

KPB 21.18 Items for Review

21.18.030 Periodic Review
21.18.035 Watershed District
21.18.040 60 Degree Cut-bank Requirement
21.18.050 Floodplain Requirements

KPB 21.18.030 Periodic Review

■ **Current Ordinance Language:**

As part of its role in comprehensive planning the planning department shall prepare an assessment of the benefits and effectiveness of this chapter after one year, with a review every two years thereafter. In preparing this evaluation the planning commission shall hold at least one public hearing.

Purpose of Proposed Code Change:

- To further define and describe the review that is required.
- To ensure that a comprehensive review is undertaken in a reasonable period of time.

21.18.030
Recommended Language

To assist in the assessment of the effectiveness of 21.18, the River Center shall provide an annual permit and activity report to the Planning Commission. This report shall include a statistical analysis of permit activity and trends, commentary on river and land use issues and trends, and any other information that may assist in furthering the management of Borough water resources and riparian habitat. (Cont.)

21.18.030
Recommended Language

A staff review of the effectiveness of 21.18 shall be presented to the Planning Commission on every fifth year, beginning in 2015. The review shall analyze the effectiveness of the individual sections of 21.18 and related borough code pursuant to the purpose and findings of this chapter.

For each annual report and 5-year review, the planning commission shall hold at least one public hearing.

KPB 21.18.035
Kenai River
Watershed District

KPB 21.18.035 Kenai River Watershed District

■ **Current Ordinance Language:**

There is established a Kenai River watershed district comprised of all lands lying within or contiguous to the Kenai River drainage system as bounded and defined on the official map, a copy of which is attached as Exhibit A, which shall be kept on file in the planning department. The Kenai River drainage system shall include all sections of the Kenai River to its outlet into Cook Inlet, all tributaries and small lake systems including Kenai and Skilak Lakes and their headwaters. The purpose of establishing this watershed district is for watershed boundaries only. Inclusion indicates that the area is important to the Kenai River watershed.

Purpose of Proposed Code Change:

- In view of the fact that the habitat protection area only extends 50-feet from regulated streams, this section serves no purpose.
- In addition, the stated purpose in the code is “for watershed boundaries only.” Current technologies allow staff to accurately identify watershed boundaries without the inclusion of exhibits or maps into the code.
- Only the Kenai River watershed is mentioned in code, yet 14 other rivers are affected by 21.18.

21.18.035 Recommendation

- Remove this section from the code.

**KPB 21.18.040
Habitat Protection Area
Established**

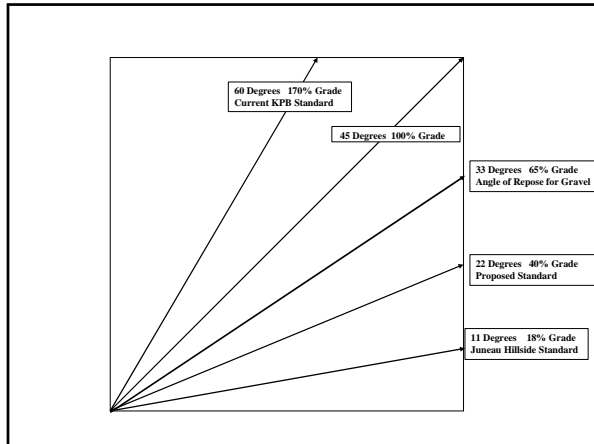
**KPB 21.18.040 Habitat Protection
Area Established**

■ Current Ordinance Language:

"....Where the banks within this fifty-foot area consist of a 60 degree or more cut bank the habitat protection area shall consist of the greater of 50 feet from the river or to a point 25 feet back from the top of the cut bank."

Purpose of Proposed Code Change:

- Protect anadromous stream water quality through reduced erosion & runoff
- Keep riverbanks & bluffs stable by protecting soil and vegetation
- Protect private property & property values
- Maintain aesthetics









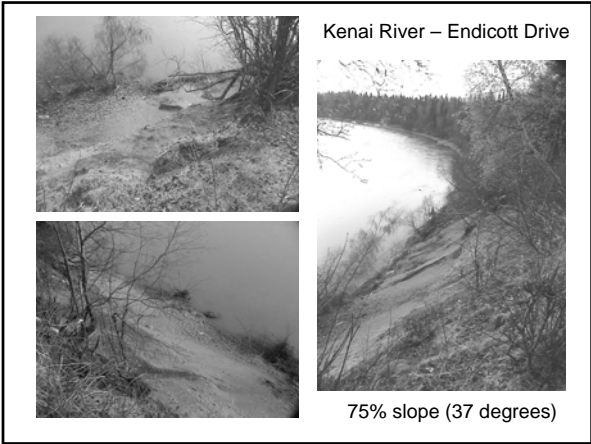
Kenai River off of Cheechako News Drive. 75% slope (37 degrees)

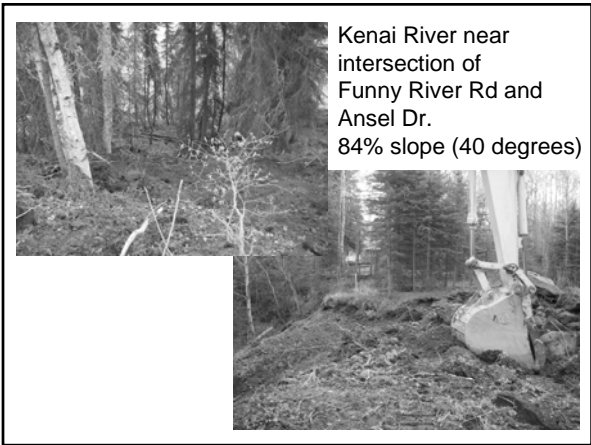


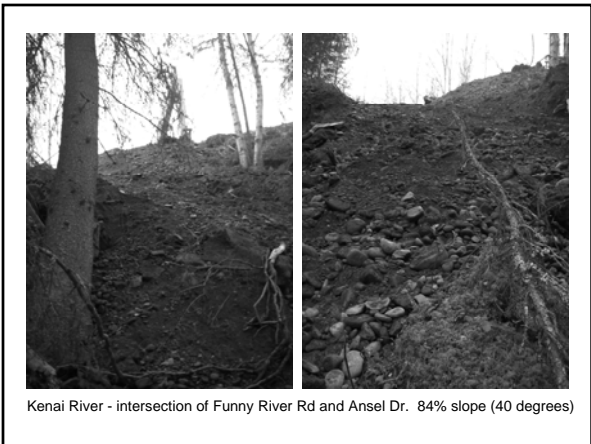
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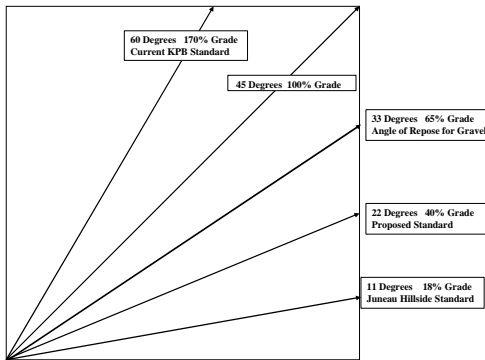








Kenai River –
Big Eddy across
from RW's.
90% (42 degrees)



Municipal Code Standards

- Kenai Peninsula Borough: 60 degrees (170%) for HPA
- City of Soldotna: 45 degrees (100%) for KROD
- City of Juneau: 18% for Hillside Development
- Girdwood: 15% (residential); 35% designated as a hazard area
- Lake Forest Park, WA: 40% and 50' + 15'
- Issaquah, WA: 40% and 50'
- King County, WA: 40% and 50' + 15'
- Prince George, BC: 20%
- Redmond, WA: 40%
- Morristown, NJ: Over 25%

21.18.040
Agency Guidance

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey the following slope classes are recognized:

- Nearly level 0 to 2 percent
- Gently sloping 2 to 4 percent
- Moderately sloping 4 to 8 percent
- Strongly sloping 8 to 15 percent
- Moderately steep 15 to 25 percent
- Steep 25 to 45 percent
- Very steep More than 45 percent

Soil Survey of Lower Kenai Peninsula Area, Alaska. Natural Resources Conservation Service, USDA, 2000.

21.18.040
Agency Guidance

AK Dept. of Environmental Conservation Regulations:

- 18 AAC 72.035. Conventional onsite systems
 - (8) the ground surface slope is less than 25 percent for trenches, and less than five percent for beds;
 - (9) as shown in Figure 1 of this subsection, at least 50 feet separates any part of the soil absorption system from any slope greater than 25 percent, whether man-made or natural, with a drop in the surface height greater than 10 feet.

21.18.040
Agency Guidance

■ **2009 International Building Code**

- The placement of buildings and structures on or adjacent to slopes steeper than 33% shall comply with Sections 1808.7.1 through 1808.7.5.
- 1808.7.2. Footings next to slopes must be placed where they'll provide good vertical and lateral support to protect against settlement.
- Where the slope is greater than 100%, the required setback shall be measured from an imaginary plane 45 degrees to the horizontal, projected upward from the toe of the slope.

21.18.040

Alternative Methods in Setting Buffer Distances to Account for Slopes

Alternative Methods

■ **Slope adjustment for vegetated water quality buffers:**

- 5 to 14% slopes. Multiply setback by 1.3
- 15 to 40% slopes. Multiply setback by 1.4
- > 40% slopes. Multiply setback by 1.5

Example: 17% slope & 50' setback. $50' \times 1.4 = 70'$

Source: Matt LaCrosse, US EPA

Alternative Methods

■ **Add 4 feet to the setback width for each 1% of slope.**

Example: 17% slope & 50' setback.

$$50' + 4 (17) = 118'$$

Source: Matt LaCrosse, US EPA

Alternative Methods

- Add 10 feet for a 15-17% slope
- Add 30 feet for a 18-20% slope
- Add 50 feet for a 21-23% slope
- Add 60 feet for a 24-25% slope

Source: Matt LaCruic, US EPA

Alternative Methods

	<u>Recreational Use</u>	<u>Sensitive Habitat</u>
0 to 14%	No change	+ 50'
15 to 25%	+25'	+ 75'
> 25%	+50'	+100'

Example: 17% slope within 50-foot setback area of sensitive riparian habitat = 50' + 75' = 125'

Source: Matt LaCruic, US EPA

21.18.040 Recommendations

- Measure slopes in percent rather than degrees
- Reduce the riverbank slope from which setbacks are measured from 60 degrees (170 percent) to 40 percent
- Increase the distance from which development can occur from the top of the bank or bluff

21.18.040

Recommended Language

“...Where the banks within this fifty-foot area consist of a 40 percent or more slope the habitat protection area shall consist of the greater of 50 feet from the river or to a point 50 feet back from the top of the slope.”

KPB 21.18.050
Floodplain

Purpose of Proposed Code Change:

- Proposal: remove floodplain regulations from the anadromous stream chapter and place them within chapter 21.06 – Floodplain Management.
- To provide organization, clarity and ease of administration.
- Pertinent portions of the floodplain regulations will be adopted into the anadromous streams chapter in the appropriate sections. For example, the prohibition of fuel storage tanks will be added into a new section in the anadromous streams chapter titled “prohibited structures, activities & uses.”

21.18.050 Recommendation

- Remove this section from the code
- Review Floodplain Code to determine if these elements are addressed
- Amend Floodplain Code as necessary
- Identify elements to be incorporated into 21.18
