36.70A RCW, or, in the absence of applicable development regulations, the appropriate elements of the comprehensive plan or subarea plan adopted under chapter 36.70A RCW shall be determined by consideration of:

- (a) The type of land use;
- (b) The level of development, such as units per acre or other measures of density;
- (c) Infrastructure, including public facilities and services needed to serve the development; and
- (d) The character of the development, such as development standards.

(2) In determining consistency, the determinations made pursuant to section 4.12.040 of this chapter shall be controlling.

(3) For purposes of this section, the term "consistency" shall include all terms used in this chapter and chapter 36.70A RCW to refer to performance in accordance with this chapter and chapter 36.70A RCW, including but not limited to compliance, conformity, and consistency.

(4) Nothing in this section requires documentation, dictates procedures for considering consistency, or limits the Director from asking more specific or related questions with respect to any of the four main categories listed in subsection (1) (a) through (d) of this section. (Ord. 3642 Sec. 1, 1996)

4.12.055: Project Concurrency:

(1) Concurrency is defined by GMA to mean that needed improvements for water, sewer, and transportation for development proposals are in place at the time of development; or in the case of transportation, that a financial commitment exists to complete the improvements within six years.

(2) The concept of concurrency is based on maintenance of specified levels of service (LOS) for water, sewer, and transportation. Level of service standards represents the minimum performance level desired for transportation facilities and services, and the minimum availability of water and sewer.

(3) Development permit or project permit means any land use permit required from the City for a project action, including but not limited to subdivisions, site plans designated as Tier 2 or Tier 3, planned unit developments, conditional uses, shoreline substantial development permits, but excluding non-site specific development permits such as

the adoption or amendment of a comprehensive plan, subarea plan, or development regulations.

(4) The following development permit applications shall be subject to a finding of approval for concurrency conducted in the processing of the development permit application:

- (a) Preliminary plat (subdivision of ten or more residential lots);
- (b) Site plans designated as Tier 2 or Tier 3;
- (c) Any other land use plan or permit which would increase the demand for transportation facilities by 50 or more peak hour trips per day (based upon the latest ITE Trip Generation Manual or other data, including LOS, as approved by the City’s traffic engineer).

CITY OF KENNEWICK
LOS FOR TRANSPORTATION

	LOS
Signalized Intersections – Existing	Level of Service “D”
Unsignalized Intersections or Driveways – Minor Street Approach	Level of Service “E”
Signalized or Unsignalized Intersection with Second Site Access Point within ¼ mile having a LOS D or better	Level of Service “F”

- (d) Any land use plan or permit that would increase the demand for potable water and/or the demand for sewer requirements above the LOS indicated within the following table for domestic use, or the current water and sewer system plans for commercial or industrial use.

CITY OF KENNEWICK
LOS FOR WATER & SEWER

	LOS
Domestic Water	170 gallons per capita per day
Domestic Sewer	120 gallons per capita per day
Commercial or Industrial Water & Sewer	Per Water & Sewer System Plan

(5) If project concurrency for transportation, as defined in 4.12.055(1) cannot be met, WAC 365-195-510(1) requires that the project must be denied unless the applicant does one or both of the following to the satisfaction of the City Traffic Engineer or designee:

- (a) Amend the application to reduce the need for capacity improvements of transportation facilities in order to maintain the adopted level of service; or
- (b) Arrange to provide capacity for transportation facilities that is not otherwise available.

(6) The following development permits are exempt from this section and applicants may submit applications, obtain permits, and commence development without a finding of approval for concurrency, unless otherwise determined by the Director:

- (a) Uses that were disclosed in a completed application filed before the effective date of this section;

- (b) Any land use plan or permit that would not increase the demand for transportation facilities by more than 50 peak hour trips per day unless the affected transportation facilities are operating at, or lower than, the adopted level-of-service for the facility;
- (c) Any land use plan or permit that would increase the demand for potable water and/or the demand for sewer requirements by less than those provided within the current water and sewer system plans.
- (7) When required as per KMC 4.12.055(3), the City shall not issue a development permit until:
 - (a) A finding of approval for concurrency has been made in accordance with established transportation, water and sewer levels of service and a certificate of concurrency has been issued; or
 - (b) The application has been determined to be exempt from the concurrency requirement as provided in subsection (6) of this section.
- (8) A finding of approval for concurrency, to determine if adequate capacity exists, shall be provided by the City Traffic Engineer or designee for transportation; and for water and sewer by the Utilities Services Manager or designee, for developments not otherwise exempt from the requirements of this section.
- (9) The level of service standards for transportation facilities adopted in KAC 13.08.030(5) *Design Level-of-Service* and as amended, will be used in conducting the concurrency test.
- (10) The levels of service standards for water and sewer service, as adopted in the Water and Sewer Plan and as amended, will be used in conducting the concurrency test.
- (11) A finding of approval for concurrency:
 - (a) Is valid only for the development permit with which it was issued and for subsequent development permits for the same property as long as the applicant obtains the subsequent development permit and where the use or intensity has not changed and the previous development permit has not expired; and
 - (b) Will be valid for the same period of time as the development permit with which it was issued; and
 - (c) Can be extended for the same time as a development permit's extension; and
 - (d) Runs with the land and cannot be transferred to a different property but transfers automatically with ownership of the property; and
 - (e) Shall expire if the underlying development permit expires or is revoked or denied by the City and has not been extended to a subsequent development permit for the same property.
- (12) A finding of approval for concurrency shall be an administrative action of the City and is categorically exempt from the State Environmental Policy Act (SEPA).
- (13) Projects not meeting the minimum threshold for concurrency review for sewer, water, or transportation are not exempt from other mitigation measures that would be determined during the normal development approval process. (Ord. 5179 Sec. 1, 2007)

4.12.060: Note of Complete Application:

- (1) Within twenty-eight days after receiving a project permit application, the Director shall mail or provide in person a written determination to the applicant, stating either:
 - (a) That the application is complete; or
 - (b) That the application is incomplete and what is necessary to make the application complete.

To the extent known by the Director, he shall identify other agencies of local, state, or federal governments that may have jurisdiction over some aspect of the application.

(2) A project permit application is complete for purposes of this section when it meets the City's procedural submission requirements and is sufficient for continued processing even though additional information may be required or project modifications may be undertaken subsequently. The determination of completeness shall not preclude the Director from requesting additional information or studies either at the time of the notice of completeness or subsequently if new information is required or substantial changes in the proposed action occur.

(3) The determination of completeness may include the following as optional information:

- (a) A preliminary determination of those development regulations that will be used for project mitigation;
 - (b) A preliminary determination of consistency, as provided under section 4.12.050; or
 - (c) Other appropriate information.
- (4)
- (a) An application shall be deemed complete under this section if the Director does not provide a written determination to the applicant that the application is incomplete as provided in subsection (1)(b) of this section.
 - (b) Within fourteen days after an applicant has submitted additional information identified as being necessary for a complete application, the Director shall notify the applicant whether the application is complete or what additional information is necessary. (Ord. 3642 Sec. 1, 1996)

4.12.070: Determining Time Limits:

(1) Except as otherwise provided in subsection (2) of this section, the Director shall issue its notice of final decision on a project permit application within one hundred twenty days after it notifies the applicant that the application is complete, as provided in Section 4.12.060. In determining the number of days that have elapsed after the Director has notified the applicant that the application is complete, the following periods shall be excluded:

- (a)
 - (i) Any period during which the applicant has been requested to correct plans, perform required studies, or provide additional required information. The period shall be calculated from the date the Director notifies the applicant of the need for additional information until the earlier of the date the Director determines whether the additional information satisfies the request for information or fourteen days after the date the information has been provided;
 - (ii) If the Director determines that the information submitted by the applicant under (a)(i) of this subsection is insufficient, he shall notify the applicant of the deficiencies and the procedures under (a)(i) of this subsection shall apply as if a new request for studies had been made;
- (b) Any period during which an environmental impact statement is being prepared following a determination of significance pursuant to chapter 43.21C RCW;
- (c) Any period for administrative appeals of project permits, if an open record appeal hearing or a closed record appeal, or both, are allowed. The time period for considering and deciding shall not exceed: (i) Ninety days for an open record appeal hearing; and (ii) sixty days for a closed record appeal. The parties to an appeal may agree to extend these time periods; and

- (d) Any extension of time mutually agreed upon by the applicant and the Director.
- (2) The time limits established by subsection (1) of this section do not apply if a project permit application:
 - (a) Requires an amendment to the comprehensive plan or a development regulation;
 - (b) Requires approval of a new fully contained community as provided in RCW 36.70A.350, a master planned resort as provided in RCW 36.70A.360, or the siting of an essential public facility as provided in RCW 36.70A.200; or
 - (c) Is substantially revised by the applicant, in which case the time period shall start from the date at which the revised project application is determined to be complete under Section 4.12.060.
- (3) If the Director is unable to issue its final decision within the time limits provided for in this section, it shall provide written notice of this fact to the project applicant. The notice shall include a statement of reasons why the time limits have not been met and an estimated date for issuance of the notice of final decision. (Ord. 3642 Sec. 1, 1996)

4.12.080: Agent: The Director may require the applicant for a project permit to designate a single person or entity to receive determinations and notices required by this chapter. (Ord. 3642 Sec. 1, 1996)

4.12.090: Public Notice:

- (1) The Director shall provide a notice of application to the public and the departments and agencies with jurisdiction as provided in this section. If the Responsible Official has made a determination of significance under chapter 43.21C RCW concurrently with the notice of application, the notice of application shall be combined with the determination of significance and scoping notice. Nothing in this section prevents a determination of significance and scoping notice from being issued prior to the notice of application.
- (2) The notice of application shall be provided within fourteen days after the determination of completeness as provided in Section 4.12.060 and include the following in whatever sequence or format the local government deems appropriate:
 - (a) The date of application, the date of the notice of completion for the application, and the date of the notice of application;
 - (b) A description of the proposed project action and a list of the project permits included in the application and, if applicable, a list of any studies requested under Section 4.12.060 or Section 4.12.070;
 - (c) The identification of other permits not included in the application to the extent known;
 - (d) The identification of existing environmental documents that evaluate the proposed project, and the location where the application and any studies can be reviewed, and any information applicable to the optional DNS process (WAC 197-11-355);
 - (e) A statement of the public comment period, which shall be not less than fifteen nor more than thirty days following the date of notice of application, and statements of the right of any person to comment on the application, receive notice of and participate in any hearings, request a copy of the decision once made, and any appeal rights. The Director may accept comments at any time prior to the closing of the record of an open record predecision hearing, if any,

or, if no open record pre-decision hearing is provided, prior to the decision on the project permit;

- (f) The date, time, place, and type of hearing, if applicable and scheduled at the date of notice of the application;
- (g) A statement of the preliminary determination, if one has been made at the time of notice, of those development regulations that will be used for project mitigation and of consistency as provided in section 4.12.050; and
- (h) Any other appropriate information.

(3) If an open record predecision hearing is required for the requested project permits, the notice of application shall be provided at least fifteen days prior to the open record hearing.

(4) The Director shall use reasonable methods to give the notice of application to the public and agencies with jurisdiction and may use its existing notice procedures. The Director may use different types of notice for different categories of project permits or types of project actions. If not otherwise specified, the Director shall use the methods provided for in (a) and (b) of this subsection. Examples of reasonable methods to inform the public are:

- (a) Posting the property for site-specific proposals;
- (b) Publishing notice, including at least the project location, description, type of permit(s) required, comment period dates, and location where the complete application may be reviewed, in the newspaper of general circulation in the general area where the proposal is located or in a local land use newsletter published by the local government;
- (c) Notifying public or private groups with known interest in a certain proposal or in the type of proposal being considered;
- (d) Notifying the news media;
- (e) Placing notices in appropriate regional or neighborhood newspapers or trade journals;
- (f) Publishing notice in agency newsletters or sending notice to agency mailing lists, either general lists or lists for specific proposals or subject areas; and
- (g) Mailing to neighboring property owners.

(5) A notice of application shall not be required for project permits that are categorically exempt under chapter 43.21C RCW, unless a public comment period or an open record predecision hearing is required.

(6) The Director shall integrate the permit procedures in this section with environmental review under chapter 43.21C RCW as follows:

- (a) Except for a determination of significance, the Director may not issue its threshold determination, or issue a decision or a recommendation on a project permit until the expiration of the public comment period on the notice of application.
- (b) If an open record predecision hearing is required and the threshold determination requires public notice under chapter 43.21C RCW, the Director shall issue its threshold determination at least fifteen days prior to the open record predecision hearing.
- (c) Comments shall be as specific as possible.

(7) The Director may combine any hearing on a project permit with any hearing that may be held by another local, state, regional, federal, or other agency provided that the hearing is held within the geographic boundary of the City. Hearings shall be combined if requested by an applicant, as long as the joint hearing can be held within the time periods

specified in 4.12.070 or the applicant agrees to the schedule in the event that additional time is needed in order to combine the hearings.

(8) The Director shall cooperate to the fullest extent possible with other agencies in holding a joint hearing if requested to do so, as long as:

- (a) The agency is not expressly prohibited by statute from doing so;
- (b) Sufficient notice of the hearing is given to meet each of the agencies' adopted notice requirements as set forth in statute, ordinance, or rule; and
- (c) The agency has received the necessary information about the proposed project from the applicant to hold its hearing at the same time as the City's hearing.

(9) An administrative appeal of the project decision, combined with any environmental determinations, shall be filed within fourteen days after the notice of the decision or after other notice that the decision has been made and is appealable. The appeal period shall be extended for an additional seven days, if state or local rules adopted pursuant to chapter 43.21C RCW allow public comment on a determination of nonsignificance issued as part of the appealable project permit decision.

(10) The applicant for a project permit is deemed to be a participant in any comment period, open record hearing, or closed record appeal.

(11) Required public notification methods (see chart below).

PUBLIC NOTICES AND LAND USE PROCEDURES

ACTION	NOTIFICATION BY DIRECT MAILING	SIGN-AGE OR POST-ING	LEGAL NOTICE IN CLASSIFIEDS	NOTIFY GROUPS WITH KNOWN INTERESTS	NO PUBLIC NOTIFICATION REQUIREMENTS	PUBLIC COMMENT PERIOD	PRE-DECISION MEETING	OPEN RECORD HEARING	DECISION	OPEN RECORD APPEAL	CLOSED RECORD APPEAL
Building Permit					*				Staff	BOAB	
FAA Form 7660					*				Staff	BOA	
Lot Line Adjustment					*				Staff	BOA	
Accessory Apartment					*				Staff	BOA	
Comparable Use				*					Staff	BOA	
Manufactured Housing In-fill					*				Staff	BOA	
Parcel Combination					*				Staff	BOA	
Home Occupation					*				Staff	BOA	
Additional/Dangerous Animals	*					15 days			Staff	BOA	
Conditional Use Permit	*	*				15 days			Staff	BOA	
Site Plan Approval Permit		* ¹			* ²	15 days ¹			Staff	BOA	
Short Plat		*				15 days			Staff	BOA	
Minor Variance					*				Staff	BOA	
Alternative Residential Development	*	*				15 days			Staff	BOA	
Pre-Plat	*	*	*	*		15 days	Staff	CC	CC		SC
Final Plat					*				CC		SC
Variance	*	*	*			15 days		BOA	BOA		SC

Historical District Permit					*			HPC	HPC		SC
Shoreline Permits	*	*	*	*		15 days	PC	CC	CC		SC
Comprehensive Plan Amendment	*	*	*	*		15 days	PC	CC	CC		SC
Title 17/18 Amendment			*	*		15 days	PC	CC	CC		SC
Change of Pre-Zone	*	*	*	*		15 days	PC	CC	CC		SC
Change of Zone	*	*	*	*		15 days	PC	CC	CC		SC
Planned Development	*	*	*	*		15 days	PC	CC	CC		SC
Development Agreement	*	*	*	*		15 days	PC	CC	CC		SC

¹ If a threshold determination is required

² If categorically exempt

(Ord. 5014 Sec. 3, 2003: Ord. 3642 Sec. 1, 1996)

4.12.100: Permit Procedures:

(1) All project permits and project permit applications, except zone changes, plats, street vacations, and other legislative decisions, shall be processed and reviewed in the following manner, upon receipt of a completed application:

- (a) For an application requiring legislative action or which is illegal, the application shall be denied or processed in accord with subsection (2).
- (b) For applications which involve more than one permit, the City will prepare a temporary schedule for review by all interested agencies, departments, and the applicant. The schedule will be prepared during the application completion determination in accord with Section 4.12.060.
- (c) Depending upon the scope of the project, the City will schedule necessary public meetings to coordinate the permit process and gather information following appropriate notification as provided in 4.12.090.
- (d) Unless otherwise required, no open record hearing will be held unless there is a bona fide objection to some portion of the permit or from some determination made during the course of the permit processing. When required, only one open record hearing will be held. The open record hearing will be before the officer or body having jurisdiction over the matter in dispute or over the matter requiring the open record hearing. If the matter disputed or for which an open record hearing is required falls within the jurisdiction of more than one department or agency, a joint hearing will be held if practical.
- (e) A decision or joint decision if possible, shall be issued and notice given thereof, including the time for appeal and the person or body to whom the appeal must be made. Unless another time is provided, an appeal must be filed within ten days of the decision. The longest appeal period following a joint hearing controls if there are multiple appeal periods.
- (f) The body or bodies with appellate jurisdiction shall hold a joint closed record appeal. An open record appeal may be held for matters for which no open record hearing has previously been held. The decision of the person or bodies hearing the appeal may be joint or separate. Every effort shall be made in the event of separate decisions to ensure that they are issued simultaneously. Any review of the decision or decisions must be made to the superior court within 21 days.

(g) In the event that no appellate body is designated for a matter, the matter shall be heard by the zoning board of adjustment.

(2) If the decision on an application must be made by the Kennewick City Council, the application will normally be denied until legislative approval has been obtained. Except for comprehensive plan amendments which may never be processed other than as part of the annual review, an applicant may request combined processing in accord with subsection (1) of this section. Normally any hearing or appeal by the Council will be conducted by a committee rather than a whole.

(3) The actual costs of any hearing or appeal not otherwise required will be borne by the person requesting the review or objecting to a decision. Security for the costs must be posted prior to the setting or notice of hearing or appeal. The failure to post security is a waiver of any objection. (Ord. 3642 Sec. 1, 1996)