

North Coast Stream Project
Guide to Instream and Riparian Restoration
Sites and Site Selection

Phase II

**Necanicum River, Nehalem River, Tillamook Bay,
Nestucca River, Neskowin Creek and Ocean
Tributary drainages**

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SUMMARY

- This guide outlines potential projects in Necanicum River, Nehalem River, Tillamook Bay, Nestucca River, Neskowin Creek and Ocean Tributary drainages.
- Instream enhancement sites have been selected based on stream width, gradient, and fish occurrence. Further prioritization of sites based on access, channel and valley morphology, habitat quality, and proximity to coho populations with high relative abundance has been conducted when possible.
- Hardwood conversion areas were selected based on the dominance of small or medium hardwoods along stream reaches.
- 761 miles of streams are of a potential size and gradient for instream enhancement out of the 2000 miles of streams analyzed
- Potential instream woody debris placement sites with a high priority are approximately 74 miles. This number could increase depending upon the outcome of further site verification.
- Over 500 miles of streams with hardwood dominated riparian zones were identified within, or downstream of, potential instream enhancement areas.

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INTRODUCTION

This Phase II guide seeks to outline potential stream habitat enhancement projects in drainages of the north coast of Oregon. This guide outlines potential projects in Necanicum River, Nehalem River, Tillamook Bay, Nestucca River, Neskowin Creek and Ocean Tributary drainages. In developing the guide we have hoped to create a useful tool for managers who are planning stream restoration work by providing a working database on potential instream and riparian enhancement sites.

Phase I of the North Coast Stream project outlined approximately 60 specific stream reaches for enhancement on the north coast and an additional 40 sites in the lower Columbia region. The phase II guide is a **supplement** to the initial phase of the project. It was developed because most of the previously selected sites on the north coast will have had work completed on them by the summer of 1997. The phase II guide differs in many ways from the first guide, with the final result being the same of selecting sites for stream habitat enhancement work.

While the first guide picked specific reaches based on habitat survey data, the phase II guide picks any reach suitable for enhancement, regardless of whether or not surveys exist in the area. The major advantage of the new guide is that it does not rely solely on stream habitat survey data to select sites. The guide predominantly outlines streams that are of a proper size and gradient for instream enhancement work. The stream size and gradient data is presented both as a database as well as graphically in Appendix I and II. A second benefit of this type of guide is that the stream size and gradient information is unchanging over longer time scales and will not have to be updated in the future. As more information is gathered on potential enhancement areas, the guide can be updated to narrow the list of high priority enhancement areas.

It must be stressed that the sites selected in this guide are potential restoration sites. Where survey information is available further refinement of site priority is possible, but this does not preclude field verification. All sites(reaches) must be field checked before planning a specific restoration project.

This guide is only one aspect that should be considered in a full watershed restoration scheme. It does not address potential upslope issues such as: land use, landslides, roads, or culverts; or instream restoration measures such as livestock management, construction of off channel ponds (alcoves), or enhancement of estuarine habitat. Upslope issues should be considered before proceeding with in channel work. The stream segments selected in this guide may be suitable for livestock management or off channel pond construction, but it must be recognized that there are many other areas in the lower reaches of these basins where this work could also be conducted.

Potential Uses Of The Guide

This guide can be used in three ways: The first is an aggressive approach, in that if moneys and resources are available for enhancement work high priority sites can be selected from the guide and site plans can be developed for these sites.

The second way the guide can be used is to incorporate it into management plans of the Oregon Department of Forestry as well as industrial forest land owners. Sites that are not necessarily high priority can be enhanced as part of other land management activities such as timber harvest, road work, etc.. This will allow better coordination between instream enhancement work and other activities in a basin.

This guide also serves as a guide for the prioritization of future ODFW habitat survey work. Those areas that have not been surveyed that are potential sites should be raised to a high priority level for a future survey.

INITIAL SITE SELECTION METHODS

The methods used to select potential instream and riparian enhancement sites involve a two step process. The first step predominantly involves the use of a Geographic Information System(GIS) to select out those segments that are potential sites. The second step of the process involves field verification of the sites selected to prioritize sites for work. The information that was put into the model varies with the basin and what data was available at the time of the site selection process. It must be emphasized that this plan focuses on the selection of sites using a lab based technique, field verification of potential sites was limited.

It also must be stressed that this method of site selection is somewhat of a 'top down' method in that it is much more useful in selecting areas where work should not be conducted no matter what the habitat quality is like. Further field verification will only reduce the list of areas available for enhancement work.

Instream Enhancement

The methods for the selection of instream habitat enhancement focus heavily on the use of United States Geological Survey(USGS) 7.5' topographic maps and USGS 7.5' digital elevation data. USGS 7.5' topographic maps were used only in those basins draining into Tillamook Bay. Topographic maps were used in this area because digital elevation data were not available at the time of the analysis.

Stream segments were first classified as to their gradient and size. It has been determined that large woody debris addition that is targeted to help salmonid habitat is most successful in streams that have a channel width between 4 and 12m (13- 40ft) and a channel gradient less than 5 percent. These criteria are a result of the fact that woody debris of the size that can be placed with heavy machinery is more stable in these streams. Choosing streams of this size allows wood pieces up to 24m(80ft) in length to be placed into stream channels.

A relationship was determined for the study area between the basin area upstream of a given point in a channel and the channel width of that channel through field verification and analysis of stream habitat survey data. Due to differences in the relationship between individual basins, a conservative maximum basin area of 18km² was selected, this roughly equates to a channel width of 15m. A minimum basin area of 2km² was selected which actually does not pick some streams larger than 4m channel width in specific basins. These streams are in high gradient basins and the other site selection criteria(gradient) removes these streams from the selection process. The point where a stream changes between greater than and less than 12m in channel width was field verified. Basin area was extracted from the digital elevation grids using Arc/Info surface hydrologic analysis techniques.

A second stream size criteria was selected to pick out those sites that have a potential for the placement of very large woody debris (over 24m(80ft) in length) or other enhancement techniques including the construction of boulder weirs. These sites were picked based on a channel size of 12- 20m(40- 66ft) and gradients less than 2 percent. These sites were primarily selected based on field visits to the basins in question.

Stream gradient classification involved classifying streams as to whether or not they were greater or less than 5 percent in channel gradient. Streams were classified between any tributaries or if a segment of less than 5 percent gradient that was over 500m existed. Stream gradients were extracted from the digital elevation data using Arc?info Surface Hydrologic Analysis tools and an AML(macro) designed by Scott Splean at Oregon State University.

The stream size and stream gradient classifications were entered into a GIS using Unix ArcInfo (ESRI 1988) software. The USGS 1:100,000 scale stream coverage

for northwest Oregon was used and the attributes of size and gradient were added to the cover. In rare cases a stream that was of a proper size and gradient to warrant selection did not appear on the USGS 1:100,000 scale stream coverage. In these rare cases, the streams were recorded as a separate database

Additional information was added to the cover when available to further restrict the list of potential sites. This information included covers on coho salmon distribution and barriers to upstream salmon migration. Information on barriers and coho salmon distribution was compiled from Milt Hill and Brent Forsberg at the ODFW GIS lab, as well as information from the Salmon Inventory Project, and Biologists within ODFW.

The base cover of stream channel size, gradient and coho salmon distribution should remain unchanged for future planning/enhancement efforts, unless further information is gained which would restrict the model (e.g. information on other barriers).

Additional information was then added to the base cover to aid in prioritization of sites. The first piece of information added was the access to a site. Sites that were more than 400m (1/4 mi.) from any road were identified and classified as no access. Sites without heavy equipment access have been left in the list of potential enhancement areas because of the possibility of using other techniques to enhance these reaches including the felling of existing conifers into the stream channel as well as the placement of woody debris with helicopters, horses, or cable logging equipment. The further classification of access was then determined through field verification. High access is given to those sites that have easy heavy equipment access to the stream channel. Moderate access is given to those areas limited by a steep hillside adjacent to the site. Low access is given to those area where an old road exists along the site, but road crossings(bridges) would have to be constructed to gain access to the site. The other information added was whether or not the stream has had a habitat survey conducted on it, as well as a general priority rating.

Riparian Enhancement

The selection of potential riparian enhancement sites primarily involves the use of a vegetation coverage acquired from the Oregon Dept. of Forestry. This coverage was then overlaid with the 1:100,000 streams coverage to pick out those riparian areas that are dominated by small or medium hardwoods. Potential hardwood conversion sites were then selected if they were on streams selected as instream sites, or if they occur downstream of reaches selected for instream enhancement.

RECOMMENDED PROJECT ACTIVITIES

The phase II project guide has been developed with certain types of instream and riparian projects in mind. It is believed that these types of projects will lead to better instream and riparian conditions in the short and long term, and these projects will also compliment the natural physical and biological processes of these systems.

Small Streams

Projects conducted on smaller streams (4-12m channel width) should primarily involve the placement of large trees into the stream channel. The following table outlines the recommended lengths and diameters of large woody debris that should be placed into a given channel(see Table 1). Trees with branches and boles attached are the preferred materials, as these types of pieces greatly increase the complexity of the project and the stream. Off channel pond construction is another potential project type in these areas.

Table 1. Recommended minimum length and diameter of woody debris pieces that should be placed into stream channels with less than a 12m bankfull channel width.		
Bankfull Width (m)	Minimum Diameter (cm.)	Minimum Length
4-8	40	1.5 times bankfull width
8-12	45	“
12+	55	“

Large Streams

Work in larger streams (12-20m channel width) should primarily involve the placement of very large trees > 30m (90ft) in length, or the placement of large boulders. Off channel pond construction may also be a successful enhancement technique in these areas. Projects in these areas should be limited to unconstrained reaches with good access and should be conducted in very close consultation with an ODFW biologist. The effects of an enhancement project on chinook salmon spawning habitat should also be addressed in these larger streams.

Riparian

The overall goal of riparian restoration is to increase the number of large conifers within the riparian area. With this goal in mind, a few types of projects are possible which vary in the degree of disturbance to the riparian area. The four types of projects are:

1. Conifer thinning- thinning of conifers where high densities of young conifers currently exist
2. Conifer release- removal or girdling of alders in and around existing young conifers.
3. Alder thinning- thinning of alders and underplanting with conifers.
4. Removal of Alder- removal of all alder in an area and replanting of conifers.

A mixture of project types will probably be needed depending on the current state of the riparian area, access, and materials available for the project. Whatever type of work is conducted, the work should: 1) Be consistent with the needs of the fish and wildlife species in the riparian zone and surrounding landscape; 2) Be conducted in close consultation with ODFW biologists; and 3) Be consistent with the natural vegetation patterns associated with the existing soil and landform types.

What are the best places to work?

The general nature of this guide has led to the fact that some reaches have been selected that will not be suitable for restoration activities. The following is a general guide to help identify areas that are both good and poor candidates for instream restoration activities. This guide was developed by Andy Talabere, Kelly Moore, and Jay Nicholas as part of the Umpqua Fish Management District's Guide to Instream and Riparian Restoration Sites and Site Selection.

Best stream reaches for restoration have these characteristics:	Poor reaches for restoration have:	What to do if the reach is best described by the <i>poor</i> condition
low gradient (<5%)	high gradient (>5%)	Structures placed in steep reaches will probably get washed downstream. It may be possible to locate flats or benches of low gradient even where the overall gradient is steep. Instream work should be limited to these areas.
moderate channel size (<12m)	large channel size(>12m)	Structures placed in large channels may get washed downstream. Instream work in these channels should use very large pieces that only extend part way into the channel.
Good Area cont'd	Poor Areas cont'd	Solutions cont'd
moderate valley shape	steep or "V" valley shape	Streams in steep or "V" shaped valleys are constrained

		by the valley walls. During high flow events these high energy streams have limited potential for winter rearing. Any instream structures should be limited to sections of wider valley where stream energy can be dissipated.
temperature water cool enough for juvenile salmon to live in during the summer	water too warm for juveniles salmon to live in during the summer	No summer use by juvenile salmon, but may be used for winter shelter. Efforts to restore or improve streamside shading may, after years, result in water temperatures that are suitable for young salmonids.
water supply adequate supply of water to support young salmon during the summer	not enough water to support young salmon during the summer	Small streams that dry up in the summer, either naturally or from water diversions, may provide useful over-winter habitat. However, if these streams are too steep, not adjacent to summer rearing areas, or have water quality problems there is little potential for winter rearing. Restoration efforts on streams that dry in the summer should carefully assess the potential for winter rearing use.
access free access by adults and juveniles during migration	restricted access by adults and juveniles during migration	Stream reaches that are effectively or even partially blocked by culverts may have other physical properties that make them desirable for restoration work. Priority should be given to resolving the passage problem in these areas.
proximity spawning, summer rearing, and winter rearing habitats within several miles of each other	large distances separating habitats that appear to be suitable for spawning and rearing areas	Reconnecting fragmented habitats is a long term endeavor. Streams that are devoid of a habitat feature critical to the salmon life-cycle will be harder to restore than areas where critical components are present. Efforts to trap gravel where there is none, reduce sediment inputs when a stream is overloaded, reduce summer water temperatures where they are currently too warm, although beneficial, are likely to take decades to be effective.
diversions downstream migrating juveniles are protected from diversions and withdrawals by good screens	downstream migrating juveniles are vulnerable to diversions	Efforts should be made to provide screens at all diversions and withdrawals that may injure or kill downstream migrants

PRIORITIZATION OF ENHANCEMENT WORK

In developing the initial enhancement database, it has been realized that many of the selected streams that are of an adequate size and gradient to conduct instream work **will not** be feasible. In response to this fact we have developed a basic prioritization of these sites to help in the site selection process. The attributes of a stream segment that have or will be evaluated include: Habitat quality (when available), channel and valley morphology (when available), segment channel width and gradient, and location in relation to coho populations with higher abundance.

It must be realized that all of these factors, as well as location of materials, available funds, and land ownership all play a part in what sites actually receive work. We have chosen to rank the sites in broad categories to help in selecting which sites to do work, with the realization that when the factors just mentioned come into play a variety of sites become open for enhancement work. The categories chosen are listed below with a brief explanation of each. If information was unknown about a given attribute it was given the benefit of the doubt and lumped into a higher category until field verification is conducted.

This priority setting process is quite flexible and is intended to be used in focusing efforts for field verification and site planning. It is not intended to be used as a scoring process.

ATTRIBUTE	CODE	DESCRIPTION
Habitat Quality	U	Habitat quality unknown
	L	Habitat lacking pools, complexity, wood
	M	Habitat lacking complexity, cover, wood
	H	Habitat healthy at present
Channel and Valley Morphology	US	Unconstrained
	TC	Terrace constrained
	CH	Hillslope Constrained
	UC	Unknown Constraint
Access	U	Unknown access
	N	No access
	L	Low access- bridges needed
	M	Moderate access- off hillside
	H	High access- easy for heavy equipment
Stream size and gradient	1	Large stream 12-20m Channel width
	2	Small stream 4-12m Channel width
High coho abundance areas	I	Contained within a known coho population
	N	within the same subbasin as a known population
	O	Outside of a known high population subbasin

Level I: High Priority for enhancement:

The optimal site for instream enhancement is one that has an unconstrained valley morphology, with low terraces surrounding the stream, the channel width would be 4-12m and the gradient would be < 5%. This stream would also have low to moderate habitat quality at present, easy access for heavy equipment, and would be contained within, or directly adjacent to a core coho area. Sites that meet these criteria should be targeted immediately for instream enhancement work.

Level II: Possible high or intermediate priority for enhancement

In selected sites, work could be conducted if only a few of the attributes exist out of the high category. These sites which are relatively numerous include the following possible scenarios:

- Any unconstrained segments not listed as a high priority
- Terrace constrained segments with high access
- Areas of unknown constraint

All areas contained in this priority level must have low, moderate, or unknown habitat quality.

Level III: Restoration is possible, but very limited.

Enhancement in these areas should not be conducted unless access is gained to a site for reasons other than enhancement, or new methods for enhancement are developed. The energy involved in conducting a project in these areas may be high in relation to the benefits gained from the work. The sites in this scenario include:

- Hillslope constrained areas with high access
- Terrace constrained areas with moderate to no access

All areas contained in this priority level must have low, moderate, or unknown habitat quality.

Level IV: Areas for Protection:

The types of areas listed below are those areas where it is not feasible to do work and it will not be feasible in the future. Protection of these areas is probably the best and only solution that should be attempted. These areas include:

- Any area of high habitat quality
- Hillslope constrained areas with moderate to no access

- Severely disturbed areas where woody debris placement will only lead to further instability.

We have established a separate category for the prioritization of enhancement on the large streams. The highest priority large stream enhancement project should only be equated to a moderate priority small stream project. In setting the priorities for large stream work, we have decided to limit it to two categories, moderate and low. **The low priority large stream projects should not be attempted if the goal is to restore overwintering habitat for salmonids.**

Moderate priority large stream sites are those sites that have an unconstrained or terrace constrained valley morphology, low habitat quality, easy equipment access, and are contained within or directly adjacent to a core area.

Low priority sites are those sites that do not meet the above criteria: i.e. either constrained by hill slopes, moderate to high quality habitat, moderate to no access, or not adjacent to a core area (not within the same sub basin).

All streams occurring on Federal Lands have not been given a priority. Many of these areas are already a part of other watershed planning processes and it was not the purpose of this exercise to duplicate work that is already in progress.

Riparian Priorities

An overall priority rating has not been given to the selected riparian enhancement areas. We have come up with a list of those attributes which can be used in the priority setting process. Highest priority should be given to those areas where instream work is not possible due to lack of equipment access or constrained hillslope morphology. Priority should then be given to those areas where conifers are not naturally reestablishing themselves near the riparian zone. In the area of the coast known to many as the “fog belt” or the spruce hemlock vegetation zone, riparian conifers currently exist at low levels in the riparian understory of many streams. In these cases, conifer release may be a better option than total removal of alder. Access into a site and proximity to known coho salmon populations can then be used to further prioritize the selected reaches.

SELECTED INSTREAM SITES BY BASIN

Approximately 760 miles of streams have been selected as potential instream enhancement areas. 300 miles occur in those drainages south of the Nehalem River and 460 miles occur in drainages north of Tillamook Bay. Roughly one third of the streams analyzed have an adequate gradient and size to warrant instream work, of these streams, only 76 miles have been designated as a high priority for instream enhancement work. Most of the streams designated as high priority fall in the Necanicum and Nehalem River basins(60 miles), with only 16 miles of high priority sites occurring south of the Nehalem River(Figure 1). For simplicity in explanation the North coast of Oregon has been divided up into several subbasins to aid in restoration priority setting and explanation of reach descriptions(Figure 2). Maps of the potential enhancement areas, as well as access, priority, proximity to core coho salmon areas, and location of existing ODFW Aquatic Inventories surveys are available as Appendix IIA-IID.

Figure 1. Length of streams selected as potential instream habitat enhancement sites in the drainages of Tillamook Bay and the Nestucca River, and the Nehalem and Necanicum Rivers.

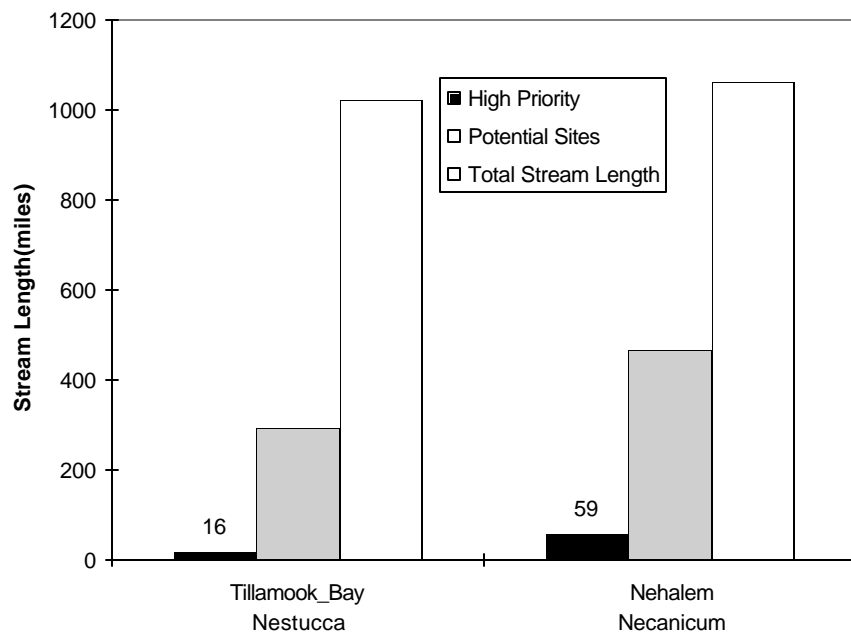
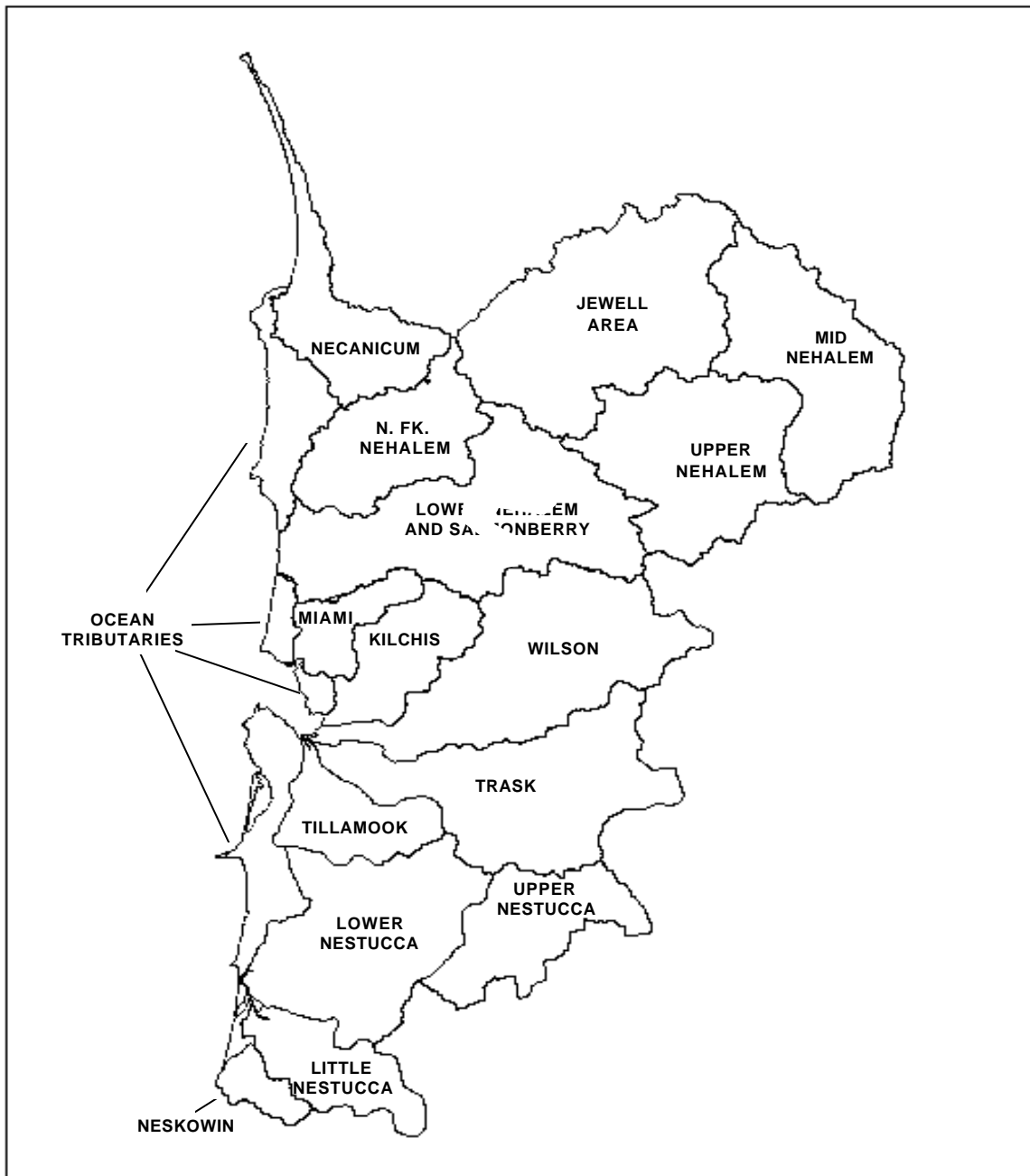


Figure 2. Subbasins of the North Oregon Coast.



Ocean tributaries

Many of the Ocean tributaries analyzed do not have suitable gradients and channel size to support coho salmon populations. 21 stream segments have been selected for possible enhancement measures for a total of 22 miles of streams. High priority segments total 4 miles and are contained in the Sand Lake and Patterson Creek drainages. Enhancement work has been conducted in the Patterson Creek, Sand

Lake and Ecola Creek drainages. The Ecola Creek drainage is a core area for coho salmon.

Necanicum River Basin

There are many stream segments suitable for instream enhancement work in the Necanicum drainage. 30 miles out of the 93 miles of streams analyzed are potentially suitable for enhancement work. 11 miles have been given a high priority due to their lack of woody debris, moderate channel size, moderate gradient and easy access. High priority areas include the Beerman Creek, Klootchie Creek, Mail Creek, and Upper Necanicum drainages. Instream and riparian enhancement work has been conducted on Klootchie Creek, Bergsvick Creek, and Beerman Creek, and more work is needed in all of these areas. The Upper Necanicum River and Bergsvick Creek are core areas for coho salmon. The South Fork Necanicum has water withdrawal issues that must be dealt with before any instream work can proceed in the South fork Necanicum or its tributaries.

Upper Nehalem River basin

The Upper Nehalem River basin includes all tributaries of the Nehalem River downstream to, and including, Rock Creek. 86 miles of streams have been selected in this area as potential instream enhancement sites. The 6 miles of high priority sites are contained in the Upper Rock Creek and Robinson Creek drainages. In channel enhancement work has been conducted on North Fork of Rock Creek, Weed Creek, North Fork Wolf Creek, and Lousignont Creek. The Upper Nehalem River above Robinson Creek and Upper Rock Creek drainages are core areas for coho salmon.

Middle Nehalem River basin

The Mid Nehalem River basin includes all tributaries of the Nehalem River from Pebble Creek, downstream to, but not including, the Beaver Creek near Birkenfeld. 103 miles of streams in this subbasin are of a potential size and gradient for instream enhancement work, with 13 of these miles at a high priority. Fine sediments and stream temperature issues may need to be addressed in many of the streams in this area before in channel projects should be attempted. High priority areas for enhancement include Battle Creek, Oak Ranch Creek, and the upper tributaries of Pebble Creek. Fall Creek is also an excellent area for enhancement pending the removal of an impassable culvert in the lower reaches of the stream. Instream enhancement work has been conducted on Deer Creek, Dog Creek and Kenusky Creek. The enhanced portion of Kenusky Creek should be treated as a Level IV protection area. Oak Creek and Deer Creek serve as core areas for coho salmon within this subbasin.

Jewell Area of the Nehalem River basin

The Jewell area of the Nehalem River basin includes all tributaries from Beaver Creek downstream to Humbug Creek. Approximately 12 miles of streams in this area have been selected as high priority enhancement areas with another 116 miles of streams having at least some potential for instream enhancement. High priority enhancement areas include the East Humbug Creek, Buster Creek, Beneke Creek and Fishhawk Creek(Birkenfeld) drainages. Instream and riparian enhancement work has been conducted on Fishhawk Creek(Jewell), Hamilton Creek, Buster Creek, Humbug Creek, and West Humbug Creek. Much of the mainstem Nehalem River and the lower ends of its tributaries in this area have been fenced or are planned for fencing projects in the near future. The Fishhawk Creek(Birkenfeld) drainage serves as a core area for coho salmon in this area with McCoon Creek being listed as a Level IV protection habitat.

North Fork Nehalem River basin

43 stream segments have been selected in the North Fork Nehalem River basin that are potential instream enhancement areas. Of these 43 sites, 8 miles have been listed as a high priority. High priority enhancement areas include the Upper North Fork Nehalem, and Little North Fork Nehalem rivers as well as Gods Valley Creek. Enhancement work has been conducted on the Little North Fork Nehalem River and Gods Valley Creek and more work could be completed on other reaches of these streams in the future. The North Fork Nehalem River does not contain any core areas for coho salmon, because of the prevalence of hatchery strain coho in the basin. Due to this fact, any enhancement work in the basin should take secondary precedence behind work designed to enhance wild coho salmon populations in other subbasins.

Lower Nehalem River and Salmonberry River basins

The Lower Nehalem basin includes all tributaries of the Nehalem River from tidewater up to, but not including, Humbug Creek. It does not include the major tributaries of the North Fork Nehalem River. 46 segments were selected that were an adequate size and gradient for instream work for a total length of 48 miles of potential stream habitat enhancement work. The only core coho salmon area that occurs in the drainage is Foley Creek, which has also been selected as a potential enhancement area. Foley Creek, Upper Cook Creek, and Lost Creek appear to be very good locations for enhancement work. Foley Creek has had enhancement work conducted on it in 1995 and 1996 and many areas of the Foley Creek watershed are still excellent sites for future enhancement. Portions of East Foley Creek have been given a level IV priority because of the high quality of the instream and off channel habitat in the area. All segments selected in the Salmonberry River

basin have been given a level IV priority due to their higher gradients, steep valley morphology, and low use by coho salmon. In channel work targeting coho salmon is not recommended anywhere in the Salmonberry River basin.

Miami River Basin

16 potential stream segments were selected in the Miami River Basin as potential instream enhancement sites for a total of 13 miles. Currently there are not any high priority enhancement areas in the Miami River basin, mainly due to a lack of field verification in the area. Eight miles of the sites were on small streams and five miles of the sites were on larger streams. The Miami River upstream of Peterson Creek has been selected as a coho salmon core area and many of the selected stream segments overlap with this area. Some habitat enhancement work has been conducted on Moss Creek, Prouty Creek, and the mainstem Miami River.

Kilchis River

The Kilchis River is a relatively high gradient system with a limited potential for enhancement work and limited access for heavy equipment. Eighteen stream segments have been selected as potential enhancement sites for a total of 18 miles of streams. Eleven and a half miles are on small streams and 7.5 miles are on larger streams. Many of these segments have very limited or no access. The upper North Fork Kilchis River, Sam Downs Creek, and Little South Fork Kilchis River are all coho salmon core areas. Instream work was conducted on the upper North Fork Kilchis in 1995, and additional instream work is planned on the Little South Fork Kilchis and Clear Creek in 1997. Sam Downs Creek is a good candidate for increased protection due to its designation as a core area, limited access and moderate to high habitat quality.

Wilson River Basin

30 potential instream enhancement segments were selected in the Wilson River drainage. Like the Kilchis River, this system is relatively high gradient. The highest potential for coho salmon habitat occurs in the Devils Lake Fork of the system. The 48 miles of habitat selected contains 34 miles of small streams and 15 miles of larger streams and is roughly 25% of the total stream miles in the basin. Core coho salmon areas include the North Fork Wilson, Cedar Creek, and the Upper Devils Lake Fork drainage. Instream work has been conducted in the past on the South Fork Wilson, and South Fork Jordan Creek. Additional instream work is planned for the Devils Lake Fork and Elliott Creek in 1997. Many of the larger channels have been given a very low priority and work should not be attempted in these areas.

Trask River Basin

The Trask River basin is quite large and represents an additional 32 potential enhancement segments. The North Fork Trask drainage has very limited access which limits which of the 49 miles selected receive enhancement work. The 18 miles of habitat selected on large streams are located on the East Fork South Fork Trask, South Fork Trask, North Fork Trask, Elkhorn Creek and Bark Shanty Creek. The upper East Fork South Fork Trask and upper South Fork Trask area very good sites for instream work if large woody debris can be acquired in these areas. Both of these areas, as well as Edwards Creek and the Lower South Fork Trask River have had limited instream work conducted on them in the past. Most of the North Fork Trask River and its tributaries have been designated as core coho salmon areas. The South Fork Trask River and its tributaries do not contain core coho salmon areas because of the past dominance of hatchery coho in the system.

Tillamook River Basin

The Tillamook River basin holds some of the highest potential for coho salmon habitat in the area because of its low gradient. Approximately 50% of its 76 stream miles have been selected as potential enhancement areas. These areas are mostly low priority for instream enhancement due to the degraded riparian conditions along many of these streams. 34 miles of the selected sites are on small streams and 3 miles are on larger streams. The 17 stream segments selected have a very high potential for off channel habitat enhancement as well as improved management of livestock around riparian areas. A majority of the Tillamook River system has been selected as a core salmonid area. Enhancement projects have been completed on Bewley Creek and Killam Creek over the past five years.

Lower Nestucca River basin

The Lower Nestucca River basin includes all tributaries of the Nestucca River from upstream of the Little Nestucca River, upstream to, but not including Niagara Creek. Approximately 32 miles of streams in this area could be potential enhancement areas due to their adequate size and gradient. Many of the stream segments selected occur on federal land managed by the U. S. Dept. of Agriculture Forest Service(USFS) and U. S. Dept. of Interior Bureau of Land Management(BLM). The segments managed by the BLM and USFS have not been given a priority at this time. Only 1 mile of high priority enhancement areas have been identified, mainly due to lack of field verification in the area. Potentially high priority areas for enhancement include sections of the Beaver Creek drainage, as well as some of the smaller tributaries in the lower portion of the subbasin. Instream and riparian enhancement work has been conducted on Farmer Creek, East Creek, Bays Creek, and East Beaver Creek. Core areas for coho salmon include Clear Creek, and East Creek.

Upper Nestucca River basin

The Upper Nestucca River basin has been separated out because of the prominence of federal land management. All federal lands have not been given a priority for enhancement, therefore there were no high priority enhancement sites selected in the Upper Nestucca basin. Extensive habitat enhancement projects have been completed or are planned for Bear Creek, Elk Creek, Niagara Creek, Clarence Creek and the Upper Nestucca River. Because of the extensive instream work that is already being done in this subbasin, it may be wise to focus restoration work on riparian enhancement and protection in the private lands of this subbasin.

Little Nestucca and Neskowin Creek basins

The Little Nestucca River and Neskowin Creek drainages hold the highest potential for instream enhancement in South Tillamook County. 32 miles of streams in the area are of an adequate size and gradient for enhancement with 3 miles being selected as high priority sites. These high priority sites are located around the South Fork Little Nestucca and Louie Creek areas. Instream enhancement work has been conducted on the South Fork Little Nestucca River. The Middle tributaries of the South Fork Little Nestucca River have been designated as core coho salmon areas.

SELECTED RIPARIAN SITES

It has not been possible to list riparian enhancement areas by specific reaches of stream in the limited time for this analysis. Instead, we have produced maps outlining the extensive hardwood dominated riparian zones that exist in the drainages analyzed. These maps are contained as Appendix IIE and IIF. In the Nehalem, Necanicum, and north coastal tributaries approximately 300 miles of hardwood dominated riparian zones were identified either within or downstream of potential enhancement areas. This equates to roughly 30% of the stream miles in the basin. Some of the streams with concentrated areas of hardwood domination include the Clear Creek, Pebble Creek, and Upper Rock Creek drainages, as well as many streams in the Jewell area and lower Nehalem River. Gods Valley Creek and Sweethome Creek also show a high density of hardwood dominated riparian zones.

In those drainages south of the Nehalem River 200 miles of hardwood dominated riparian zones were identified. Many of these areas overlap well with land contained within the Tillamook Burn. Areas heavily dominated by hardwoods include the Upper Miami, Upper Kilchis, and Middle Wilson Rivers, as well as the South Fork Trask River, Upper Three Rivers, and the Upper Little Nestucca River.

It is imperative that projects targeting restoration of conifers in and along riparian zones be implemented as soon as possible to insure a future supply of woody debris to the stream channels in all of the basins analyzed.

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Appendix IA. Potential instream enhancement sites for the Necanicum River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Beerman Creek	1311	4299	4-12m	1	H	YES		X		Willamette Ownership Boundary	End Of Coho(Barrier)	
Bergsvik Creek	4073	13361	4-12m	1	H	YES	95	X		Necanicum River	Little Joe Creek	
Kloutchie Creek	2283	7488	4-12m	1	H	YES	95	X		Necanicum River	Kloutchie Creek Trib A	
Kloutchie Creek	1349	4423	4-12m	1	H	YES	95	X		Kloutchie Creek Trib A	End Of Coho	
Kloutchie Creek Trib A	796	2609	4-12m	1	H			X		Kloutchie Creek	End Of Coho	
Little Joe Creek	250	821	4-12m	1	H	YES		X		Bergsvick Creek	End Of Coho(Tj)	
Mail Creek	915	3000	4-12m	1	H	YES		X		Necanicum River	End Of Coho(Barrier)	
Necanicum River	1491	4891	4-12m	1	H	YES		X		Bergsvick Creek	Grindy Creek	
Necanicum River	229	753	4-12m	1	L	YES		X		Grindy Creek	End Of Coho	At Saddle Mt. Rd.
Necanicum River	852	2795	4-12m	1	M	YES		X		Grindy Creek	End Of Coho	At N. Munce Rd.
N. Fork Necanicum River	1013	3324	4-12m	1	M			X		Necanicum River	North Fork Necanicum Trib A	
N. Fk. Necanicum River Trib A	1409	4620	4-12m	1	M			X		North Fork Necanicum	End Of Coho	
Volmer Creek	1687	5533	4-12m	1	H			X		Necanicum River	End Of Coho	
Beerman Creek	1916	6283	4-12m	2	M	YES		X		Necanicum River	Willamette Ownership Boundary	
Joe Creek	2249	7378	4-12m	2	H			X	AST	Bergsvick Creek	End Of Coho	
Johnson Creek	959	3146	4-12m	2	H	YES		X		Necanicum River	End Of Coho	
Little Humbug Creek	1690	5542	4-12m	2	M	YES		X		Necanicum River	End Of Coho(Barrier)	
Mill Creek	381	1250	4-12m	2	U					Neawanna Creek	End Of Coho	
Neawanna Creek	4728	15507	4-12m	2	U					Tidewater	End Of Coho	
Necanicum River	1852	6075	4-12m	2	L	YES		X		Grindy Creek	End Of Coho	
N. Fork Necanicum River	1059	3473	4-12m	2	M					Necanicum River	North Fork Necanicum Trib A	
N. Fork Necanicum River	1471	4824	4-12m	2	M			X		North Fork Necanicum Trib A	End Of Coho	
Shangrila Creek	751	2464	4-12m	2	U					Neawanna Creek	End Of Coho	Different Outlet Than Map
Square Creek	904	2967	4-12m	2	U					Circle Creek	End Of Coho	
Williamson Creek	529	1736	4-12m	2	M	YES				Necanicum River	End Of Coho	
Beerman Creek	381	1248	4-12m	3	M	YES		X		Willamette Ownership Boundary	End Of Coho(Barrier)	
Brandis Creek	585	1920	4-12m	3	H	YES		X		South Fork Necanicum	End Of Coho	
Circle Creek	1960	6428	4-12m	3	H	YES		X		Necanicum River	/TJ AT T5N-R10W-4SE	
Little Humbug Creek	466	1527	4-12m	3	M	YES		X		Necanicum River	End Of Coho(Barrier)	
Necanicum River Trib A	848	2783	4-12m	3	H	YES		X		Necanicum River	End Of Coho	
S. Fork Necanicum River	568	1863	4-12m	3	H	YES		X		South Fork Necanicum Trib A	End Of Coho	Water Withdrawal Issue
South Fork Necanicum River Trib A	371	1218	4-12m	3	H	YES		X		South Fork Necanicum	End Of Coho(Barrier)	Water Withdrawal Issue
Bergsvik Creek	1125	3690	4-12m	4	H	YES		X	AST	Little Joe Creek	End Of Coho	
Circle Creek	821	2694	4-12m	4	H	YES		X		Necanicum River	/TJ AT T5N-R10W-4SE	
Circle Creek	2879	9444	4-12m	4	H	YES		X		/TJ AT T5N-R10W-4SE	End Of Coho	
Grindy Creek	1434	4703	4-12m	4	H	YES		X		Necanicum River	End Of Coho(Barrier)	
Warner Creek	794	2603	4-12m	4	L	YES		X		Necanicum River	End Of Coho	

Priority:1 = High, 2 = Moderate, 3 = Low, 4 = Very Low; Access: H = High, M = Moderate, L = Low, U = Unknown;ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix IB. Potential instream enhancement sites for Ocean tributaries from Nehalem Bay to Neskowin Creek.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Jacoby Creek	713	2338	4-12m	1	H			X		Patterson Creek	End Of Coho	
Patterson Creek	1651	5416	4-12m	1	H			X		Tillamook Bay	End Of Coho	
Sand Creek	3290	10793	4-12m	1	H	YES		X		Andy Creek	End Of Coho(Barrier)	
Andy Creek	1630	5346	4-12m	2	U		X			Sand Creek	End Of Coho	
Douthy Creek	2722	8929	4-12m	2	M					Tillamook Bay	End Of Coho	Check For Coho
Jewel Creek	2989	9804	4-12m	2	H					Sand Creek	End Of Coho	
Neahkahnie Creek	776	2544	4-12m	2	U					Pacific Ocean	End Of Coho	Check For Coho
West Fork Ecola Creek	2537	8322	12-20m	2	M	YES	95	X		North Fork Ecola Creek	Tolvana Creek	
Whiskey Creek	1244	4081	4-12m	2	M					Netarts Bay	End Of Coho	
Davis Creek	936	3070	4-12m	3	H					Sand Creek	End Of Coho	Check For Coho
Sand Creek	3506	11499	4-12m	3	H	YES		X		Sand Lake	Andy Creek	
Arch Cape Creek	190	622	4-12m	4	H					Pacific Ocean	End Of Coho(Culvert Barrier?)	
Asbury Creek	452	1482	4-12m	4	H					Pacific Ocean	Shark Creek	
Daley Lake	2373	7783	4-12m	4	L					Pacific Ocean	End Of Coho	Check For Coho
Larson Creek	1233	4044	4-12m	4	U				TILL	Tillamook Bay	End Of Coho	Check For Coho
Neahkahnie Creek	936	3070	4-12m	4	N					Pacific Ocean	End Of Coho	Check For Coho
North Fork Ecola Creek	2953	9687	12-20m	4	M	YES			AST	Ecola Creek	End Of Coho(Barrier)	
Short Sand Creek	2247	7370	4-12m	4	H					Pacific Ocean	End Of Coho	
Short Sand Creek	388	1273	4-12m	4	N					Pacific Ocean	End Of Coho	
Vaughn Creek	1038	3404	4-12m	4	M					Tillamook Bay	End Of Coho(Golf Course)	Check For Coho
Watseco Creek	1051	3447	4-12m	4	M					Pacific Ocean	End Of Coho	Check For Coho
West Fork Ecola Creek	1118	3666	12-20m	4	M	YES		X		North Fork Ecola Creek	Tolvana Creek	

Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low; Access: H = High, M = Moderate, L = Low, U = Unknown; ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix IC. Potential instream enhancement sites for the Upper Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
North Fork Rock Creek	380	1248	4-12m	1	H	YES	95	X		Mouth	Large TJ/	
Rock Creek Trib B	556	1822	4-12m	1	H			X		Mouth	End Of Coho	
Rock Creek	1704	5590	4-12m	1	H	YES		X		Tj/	South Fork Rock Creek	
South Fork Rock Creek	2200	7216	4-12m	1	H	YES		X	FG	Hwy 26	Shields Rd	
South Fork Rock Creek	1780	5840	4-12m	1	H	YES		X	FG	Mouth	HWY 26	
South Fork Rock Creek Trib A	775	2541	4-12m	1	H					South Fork Rock Creek	End Of Coho	
South Prong Clear Creek	1436	4710	4-12m	1	H			X		Clear Creek	End Of Coho	Check For Coho Use
Robinson Creek	395	1294	4-12m	1	H			X		Nehalem River	TJ/ AT T3N-R5W-11SW	
Robinson Creek	582	1909	4-12m	1	H			X		TJ/ AT T3N-R5W-11SW	End Of Coho	
Bear Creek(Vernonia)	1864	6115	4-12m	2	U					Nehalem River	End Of Coho	Check Coho Use
Rock Creek Trib A	927	3040	4-12m	2	M			X		Rock Creek	End Of Coho	
Selder Creek	4561	14960	4-12m	2	M			X		Selder Creek	End Of Coho	
Selder Creek Trib A	398	1305	4-12m	2	U					Rock Creek	End Of Coho	
Fall Creek(Rock Creek)	3156	10353	4-12m	2	M					Rock Creek	End Of Coho	Possible Barrier
Olson Creek	1274	4178	4-12m	2	M			X	FG	Rock Creek	End Of Coho	
North Fork Rock Creek	1667	5469	4-12m	2	M	YES	95	X		Large TJ/	End Of Coho	
Military Creek	1816	5956	4-12m	2	U					Mouth	End Of Coho	
Rock Creek	1832	6010	12-20m	2	M	YES		X	FG	North Fork Rock Creek	TJ/	
Rock Creek	1024	3360	4-12m	2	M			X		South Fork Rock Creek	End Of Coho	
Rock Creek Trib C	401	1317	4-12m	2	M			X	AST	Rock Creek	End Of Coho	
Beaver Creek(Vernonia)	11923	39107	4-12m	2	U					Nehalem River	End Of Coho	
Beaver Creek(Vernonia) Trib A	907	2975	4-12m	2	U					Beaver Creek	End Of Coho	
Beaver Creek (Vernonia) Trib B	2135	7003	4-12m	2	H					Beaver Creek	End Of Coho	
Cedar Creek(Vernonia)	2056	6743	4-12m	2	H			X		Nehalem River	End Of Coho	
Weed Creek(Vernonia)	1112	3648	4-12m	2	M					Nehalem River	End Of Coho	Check For Coho Use
Kist Creek	1021	3349	4-12m	2	U					Nehalem River	End Of Coho	Check For Coho,Possible Barrier
Robinson Creek	1175	3855	4-12m	2	U					Nehalem River	TJ/ AT T3N-R5W-11SW	
Robinson Creek	663	2176	4-12m	2	U					TJ/ AT T3N-R5W-11SW	End Of Coho	
Robinson Creek Trib A	515	1690	4-12m	2	U					Robinson Creek	End Of Coho	Check For Coho Use
Wolf Creek	5200	17057	12-20m	2	H			X	FG	Nehalem River	North Fork Wolf Creek	
Wolf Creek	1429	4687	4-12m	2	M			X	FG	North Fork Wolf Creek	Wolf Creek Falls	
North Fork Wolf Creek	4213	13820	4-12m	2	M	YES	96	X	FG	Wolf Creek	End Of Coho	
North Fork Wolf South Trib	1602	5253	4-12m	2	U				FG	North Fork Wolf Creek	End Of Coho	
North Fork wolf Creek Trib B	1375	4512	4-12m	2	M				FG	North Fork Wolf Creek	End Of Coho	Check For Coho Use
North Fork wolf Creek Trib B	86	281	4-12m	2	M				FG	North Fork Wolf Creek	End Of Coho	Check For Coho Use
Lousignont Creek(Timber)	1145	3756	4-12m	2	M	YES	96	X		North Fork Lousignont Creek	Carlson Creek	
Lousignont Creek(Timber)	1998	6555	4-12m	2	M	YES		X	FG	Carlson Creek	End Of Coho	
Lousignont Creek(Timber)	1704	5588	4-12m	2	H	YES		X	FG	Carlson Creek	End Of Coho	
North Fork Lousignont Creek	3402	11159	4-12m	2	M			X	FG	Lousignont Creek	End Of Coho	
South Fork Lousignont Trib A	1104	3622	4-12m	2	U				FG	South Fork Lousignont Creek	End Of Coho	Check For Coho Use
Castor Creek	829	2720	4-12m	2	M			X		Nehalem River	End Of Coho	
Castor Creek	1681	5515	4-12m	2	U			X		Nehalem River	End Of Coho	
Castor Creek Trib A	528	1733	4-12m	2	U					Castor Creek	End Of Coho	Check For Coho Use

Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority); Access: H = High, M = Moderate, L = Low, U = Unknown;ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix IC continued. Potential instream enhancement sites for the Upper Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Nehalem River	2158	7077	4-12m	2	M	YES		X	FG	Hans Creek	End Of Coho	
South Fork Nehalem River	1343	4405	4-12m	2	M	YES		X	FG	Hans Creek	End Of Coho	
Step Creek	536	1758	4-12m	2	M			X	FG	Nehalem River	End Of Coho	
Weed Creek(Rock Creek)	4523	14837	4-12m	3	M	YES	95	X		Mouth	End Of Coho	
North Fork Rock Creek	1874	6148	4-12m	3	H	YES	95	X		Mouth	Large TJ/	
Clear Creek	3000	9840	4-12m	3	M	YES		X		Green Timber Creek	End Of Coho(Barrier)	
Green Timber Creek	546	1791	4-12m	3	H					Clear Creek	End Of Coho	Check For Coho Use
Nehalem River	422	1385	4-12m	3	L	YES		X	FG	Hans Creek	End Of Coho(Doty Pond?)	
Upper Nehalem River Trib B	598	1963	4-12m	3	L				FG	Nehalem River	End Of Coho	Check For Coho Use
Ivy Creek	1340	4395	4-12m	4	N					Rock Creek	End Of Coho	
Maynard Creek	1161	3807	4-12m	4	N					Rock Creek	End Of Coho	
Selder Creek	1859	6099	4-12m	4	N				AST	Rock Creek	End Of Coho	
Olson Creek	832	2730	4-12m	4	N			X	FG	Rock Creek	End Of Coho	
North Fork Rock Creek	1950	6395	4-12m	4	N	YES		X	AST	Large TJ/	End Of Coho	
North Fork Rock Creek Trib B	1096	3596	4-12m	4	N				AST	Mouth	End Of Coho	
Rock Creek	3500	11479	4-12m	4	N			X	3	South Fork Rock Creek	End Of Coho	
South Fork Rock Creek	1001	3284	4-12m	4	N	YES		X	FG	Above Shields Rd	End Of Coho	
South Fork Rock Creek Trib A	654	2144	4-12m	4	N					South Fork Rock Creek	End Of Coho	
Bear Creek(Rock Creek)	1622	5319	4-12m	4	H	YES		X	FG	South Fork Rock Creek	End Of Coho	
Beaver Creek(Vernonia) Trib A	1809	5932	4-12m	4	N					Beaver Creek	End Of Coho	
Weed Creek(Vernonia)	806	2642	4-12m	4	N					Nehalem River	End Of Coho	Check For Coho Use
Clear Creek	3672	12045	12-20m	4	H	YES		X		Nehalem River	Green Timber Creek	
Green Timber Creek	175	576	4-12m	4	N					Clear Creek	End Of Coho	Check For Coho Use
Lower North Fork Clear Creek	998	3272	4-12m	4	N					Clear Creek	End Of Coho	
Kist Creek	3110	10202	4-12m	4	N					Nehalem River	End Of Coho	
Robinson Creek	347	1138	4-12m	4	N					TJ/ AT T3N-R5W-11SW	End Of Coho	
Robinson Creek Trib A	1278	4193	4-12m	4	N					Robinson Creek	End Of Coho	Check For Coho Use
North Fork Wolf Creek	1429	4688	4-12m	4	N	YES		X	FG	Wolf Creek	End Of Coho	
Lousignont Creek(Timber)	1532	5024	12-20m	4	H	YES		X		Nehalem River	North Fork Lousignont Creek	
Lousignont Creek(Timber)	1528	5013	4-12m	4	N	YES		X	FG	North Fk Lousignont Cr	Carlson Creek	
Carlson Creek	1567	5138	4-12m	4	M	YES		X	FG	South Fk Lousignont Cr.	End Of Coho	
Carlson Creek	914	2999	4-12m	4	N	YES		X	FG	South Fk Lousignont Cr.	End Of Coho	
Castor Creek	521	1709	4-12m	4	N			X		Nehalem River	End Of Coho	
Nehalem River	6869	22530	12-20m	4	U				FG	Castor Creek	Step Creek	
Nehalem River	756	2480	12-20m	4	M	YES		X	FG	Step Creek	Hans Creek	
Nehalem River	972	3189	12-20m	4	M	YES		X	FG	Step Creek	Hans Creek	
Nehalem River	1500	4918	4-12m	4	N	YES		X	FG	Step Creek	Hans Creek	
Nehalem River	875	2869	4-12m	4	N	YES		X	FG	Hans Creek	End Of Coho(Doty Pond?)	
Step Creek	972	3189	4-12m	4	N				FG	Nehalem River	End Of Coho	
Derby Creek	280	917	4-12m	4	N				FG	Nehalem River	End Of Coho	

Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority); Access: H = High, M = Moderate, L = Low, U = Unknown; ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix ID. Potential instream enhancement sites for the Middle Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Battle Creek	2421	7939	4-12m	1	H			X		Johnson Creek	End Of Road Access	Riparian Work 97
South Fork Battle Creek	959	3146	4-12m	1	H			X		Battle Creek	End Of Coho	
Johnson Creek	514	1686	4-12m	1	H					Battle Creek	/TJ And Road X-Ing	
Cedar Cr(Oak Ranch Cr)	1406	4612	4-12m	1	H			X		Nehalem River	End Of Coho	
Oak Ranch Creek	3287	10781	4-12m	1	H	YES		X	FG	Rock Pit Above Apiary Rd X-Ing	Camp Wilkerson	
Fall Creek(Vernonia)	2370	7772	4-12m	1	H			X		Nehalem River	End Of Coho	Culvert Wk Needed
Pebble Creek	4370	14334	4-12m	1	H			X		Coal Creek	End Of Coho	
West Fork Pebble Creek	1309	4293	4-12m	1	H			X		Pebble Creek	End Of Coho	
Coal Creek(Pebble Creek)	4760	15612	4-12m	1	H	YES		X		Pebble Creek	End Of Coho	
Nehalem River Trib C	1031	3380	4-12m	2	U					Nehalem River	End Of Coho	Check For Coho
Adams Creek	560	1837	4-12m	2	U					Nehalem River	End Of Coho	
Calvin Creek	7873	25825	4-12m	2	H	YES		X		Nehalem River	End Of Coho	
Nehalem River Trib D	1550	5083	4-12m	2	U					Nehalem River	End Of Coho	Check For Coho
Ford Creek	2690	8825	4-12m	2	M					Nehalem River	/TJ AT T6N-R5W-11C	
Lundgren Creek	2948	9668	4-12m	2	H			X		Nehalem River	End Of Coho	
Lundgren Creek	1320	4330	4-12m	2	U			X		Nehalem River	End Of Coho	
Eastman Creek	2094	6869	4-12m	2	H			X		Lundgren Creek	End Of Coho	
Messing Creek	2587	8486	4-12m	2	M			X		Lundgren Creek	End Of Coho	
Messing Creek Trib A	1186	3889	4-12m	2	M					Messing Creek	End Of Coho	
Battle Creek	1678	5504	4-12m	2	H			X		Nehalem River	Johnson Creek	
Deer Creek	3274	10738	12-20m	2	M	YES		X		Nehalem River	TJ/ AT T6N-R4W-6NW	
Deer Creek	8249	27056	4-12m	2	M	YES	95	X		Little Deer Creek	Kauppi Lake	
Deer Creek	715	2344	4-12m	2	M	YES		X		TJ/ AT T6N-R4W-6NW	Little Deer Creek	
Deer Creek Trib A	1210	3970	4-12m	2	U					Deer Creek	End Of Coho	
Little Deer Creek	2955	9691	4-12m	2	M					Deer Creek	End Of Coho	
Nehalem River Trib E	2038	6685	4-12m	2	U					Nehalem River	End Of Coho	Check For Coho
Cedar Cr(Oak Ranch Cr)	1178	3865	4-12m	2	M			X		Nehalem River	End Of Coho	
Oak Ranch Creek	2934	9622	4-12m	2	H	YES		X		Archibald Creek	Rock Pit Above Apiary Rd X-Ing	
Oak Ranch Creek	2502	8207	4-12m	2	U	YES		X	FG	Camp Wilkerson	TJ AT T5N-R3W-21NW	
Oak Ranch Creek	1518	4979	4-12m	2	U				FG	TJ AT T5N-R3W-21NW	End Of Coho	
Crooked Creek	4598	15082	12-20m	2	H	YES				Nehalem River	TJ/ AT T5N-R4W-20NE	Culvert Barrier?
Crooked Creek	7695	25239	4-12m	2	H	YES				TJ/ AT T5N-R4W-20NE	Tj At 315 Rd	Culvert Barrier?
Crooked Creek	2692	8829	4-12m	2	H	YES				TJ At 315 Rd X-Ing	End Of Coho	Culvert Barrier?
Crooked Creek Trib B	1276	4187	4-12m	2	H					TJ At 315 Rd X-Ing	End Of Coho	Check Coho Use
Cook Creek(Vernonia)	364	1193	4-12m	2	H			X		Nehalem River	End Of Coho	
Nehalem River Trib F	708	2322	4-12m	2	H					Nehalem River	End Of Coho	Check For Coho
East Fork Nehalem River	1600	5248	4-12m	2	H			X		Scaponia Park	End Of Coho	Residential Land
East Fork Nehalem River	3052	10012	4-12m	2	M			X		Scaponia Park	End Of Coho	Check For Coho
East Fork Nehalem Trib A	576	1888	4-12m	2	M					East Fork Nehalem River	End Of Coho	Check For Coho
East Fork Nehalem Trib B	662	2172	4-12m	2	H					East Fork Nehalem River	End Of Coho	Residential Land
Dog Creek	1121	3678	4-12m	2	M	YES	95	X		East Fork Nehalem River	End Of Coho	
Elk Creek	594	1947	4-12m	2	M	YES				East Fork Nehalem River	End Of Coho	Culvert Wk Needed
Kensky Creek	1413	4635	4-12m	2	H	YES	95	X		East Fork Nehalem River	End Of Coho	Some Priority 4
Nehalem River Trib G	1976	6481	4-12m	2	U					Nehalem River	End Of Coho	Check For Coho
Knickerson Creek	2068	6785	4-12m	2	U					Nehalem River	End Of Coho	
Coon Creek	1710	5608	4-12m	2	M	YES		X		Pebble Creek	End Of Coho	

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Appendix ID continued. Potential instream enhancement sites for the Middle Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Pebble Creek	2729	8951	4-12m	2	M			X		West Fork Pebble Creek	End Of Coho	
Swamp Creek	1570	5148	4-12m	2	U					Pebble Creek	End Of Coho	
West Fork Pebble Creek Trib A	1658	5439	4-12m	2	U					West Pebble Creek	End Of Coho	
Coal Creek Trib B	391	1281	4-12m	2	M			X		Coal Creek	End Of Coho	
Dell Creek	599	1965	4-12m	2	U	YES				Pebble Creek	End Of Coho	
Cedar Creek(Oak Ranch Creek)	250	821	4-12m	3	H			X		Nehalem River	End Of Coho	
Archibald Creek	1312	4304	4-12m	3	H			X		Oak Ranch Creek	ROAD X-ING AT T5N-R4W-1S	
Dog Creek	1573	5161	4-12m	3	L	YES		X		East Fork Nehalem River	End Of Coho	
Dog Creek Trib A	625	2051	4-12m	3	L					Dog Creek	End Of Coho	Check For Coho
Elk Creek	4501	14763	4-12m	3	M	YES				East Fork Nehalem River	End Of Coho	Culvert Wk Needed
Kenusky Creek	1696	5564	4-12m	3	H	YES		X		East Fork Nehalem River	End Of Coho	Temp.,Riparian
Nehalem River Trib C	1142	3745	4-12m	4	N					Nehalem River	End Of Coho	Check For Coho
Adams Creek	1141	3742	4-12m	4	N					Nehalem River	End Of Coho	
Calvin Creek	850	2790	4-12m	4	N					Nehalem River	End Of Coho	
Ford Creek	1873	6142	4-12m	4	N					/TJ AT T6N-R5W-11NE	End Of Coho	
Ford Creek Trib A	902	2957	4-12m	4	N					Ford Creek	End Of Coho	
Lundgren Creek	407	1334	4-12m	4	N			X		Nehalem River	End Of Coho	
Battle Creek	1299	4262	4-12m	4	N			X		End Of Road Access	End Of Coho	
South Fork Battle Creek	496	1627	4-12m	4	N			X		Battle Creek	End Of Coho	
Johnson Creek	2743	8998	4-12m	4	N					/TJ AT T6N-R4W-20NW	End Of Coho	
Deer Creek	909	2983	4-12m	4	N	YES		X		TJ/ AT T6N-R4W-6NW	Little Deer Creek	
Oak Ranch Creek	3141	10302	12-20m	4	H	YES		X		Nehalem River	Archibald Creek	
Oak Ranch Creek	902	2957	4-12m	4	N			X	FG	Camp Wilkerson	TJ AT T5N-R3W-21NW	
Crooked Creek Trib A	1537	5041	4-12m	4	N					Crooked Creek	End Of Coho	Check Coho Use
Cook Creek(Vernonia)	1138	3733	4-12m	4	H			X		Nehalem River	End Of Coho	
East Fork Nehalem River	4523	14837	12-20m	4	M			X		Dog Creek	Scaponia Park	
East Fork Nehalem Trib A	606	1988	4-12m	4	N					East Fork Nehalem River	End Of Coho	Check For Coho
East Fork Nehalem Trib C	453	1485	4-12m	4	N						End Of Coho	Check Coho Use
Kenusky Creek	2002	6565	4-12m	4	N	YES		X		East Fork Nehalem	End Of Coho	
Kenusky Creek Trib A	759	2491	4-12m	4	N			X		Kenusky Creek	End Of Coho	
Jim George Creek	3277	10747	4-12m	4	N					East Fork Nehalem River	End Of Coho	
Coon Creek	1979	6492	4-12m	4	N	YES				Pebble Creek	End Of Coho	
Pebble Creek	5315	17433	12-20m	4	M			X		Nehalem River	Coal Creek	Water Quality(Temp)?
Pebble Creek	2162	7091	4-12m	4	N			X	FG	West Fork Pebble Creek	End Of Coho	
West Fork Pebble Creek	1428	4682	4-12m	4	N			X		Pebble Creek	End Of Coho	
Dell Creek	1810	5936	4-12m	4	N	YES			FG	Pebble Creek	End Of Coho	
Dell Creek Trib A	726	2382	4-12m	4	N	YES				Dell Creek	End Of Coho	

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Appendix IE. Potential instream enhancement sites for the Jewell area of the Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
East Humbug Creek	3428	11245	4-12m	1	H			X	AST	1st Rd X-Ing	End Of Road Access	
Cow Creek(Vinemaple)	2623	8602	4-12m	1	H	YES		X		Nehalem River	End Of Road Access	
Buster Creek	1789	5866	4-12m	1	H		96	X	AST	Walker Creek	Stanley Creek	
Buster Creek	3280	10758	4-12m	1	H			X	AST	Stanley Creek	End Of Road Access	
Beneke Creek	2436	7990	4-12m	1	H			X		Walker Creek	End Of Road Access	
Walker Creek	5892	19326	4-12m	1	H	YES		X	AST	2nd Walker Cr Rd X-Ing	End Of Road Access	
Fishhawk Creek(Birkenfeld)	432	1415	4-12m	1	H	YES		X		North Fork Fishhawk Cr	End Of Coho(Falls)	
McClure Creek	825	2705	4-12m	2	U					Humbug Creek	End Of Coho	
Alder Creek(Humbug Creek)	801	2629	4-12m	2	U					Humbug Creek	End Of Coho	
Big Creek	1881	6170	4-12m	2	U	YES				Humbug Creek	End Of Coho	
Humbug Creek	1838	6030	12-20m	2	H	YES		X		East Humbug Creek	West Humbug Creek	
East Humbug Creek	1607	5271	12-20m	2	H			X		Humbug Creek	1st Road X-Ing	Off Channel Potential
East Humbug Creek	1738	5699	4-12m	2	U				AST	End Of Road Access	End Of Coho	
Beaver Cr.(Humbug Creek)	2390	7839	4-12m	2	U					Humbug Creek	End Of Coho	
Destruction Creek	751	2462	4-12m	2	U					Beaver Creek	End Of Coho	
West Humbug Creek	2438	7998	4-12m	2	M	YES	96	X		Humbug Creek	TJ/ AT T5N-R8W-22N	
West Humbug Creek	3225	10578	4-12m	2	M	YES		X		TJ/ AT T5N-R8W-22N	End Of Coho	
West Humbug Creek Trib A	1087	3564	4-12m	2	M			X		West Humbug Creek	End Of Coho	
Quartz Creek	1985	6511	4-12m	2	U	YES			AST	Nehalem River	High Gradient Reach Below S Fk	
George Creek(Vinemaple)	726	2380	4-12m	2	U					Nehalem River	End Of Coho	Fencing Work 1995
Klines Creek (North)	992	3254	4-12m	2	M					Nehalem River	End Of Coho	
Klines Creek(South)	823	2700	4-12m	2	H	YES		X		Nehalem River	End Of Coho	
Moores Creek	655	2150	4-12m	2	H	YES				Nehalem River	End Of Coho	
Buster Creek	1874	6146	12-20m	2	H			X		/TJ AT T5N-R6W-30NW	Walker Creek	
Buster Creek	888	2914	4-12m	2	M			X	AST	End Of Lower Rd Access	End Of Coho	
Walker Creek(Buster Creek)	1253	4111	4-12m	2	M			X	AST	Buster Creek	Tj Upstream Of Wage Rd	
Stanley Creek	1259	4131	4-12m	2	U				AST	Buster Creek	End Of Coho	
Fishhawk Creek(Jewell)	1665	5461	4-12m	2	M	YES		X		Hamilton Creek	Fishhawk Falls	
Hamilton Creek	3399	11149	4-12m	2	M	YES	95	X	AST	Fishhawk Creek	End Of Road Access	
Gilmore Creek	986	3234	4-12m	2	H					Beneke Creek	End Of Coho	
Gilmore Creek	1429	4688	4-12m	2	U					Beneke Creek	End Of Coho	
Trailover Creek	313	1027	4-12m	2	U	YES				Walker Creek	End Of Coho	
Walker Creek	2462	8076	12-20m	2	H	YES		X		Beneke Creek	2nd Walker Creek Rd X-Ing	
Crawford Creek	147	482	4-12m	2	U					Nehalem River	End Of Coho	
Grub Creek	950	3115	4-12m	2	U				AST	Nehalem River	End Of Coho	
Squaw Creek	4495	14745	4-12m	2	U				AST	Nehalem River	End Of Coho	
West Branch Squaw Creek	1248	4095	4-12m	2	U				AST	Squaw Creek	End Of Coho	
Northrup Creek	709	2324	4-12m	2	H			X	AST	OdF Boundary	Cow Creek	
Northrup Creek	5912	19391	4-12m	2	M			X	AST	Cow Creek	End Of Coho	
Sager Creek	2513	8241	4-12m	2	M	YES		X	AST	Nehalem River	East Sager Creek	
East Sager Creek	1696	5564	4-12m	2	M			X	AST	Sager Creek	End Of Coho	Silt,Culvert,Check For Coho
Lousignont Creek(Birkenfeld)	522	1712	4-12m	2	M					Nehalem River	End Of Coho	
Kale Creek	1445	4740	4-12m	2	U					Nehalem River	End Of Coho	Check Coho Use
Deep Creek	403	1322	4-12m	2	U			X	AST	TJ AT T6N-R6W-12	End Of Coho	
Deep Creek	3099	10165	4-12m	2	U	YES			AST	TJ/ AT T5N-R5W-19NW	Tj At End Of Deep Creek Rd.	

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Appendix I E continued. Potential instream enhancement sites for the Jewell area of the Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Deep Creek Trib A	1190	3904	4-12m	2	U					Deep Creek	End Of Coho	Check Coho Use
Deep Creek Trib C	402	1319	4-12m	2	U				AST	TJ AT T6N-R6W-12	End Of Coho	
Lane Creek	3129	10263	4-12m	2	U					Deep Creek	End Of Coho	Check Coho Use
Lane Creek Trib A	1625	5331	4-12m	2	U					Lane Creek	End Of Coho	Check Coho Use
Fishhawk Creek(Birkenfeld)	979	3212	4-12m	2	H	YES		X		Mccocon Creek	North Fork Fishhawk Cr.	
Warner Creek	1515	4970	4-12m	2	U	YES			AST	Fishhawk Creek	End Of Coho	Check Coho Use
Boxler Creek	1295	4249	4-12m	2	U					Road X-Ing Above Lake	Fishhawk North Rd X-Ing	
North Fork Fishhawk Creek	2552	8372	4-12m	2	U					Wrong Way Creek	Upper Road Crossing	
Wrong Way Creek	1358	4454	4-12m	2	U					Mouth	End Of Coho	
Beaver Creek(Birkenfeld)	5405	17728	4-12m	2	U					Nehalem River	ROAD X-ING AT T7N-R5W-32SE	
Beaver Cr. Trib A(Birkenfeld)	3351	10992	4-12m	2	U					Beaver Creek	End Of Coho	
Klines Creek(South)	770	2527	4-12m	3	H	YES		X		Nehalem River	End Of Coho	Agricultural Land
Moore Creek	460	1510	4-12m	3	H	YES		X		Nehalem River	End Of Coho	Agricultural Land
Buster Creek Trib A	167	547	4-12m	3	H				AST	Buster Creek	End Of Coho	Check Coho Use
Beneke Creek	1609	5279	4-12m	3	L			X	AST	Bull Heifer Creek	TJ AT T6N-R7W-11C	
Cow Creek	2908	9537	4-12m	3	H			X	AST	Northrup Creek	200m Above Cow Cr Road	
Deep Creek	1444	4735	4-12m	3	H	YES		X		Lane Creek	TJ AT T5N-R5W-19NW	
McClure Creek	1361	4465	4-12m	4	N					Humbug Creek	End Of Coho	
Alder Creek(Humbug Creek)	1265	4148	4-12m	4	N					Humbug Creek	End Of Coho	
Strum Creek	505	1657	4-12m	4	N					Nehalem River	End Of Coho	
George Creek(Vinemaple)	1188	3896	4-12m	4	N					Nehalem River	End Of Coho	Fencing Work 1995
Cow Creek(Vinemaple)	1383	4537	4-12m	4	N	YES		X	AST	End Of Road Access	End Of Coho(Falls)	
Klines Creek (North)	887	2908	4-12m	4	N					Nehalem River	End Of Coho	
Klines Creek(South)	1107	3630	4-12m	4	N	YES		X	AST	Nehalem River	End Of Coho	
Buster Creek	3844	12607	12-20m	4	U			X	AST	Nehalem River	/TJ AT T5N-R6W-30NW	
Buster Creek	2783	9128	4-12m	4	N			X	AST	End Of Lower Rd Access	End Of Coho	
Buster Creek Trib B	1908	6257	4-12m	4	N				AST	Buster Creek	End Of Coho	Check Coho Use
Buster Creek Trib C	1077	3532	4-12m	4	N				AST	Buster Creek	End Of Coho (Below Rd X-Ing)	Check Coho Use
Walker Creek(Buster Creek)	2014	6606	4-12m	4	N			X	AST	Walker Creek	End Of Coho	
Walker Cr.(Buster Cr.) Trib A	1473	4832	4-12m	4	N			X	AST	Walker Creek	End Of Coho	Check Coho Use
Fishhawk Creek(Jewell)	5728	18788	12-20m	4	H		95	X		Little Fishhawk Creek	Hamilton Creek	Riparian Planting 1997
Hamilton Creek	2302	7551	4-12m	4	N	YES		X	AST	End Of Road Access	End Of Coho	
Beneke Creek	5163	16934	12-20m	4	H	YES		X	AST	Gilmore Creek	Walker Creek	
Beneke Creek	1600	5249	4-12m	4	N				AST	End Of Road Access	Bull Heifer Creek	
Bull Heifer Creek	500	1640	4-12m	4	N				AST	Beneke Creek	End Of Coho	
Beneke Creek	222	729	4-12m	4	N				AST	Bull Heifer Creek	TJ AT T6N-R7W-11C	
Gilmore Creek Trib A	1929	6326	4-12m	4	N				AST	Gilmore Creek	End Of Coho	
Trailover Creek	1645	5395	4-12m	4	N	YES			AST	Walker Creek	End Of Coho	
Walker Creek	2712	8896	4-12m	4	N			X	AST	/TJ AT T5N-R6W-20	End Of Coho	
Walker Creek	6001	19682	4-12m	4	N	YES		X	AST	End Of Road Access	End Of Coho	
Crawford Creek	1343	4403	4-12m	4	N				AST	Nehalem River	End Of Coho	
Grub Creek	1336	4383	4-12m	4	N				AST	Nehalem River	End Of Coho	Check Coho Use
Nehalem River Trib B	756	2478	4-12m	4	N				AST	Nehalem River	End Of Coho	Check Coho Use
Staughters Creek	1536	5039	4-12m	4	U				AST	Nehalem River	End Of Coho	Check Coho Use
West Branch Squaw Creek	635	2083	4-12m	4	N				AST	Squaw Creek	End Of Coho	

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Appendix IE continued. Potential instream enhancement sites for the Jewell area of the Nehalem River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Northrup Creek	2520	8265	12-20m	4	H			X		Nehalem River	ODF Boundary	Agricultural Land
Northrup Creek	576	1889	4-12m	4	N			X	AST	Cow Creek	End Of Coho	
Cow Creek	1907	6256	4-12m	4	N			X	AST	200m Above Cow Cr Rd	End Of Coho	
Sager Creek	2854	9360	4-12m	4	N	YES		X	AST	East Sager Creek	End Of Coho	
Lousignont Creek(Birkenfeld)	4233	13884	4-12m	4	N				AST	Nehalem River	End Of Coho	
Deep Creek	6619	21712	12-20m	4	H	YES		X		Lane Creek	TJ AT T5N-R5W-19NW	
Deep Creek	1947	6388	4-12m	4	N	YES				Lane Creek	TJ AT T5N-R5W-19NW	
Deep Creek	1287	4223	4-12m	4	N				AST	TJ AT T6N-R6W-12	End Of Coho	
Deep Creek	613	2012	4-12m	4	N	YES				TJ/ AT T5N-R5W-19NW	Tj At End Of Deep Creek Rd.	
Deep Creek Trib B	3179	10427	4-12m	4	N				AST	Deep Creek	End Of Coho	
Deep Creek Trib C	804	2638	4-12m	4	N				AST	TJ AT T6N-R6W-12	End Of Coho	
Fishhawk Creek(Birkenfeld)	3116	10222	12-20m	4	H			X	AST	End Of Ag Land Use	Fishhawk Lake	
Fishhawk Creek(Birkenfeld)	3545	11627	12-20m	4	H	YES		X		Fishhawk Lake	Mccocon Creek	Ag Land, Erosion
Fishhawk Creek(Birkenfeld)	1018	3340	12-20m	4	H	YES		X		Mccocon Creek	North Fork Fishhawk Cr.	
Warner Creek	680	2232	4-12m	4	N	YES			AST	Fishhawk Creek	End Of Coho	
McCoon Creek	3124	10245	4-12m	4	M	YES				Fishhawk Creek	End Of Coho	Good Habitat
North Fork Fishhawk Creek	741	2431	4-12m	4	H					Fishhawk Creek	Wrong Way Creek	

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Appendix I F. Potential instream enhancement sites for the Lower Nehalem and Salmonberry River basins

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Foley Creek	5234	17167	4-12m	1	H		95	X		Road X-Ing At T2N-R10W-13	End Of Coho	
East Foley Creek	1169	3835	4-12m	1	H	YES		X		Mouth	ODF Boundary	Fencing 1996
Lost Creek	1208	3961	4-12m	1	H			X	TILL	Lower End Of Upper Access	End Of Coho(Barrier)	
Jetty Creek	2379	7804	4-12m	2	H	YES				Nehalem Bay	End Of Coho	
Messhouse Creek	1063	3486	4-12m	2	U					Nehalem River	End Of Coho	Check Coho Use
Alder Creek(Nehalem Bay)	2749	9018	4-12m	2	U					Nehalem Bay	End Of Coho	
Roy Creek	1974	6474	4-12m	2	U					Mouth	ODF Boundary	Culvert Barrier?
Anderson Creek (Foley Cr.)	925	3033	4-12m	2	U					Mouth	Road X-Ing At T2N-R10W-1	
Dry Creek	882	2892	4-12m	2	H			X	TILL	ODF Boundary	1st TJ On Right At T2N-R9W-8S	Check Coho Use
Dry Creek	800	2626	4-12m	2	H			X		Mouth	ODF Boundary	Check Coho Use
Peterson Creek	447	1465	4-12m	2	H			X		Mouth	Foss Rd.	
Anderson Creek(Low. Nehalem)	1804	5917	4-12m	2	M			X	TILL	Mouth	1800m	
Cook Creek(Lower Nehalem)	6157	20194	12-20m	2	H			X	TILL	Clammer Rd. X-Ing	Large TJ On Left At T2N-R8W-3N	
Cook Creek(Lower Nehalem)	3091	10138	4-12m	2	H			X	TILL	Large TJ On Left At T2N-R8W-3N	Road X-Ing At T2N-R8W-1NW	
Hanson Creek	297	973	4-12m	2	H				TILL	Cook Creek	End Of Coho	
Hoevet Creek	428	1403	4-12m	2	M			X	TILL	Mouth	400m	
Lost Creek	384	1259	12-20m	2	H			X		Nehalem River	Ofd Boundary	
Fall Creek(Lower Nehalem)	1186	3890	4-12m	2	U				TILL	Nehalem River	End Of Coho	
Cronin Creek	2007	6583	4-12m	2	U				TILL	North Fork Cronin Creek	Middle Fork Cronin Creek	
North Fork Cronin Creek	3224	10576	4-12m	2	U				TILL	South Fork Cronin Creek	End Of Coho	
Middle Fork Cronin Creek	2156	7071	4-12m	2	U				TILL	South Fork Cronin Creek	End Of Coho	
Nehalem River Trib A	1250	4099	4-12m	2	U				AST	Nehalem River	End Of Coho	
Spruce Run Creek	170	558	4-12m	2	H			X	AST	Nehalem River	End Of Coho	
George Creek	2625	8609	4-12m	2	U					Nehalem River	End Of Coho	Check Coho Dist.
East Foley Creek	995	3263	4-12m	3	H	YES		X	TILL	Road X-Ing At T2N-R9W-8	TJ On Right At T2N-R9W-8S	
South Fork Cook Creek	761	2496	4-12m	3	M			X	TILL	Cook Creek	End Of Coho	
East Fork Cook Creek	2000	6561	4-12m	3	L			X	TILL	Cook Creek	End Of Coho	
Lost Creek	2582	8469	4-12m	3	L			X	TILL	Ofd Boundary	Lower End Of Upper Access	
Foley Creek	1186	3889	12-20m	4	H	YES		X		Anderson Creek	East Foley Creek	Fencing 1996
Foley Creek	3109	10197	12-20m	4	H	YES		X		East Foley Creek	Road X-Ing At T2N-R10W-13	
East Foley Creek	1842	6041	4-12m	4	H	YES		X	TILL	ODF Boundary	Road X-Ing At T2N-R9W-8	Good habitat
Cook Creek(Lower Nehalem)	4079	13378	12-20m	4	L			X		Mouth	Clammer Rd. X-Ing	
Strahm Creek	307	1008	4-12m	4	N			X	TILL	Cook Creek	End Of Coho	
Hoevet Creek	470	1540	4-12m	4	N			X	TILL	End Of Road Access	End Of Coho	
Lost Creek	866	2839	4-12m	4	N			X	TILL	Ofd Boundary	Lower End Of Upper Access	
Hellhoff Creek	2148	7046	4-12m	4	N				TILL	Nehalem River	End Of Coho	
South Fork Salmonberry River	976	3200	4-12m	4	N				TILL	Salmonberry River	Ripple Creek	
South Fork Salmonberry River	1890	6199	4-12m	4	U				TILL	Ripple Creek	End Of Coho	
Ripple Creek	1443	4731	4-12m	4	U				TILL	S. Fk Salmonberry River	End Of Coho	
Kinney Creek	1370	4495	4-12m	4	N				FG	Salmonberry River	End Of Coho	
Wolf Creek	2775	9102	4-12m	4	N	YES				Salmonberry River	End Of Coho(Barrier)	
Wolf Creek Trib A	623	2042	4-12m	4	N				FG	Wolf Creek	End Of Coho	
Salmonberry River	607	1991	4-12m	4	N	YES			FG	Pennyoyr Creek	End Of Coho(Barrier)	
Cronin Creek	822	2697	12-20m	4	U			X		Nehalem River	South Fork Cronin Creek	
South Fork Cronin Creek	1294	4243	4-12m	4	N				TILL	Middle Fork Cronin Creek	End Of Coho	

Spruce Run Creek	744	2440	4-12m	4	N				AST	Nehalem River	End Of Coho	
Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority); Access: H = High, M = Moderate, L = Low, U = Unknown; ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.												

Appendix I G. Potential instream enhancement sites for the North Fork Nehalem River.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Gods Valley Creek	7170	23517	4-12m	1	H	YES	94,95	X		North Fork Nehalem River	End Of Coho	
North Fork Nehalem River	4300	14103	4-12m	1	H	YES		X	AST	L N Fk Nehalem River	End Of Coho	
Little North Fk Nehalem River	1681	5514	4-12m	1	H	YES	95	X		W. Munce Rd X-Ing	End Of Road Access	
Bobs Creek	1502	4928	4-12m	2	M			X		Nehalem Bay	End Of Coho	
Anderson Creek(N Fk Nehalem)	2527	8290	4-12m	2	U					N. Fk. Nehalem River	End Of Coho	
Coal Creek(N Fk Nehalem)	1541	5053	4-12m	2	M	YES		X	TILL	End Of Ag Land Use	End Of Coho	
West Fork Coal Creek	2984	9787	4-12m	2	M			X	TILL	Coal Creek	End Of Coho	
Gravel Creek	1657	5435	4-12m	2	U					North Fork Nehalem River	Road X-Ing At T3n-R9w-18se	
Big Rackheap Creek	2425	7952	4-12m	2	M				TILL	North Fork Nehalem River	End Of Coho	
Rack Heap Creek	1237	4057	4-12m	2	M				TILL	Big Rackheap Creek	End Of Coho	
Acey Creek	4204	13789	4-12m	2	U					N. Fk. Nehalem River	End Of Coho	
Fall Creek(Lower N Fk Nehalem)	463	1519	4-12m	2	U					N. Fk. Nehalem River	End Of Coho	
Henderson Creek	696	2282	4-12m	2	U					Nehalem River	End Of Coho	
Boykin Creek	1683	5520	4-12m	2	U					North Fork Nehalem River	End Of Coho	
Soapstone Creek	1331	4366	12-20m	2	H			X		North Fork Nehalem River	Buchanan Creek	
Soapstone Creek	2009	6590	4-12m	2	M	YES		X	AST	Buchanan Creek	End Of Coho	
Jack Horner Creek	584	1915	4-12m	2	U	YES				Soapstone Creek	End Of Coho	
Sweet Home Creek	3352	10995	4-12m	2	H			X	AST	North Fork Nehalem River	End Of Coho	
Sweethome Creek Trib B	1247	4091	4-12m	2	U				AST	Sweethome Creek	End Of Coho	Check Coho Use
Fall Creek(Upper N Fk Nehalem)	1167	3827	4-12m	2	U	YES			AST	North Fork Nehalem River	Fall Creek Falls	
North Fork Nehalem River	1038	3405	4-12m	2	U			X		Mattson Rd X-Ing	W Munce Rd X-Ing	
North Fork Nehalem Trib B	1985	6510	4-12m	2	U					North Fork Nehalem River	End Of Coho	Check Upper Dist. Of Coho
North Fork Nehalem Trib C	2561	8399	4-12m	2	U					North Fork Nehalem River	End Of Coho	Check Upper Dist. Of Coho
Little North Fk Nehalem River	2743	8996	4-12m	2	U	YES		X		Mattson Rd X-Ing	W. Munce Rd. X-Ing	
Little North Fork Nehalem Trib A	2715	8904	4-12m	2	U				AST	L N Fk Nehalem River	End Of Coho	Check Coho Use
Bobs Creek	678	2224	4-12m	3	H			X		Nehalem Bay	End Of Coho	
Coal Creek(N Fk Nehalem)	527	1729	4-12m	3	U	YES		X		End Of Ag Land Use	End Of Coho	
Soapstone Creek	1652	5418	4-12m	3	L	YES		X	AST	Buchanan Creek	End Of Coho	
Soapstone Creek Trib A	2280	7480	4-12m	3	L				AST	Soapstone Creek	End Of Coho	
Jack Horner Creek	416	1365	4-12m	3	L	YES		X		Soapstone Creek	End Of Coho	
Lost Creek	2815	9235	4-12m	3	L				AST	North Fork Nehalem River	End Of Coho	
Little North Fk Nehalem River	1990	6528	4-12m	3	U	YES				End Of Road Access	End Of Coho	
Anderson Creek(N Fk Nehalem)	141	461	4-12m	4	N					North Fork Nehalem River	End Of Coho	
Coal Creek(N Fk Nehalem)	1889	6195	12-20m	4	U	YES		X		North Fork Nehalem River	End Of Ag Land Use	
Coal Creek(N Fk Nehalem)	2868	9408	4-12m	4	N	YES		X	TILL	End Of Ag Land Use	End Of Coho	
West Fork Coal Creek	106	347	4-12m	4	N					Coal Creek	End Of Coho	
Big Rackheap Creek	948	3110	4-12m	4	N					North Fork Nehalem River	End Of Coho	
Henderson Creek	1122	3682	4-12m	4	N					Nehalem River	End Of Coho	
Buchanan Creek	631	2068	4-12m	4	N	YES		X		Soapstone Creek	Falls	
Jack Horner Creek	539	1769	4-12m	4	N	YES			AST	Soapstone Creek	End Of Coho	
North Fork Nehalem Trib A	880	2886	4-12m	4	N					North Fork Nehalem River	End Of Coho	
North Fork Nehalem River	6214	20382	12-20m	4	U	YES			AST	Fall Creek	L N Fk Nehalem River	
Little North Fk Nehalem River	2137	7009	12-20m	4	H	YES			AST	N Fk Nehalem	Mattson Rd X-Ing	

Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority); Access: H = High, M = Moderate, L = Low, U = Unknown; ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix IH. Potential instream enhancement sites for the Miami River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF District	From	To
Hobson Creek	471	1545	4-12m	2				Mouth	Miami-Foley Rd.
Illingsworth Creek	1010	3312	4-12m	2				Mouth	ODF Boundary at T1N-R10W-23C
Miami River	1793	5882	4-12m	2	YES	X	TILL	TJ on left at T2N-R9W-21	Falls at T2N-R9W-23
Minich Creek	906	2973	4-12m	2				Mouth	ODF Boundary
Minich Creek	49	161	4-12m	2			TILL	ODF Boundary	upstream 40m
Moss Creek	1110	3640	4-12m	2				Mouth	ODF Boundary
Moss Creek	1331	4364	4-12m	2			TILL	Lower ODF Boundary	Upper ODF Boundary
Moss Creek	1540	5051	4-12m	2	YES			Upper ODF Boundary	TJ on left at T1N-R10W-19
N Fk Miami River	1486	4874	4-12m	2		X	TILL	Mouth	TJ on left at T2N-R9W-14
Peterson Creek	1155	3787	4-12m	2	YES			Mouth	Third road x-ing
Prouty Creek	668	2190	4-12m	2		X	TILL	Mouth	TJ on left past Miami For. Rd
Waldron Creek	760	2492	4-12m	2				Mouth	Kiger Creek
Miami River	1535	5034	12-20m	2	YES		TILL	Prouty Creek	ODF Boundary
Miami River	6321	20732	12-20m	2	YES	X	TILL	ODF Boundary	TJ on left at T2N-R9W-21
Stuart Creek	206	674	4-12m	4				Mouth	ODF Boundary
Stuart Creek	822	2697	4-12m	4			TILL	ODF Boundary	TJ on left at T2N-R10W-36

Priority:1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority);ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix II. Potential instream enhancement sites for the Kilchis River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF District	From	To
Little South Fk Kilchis River	3200	10496	4-12m	1	YES	X	TILL	Sam Downs Creek	TJ on left at T1N-R9W-13
Clear Creek	884	2898	12-20m	2	YES	X		Mouth	2nd Bridge
Clear Creek	2477	8126	4-12m	2	YES	X	TILL	2nd Bridge	TJ on left at T1S-R9W-3
Coal Creek	2015	6611	4-12m	2				Mouth	Diversion Dam
Fick Creek	391	1283	4-12m	2		X	TILL	Mouth	400m
Kilchis River Trib 1	830	2722	4-12m	2				Mouth	ODF Boundary
Kilchis River Trib 1	114	373	4-12m	2			TILL	ODF Boundary	Upstream 100m
Little South Fk Kilchis River	1978	6487	12-20m	2	YES	X	TILL	Iris Creek	Sam Downs Creek
Murphy Creek	834	2734	4-12m	2				Mouth	Kilchis River Rd
North Fork Kilchis River	2108	6914	4-12m	2	YES	X	TILL	Triangulation Creek	Kilchis River Falls
Company Creek	466	1529	4-12m	3		X	TILL	Mouth	500m
S Fk Kilchis River	1063	3488	4-12m	3	YES	X	TILL	Fitch Creek	1st TJ on left at T1N-R8W-9
Sam Downs Creek	1892	6206	4-12m	3	YES	X	TILL	Mouth	Anns Creek
Schroeder Creek	954	3128	4-12m	3		X	TILL	French Creek	TJ on left at T2N-R8W-19
South Fork Kilchis River	6140	20139	12-20m	3	YES	X	TILL	Company Creek	Fitch Creek
Triangulation Creek	347	1137	4-12m	3		X	TILL	Mouth	350m
North Fork Kilchis River	1270	4164	12-20m	4	YES	X	TILL	Fossil Canyon	Triangulation Creek
Schroeder Creek	1912	6271	12-20m	4		X	TILL	mouth	French Creek

Priority:1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority);ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix I J. Potential instream enhancement sites for the Wilson River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF Ownership	From	To
Beaver Creek	198	651	4-12m	2			TILL	ODF Boundary	upstream 200m
Ben Smith Creek	1266	4153	4-12m	2				mouth	upstream 1250m
Cedar Creek	3101	10170	4-12m	2		X	TILL	TJ on right at T1N-R7W-7	past N Fk 1100m
Cedar Creek Trib 1	1188	3895	4-12m	2			TILL	Cedar Creek	upstream 1200m
Deo Creek	2704	8869	4-12m	2	YES		FG	Mouth	Road X-ing at T1N-R6W-1
Devils Lake Fork	7915	25961	4-12m	2	YES		FG	Elliot Creek	Headwaters at T1N-R5W-5SE
Devils Lake Fork Trib 1	2223	7293	4-12m	2			FG	Mouth	End of ODF ownership
Devils Lake Fork Trib 2	1705	5592	4-12m	2			FG	Mouth	Road X-ing at T1N-R5W-4
Elk Creek	3057	10028	4-12m	2			FG	Wilson River	TJ on left at T2N-R6W-29
Elliott Creek	2439	7999	4-12m	2	YES		FG	Mouth	Falls
Fox Creek	1420	4657	4-12m	2				Mouth	Barrier at T1S-R7W-6
Hughey Creek	2264	7427	4-12m	2				Mouth	T1S-R9W-26C
Idiot Creek	1514	4965	4-12m	2	YES	X	FG	Mouth	Barrier at T2N-R6W-28
Jones Creek	733	2403	4-12m	2		X	TILL	Mouth	300m above Cedar Creek Rd
N Fk Cedar Creek	1163	3816	4-12m	2			TILL	Mouth	Forks at T1N-R8W-1
Phipps Creek	1252	4107	4-12m	2		X	TILL	Mouth	upstream 1250m
Roger Creek	2101	6893	4-12m	2			TILL	W Fk of N Fk Wilson	TJ on left at T2N-R7W-17
South Fork Wilson River	4136	13567	4-12m	2	YES	X	FG	T1N-R6W-9NE	TJ on right at T1N-R6W-15
West Fk North Fk Wilson River	3272	10733	4-12m	2	YES		TILL	Roger Creek	1st TJ on left at T2N-R8W-25
Cedar Creek	2661	8727	12-20m	2		X	TILL	mouth	TJ on right at T1N-R7W-7
South Fork Wilson River	3979	13050	12-20m	2	YES	X	FG	S. Fk Camp	T1N-R6W-9NE
Drift Creek	686	2249	4-12m	3	YES		FG	Mouth	Barrier at 700m
S Fk Jordan Creek	2992	9814	4-12m	3	YES		TILL	Mouth	End of Road
White Creek	1858	6096	4-12m	3	YES		TILL	Mouth	TJ on right at T1S-R8W-6
North Fork Wilson River	3946	12944	4-12m	4			TILL	Morris Creek	Forks at T2N-R7W-14N
Devils Lake Fork	1677	5502	12-20m	4	YES		FG	Drift Creek	Elliot Creek
Jordan Creek	5428	17803	12-20m	4		X	TILL	South Fork Jordan Creek	Falls at T1N-R7W-26
Little North Fork Wilson River	4930	16169	12-20m	4	YES		TILL	White Creek	Barrier at T1N-R8W-33
North Fork Wilson River	3029	9934	12-20m	4		X	TILL	W Fk of N Fk Wilson	Morris Creek
West Fk North Fk Wilson River	3196	10481	12-20m	4	YES	X	TILL	North Fork Wilson River	Roger Creek

Priority:1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority);ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix I K. Potential instream enhancement sites for the Trask River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF District	From	To
E Fk of S Fk Trask River	1799	5900	4-12m	1		X	TILL	TJ on left at T2S-R7W-26	Boundary of SEC 25 and 26
Edwards Creek	5411	17747	4-12m	1	YES		TILL	Mouth	End of old road
South Fork Trask River	4635	15202	4-12m	1	YES	X	TILL	Bill Creek	Headwaters at T2S-R8W-35W
Summit Creek	104	342	4-12m	1		X		South Fork Trask River	upstream 100m
Bill Creek	1084	3556	4-12m	2	YES	X	TILL	Mouth	Upper ODF Boundary
Bill Creek	264	867	4-12m	2	YES	X	TILL		
Bill Creek	1378	4520	4-12m	2	YES	X		Upstream ODF Boundary	upstream 1300m at T2S-R8W-26N
Boundary Creek	936	3070	4-12m	2	YES	X	TILL	Mouth	Headquarters Camp Cr.
Clear Creek	4547	14913	4-12m	2	YES	X	TILL	Mouth	Barrier at T1S-R6W-7
Cruiser Creek	1094	3588	4-12m	2	YES			Mouth	ODF Boundary
Cruiser Creek	1525	5002	4-12m	2	YES		TILL	ODF Boundary	400m past TJ Right
Cruiser Creek Trib 1	797	2614	4-12m	2			TILL	Mouth	
Elkhorn Creek	4399	14430	4-12m	2	YES		TILL	Cruiser Creek	TJ at T2S-R6W-7SW
Elkhorn Creek Trib 1	1553	5094	4-12m	2	YES		TILL	TJ at T2S-R6W-7SW	T2S-R7W-13C
Green Creek	1688	5537	4-12m	2		X		Mouth	1700m
Headquarters Camp Creek	590	1935	4-12m	2	YES	X	TILL	Boundary Creek	Stretch Creek
Joyce Creek	672	2204	4-12m	2	YES	X	TILL	Mouth	1st TJ on right
Michael Creek	984	3228	4-12m	2		X	TILL	Mouth	TJ on left at T1S-R7W-23
Mill Creek Trib 1	1744	5721	4-12m	2				Mill Creek	1800m
Mill Creek Trib 2	982	3221	4-12m	2				Mill Creek	Road X-ing at T2S-R9W-10SW
Rock Creek	1024	3358	4-12m	2	YES	X	TILL	Mouth	1000m (Bend to left)
Steampot Creek	1207	3959	4-12m	2	YES	X	TILL	Mouth	TJ on right at T2S-R7W-21SE
Trask River Trib 1	1443	4732	4-12m	2				Mouth	1400m
Bark Shanty Creek	1747	5732	12-20m	2	YES	X	TILL	Mouth	Barrier at T1S-R7W-32S
South Fork Trask River	5203	17066	12-20m	2		X	TILL	Mouth	Bill Creek
Hembre Creek	448	1471	4-12m	3		X	TILL	Mouth	Road Crossing
N Fk of N Fk Trask River	3701	12140	4-12m	3			FG	Large TJ on left at T1S-R6W-9	Forks at T1N-R6W-34
Gold Creek	249	816	4-12m	4	YES			Mouth	Hatchery Dam
E Fk of S Fk Trask River	9627	31578	12-20m	4		X	TILL	Scotch Creek	TJ on left at T2S-R7W-26
Elkhorn Creek	3758	12327	12-20m	4	YES		TILL	Mouth	Cruiser Creek
M Fk of N Fk Trask River	3979	13051	12-20m	4	YES		FG	Elkhorn Creek	Barrier at T1S-R6W-27
N Fk of N Fk Trask River	5428	17803	12-20m	4		X	FG	Mouth	Large TJ on left at T1S-R6W-9

Priority:1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority);ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook.

Appendix I L. Potential instream enhancement sites for the Tillamook River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Habitat Survey	Field Verified	ODF District	From	To
Bewley Creek	2204	7231	4-12m	1	YES	X		Third Bridge	T2S-R10W SEC 26 and 27 Border
Bewley Creek Trib 1	1679	5509	4-12m	1		X		Bewley Creek	T2S-R10W-22C
Barry Creek	1507	4946	4-12m	2				Mouth	T2S-R9W-30SE
Fawcett Creek	3521	11551	4-12m	2	YES			Mouth	ODF Boundary
Fawcett Creek	1659	5443	4-12m	2	YES		TILL	ODF Boundary	T2S-R9W-23
Joe Creek	1280	4199	4-12m	2				Mouth	TJ on right at T2S-R9W-29
Killam Creek	5622	18443	4-12m	2	YES			Mouth	TJ on right at T2S-R9W-12
Mills Creek	425	1395	4-12m	2		X		Mouth	400m
Munson Creek	2879	9444	4-12m	2		X		Mouth	Munson Creek Falls
Simmons Creek	3244	10643	4-12m	2	YES			Mouth	ODF Boundary
Simmons Creek	2637	8651	4-12m	2	YES	X	TILL	ODF Boundary	Barrier at T2S-R9W-26E
Tillamook River	2273	7458	4-12m	2	YES	X		End of Ag Ownership	1/4 mi. below last road x-ing
Tillamook River	1120	3675	4-12m	2	YES	X			
Bear Creek	2371	7778	4-12m	3		X		Beaver Creek	Rd 225 X-ing at T2S-R10W-3
Beaver Creek	4632	15196	4-12m	3		X		Mouth	TJ on right at T2S-R10W-14
Bewley Creek	4908	16101	4-12m	3	YES	X		Mouth	Third Bridge
Sutton Creek	3526	11570	4-12m	3		X		Mouth	Road X-ing at T2S-R10W-34
Tillamook River	5945	19505	4-12m	3		X		Barry Creek	End of Ag Ownership
Tillamook River	5358	17578	12-20m	4		X		Killam Creek	Barry Creek

Priority: 1 = High, 2 = Moderate, 3 = Low, 4 = Very Low, 5 = Federal Land(No priority);ODF District: AST = Astoria, FG = Forest Grove, TILL = Tillamook..

Appendix I M. Potential instream enhancement sites for the Lower Nestucca River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Farmer Creek	289	949	4-12m	1	H		95	X		Nestucca River	Tj At Road 1024 Jct	
Turpy Creek	1132	3711	4-12m	1	H					Boulder Creek	End Of Coho	
Alder Creek(Nestucca River)	654	2145	4-12m	2	L					Nestucca River	End Of Coho	
Alder Creek(Three Rivers)	4867	15962	4-12m	2	H			X		Three Rivers	End Of Coho	
Bear Creek(Beaver Creek)	1929	6327	4-12m	2	M					East Beaver Creek	End Of Coho	
Boulder Creek	3266	10712	4-12m	2	H			X		Nestucca River	/TJ AT T3S-R9W-35SW	
Buck Creek	415	1362	4-12m	2	H					Alder Creek	End Of Coho	
Cedar Creek(Upper Nestucca)	341	1119	4-12m	2	M					Nestucca River	End Of Coho	
Clear Creek	2754	9033	4-12m	2	H			X		Nestucca River	USFS Boundary	
Crazy Creek	456	1494	4-12m	2	L					Three Rivers	End Of Coho	
East Beaver Creek	2726	8942	12-20m	2	H		X	X		T3S-R9W-SECTIONS 10 AND 11 BOU	ROAD X-ING AT T3S-R9W-1SW	
East Beaver Creek	1083	3552	4-12m	2	M		X	X	TILL	Road X-Ing AT T3S-R9W-1SW	End Of Coho	
Fall Creek	291	955	4-12m	2	M					Nestucca River	End Of Coho(Barrier?)	
Foland Creek	1961	6431	4-12m	2	H					Nestucca River	/TJ AT T3S-R9W-33NW	
Foland Creek	276	905	4-12m	2	U					Nestucca River	End Of Coho	
Hartney Creek	1571	5152	4-12m	2	U					Nestucca River	End Of Coho	
Horn Creek	3929	12887	4-12m	2	N	YES	X	X		Nestucca Bay	Tj/ At T4s-R11w-17ne	
Horn Creek	353	1157	4-12m	2	N	YES		X		TJ/ AT T4S-R11W-17NE	End Of Coho	
Lawrence Creek	984	3227	4-12m	2	U					Three Rivers	End Of Coho	
Moon Creek	3097	10158	4-12m	2	M			X			End Of Coho	
Pollard Creek	125	410	4-12m	2	U					Three Rivers	End Of Coho	
Sanders Creek	754	2472	4-12m	2	H					Nestucca River	End Of Coho	
Swab Creek	804	2638	4-12m	2	H					Wolfe Creek	End Of Coho	
Three Rivers	404	1325	4-12m	2	L					Crazy Creek	End Of Coho(Falls)	
Three Rivers Trib A	268	878	4-12m	2	H					Three Rivers	End Of Coho	
Tiger Creek	1963	6438	4-12m	2	U	YES				West Beaver Creek	End Of Coho	
Tiger Creek	1111	3644	4-12m	2	H	YES				West Beaver Creek	End Of Coho	
Tiger Creek Trib A	1737	5698	4-12m	2	U					Tiger Creek	End Of Coho	
Tiger Creek Trib A	1043	3420	4-12m	2	H					Tiger Creek	End Of Coho	
West Beaver Creek	3517	11536	4-12m	2	H					North Beaver Creek	End Of Coho	
West Beaver Creek Trib A	1849	6066	4-12m	2	H					West Beaver Creek	End Of Coho	
Wolfe Creek	1953	6405	4-12m	2	H			X		Nestucca River	End Of Coho	
Bays Creek	1176	3858	4-12m	3	H			X		Nestucca River	End Of Coho	
East Creek	1308	4290	4-12m	3	M	YES		X		Detrick Ranch	East Cr Road X-Ing At Sec 15	
Farmer Creek	2503	8208	4-12m	3	H			X		Nestucca River	Tj At Road 1024 Jct	
Sanders Creek	1148	3766	4-12m	3	H			X		Nestucca River	End Of Coho	Agricultural Land
West Beaver Creek	4126	13532	4-12m	3	H			X		East Beaver Creek	North Beaver Creek	
West Creek	1319	4326	4-12m	3	H			X		Nestucca River	End Of Coho	Agricultural Land
Alder Creek(Nestucca River)	454	1489	4-12m	4	L					Nestucca River	End Of Coho	
Bear Creek(Beaver Creek)	1293	4242	4-12m	4	N					East Beaver Creek	End Of Coho	
Crazy Creek	872	2859	4-12m	4	N					Three Rivers	End Of Coho	
East Beaver Creek	5412	17751	12-20m	4	H	YES		X		West Beaver Creek	USFS Boundary At Rd 8172	

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Appendix I M continued. Potential instream enhancement sites for the Lower Nestucca River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
East Creek	3610	11842	12-20m	4	M			X	TILL	Moon Creek	Detrick Ranch	
George Creek	1069	3505	4-12m	4	M			X		Nestucca River	End Of Coho	
Hartney Creek	575	1887	4-12m	4	U					Nestucca River	End Of Coho	
Moon Creek	1357	4452	12-20m	4	M			X		Nestucca River		
Moon Creek	1291	4236	4-12m	4	N			X			End Of Coho	
North Beaver Creek	2924	9590	4-12m	4	H			X		West Beaver Creek	End Of Coho	
Three Rivers	2208	7241	12-20m	4	L					Alder Creek	Crazy Creek	
Three Rivers	933	3062	12-20m	4	H			X		Pollard Creek	Alder Creek	
Tony Creek	1498	4914	4-12m	4	N					Nestucca River	End Of Coho	
West Creek	1231	4038	4-12m	4	H			X		Nestucca River	End Of Coho	
West Fork Folund Creek	1087	3566	4-12m	4	N					Foland Creek	End Of Coho	
Bays Creek	3054	10019	4-12m	5	N		96	X		Nestucca River	End Of Coho	
Clear Creek	2240	7348	4-12m	5	N			X		Usfs Boundary	End Of Coho	
Crazy Creek	432	1416	4-12m	5	N					Three Rivers	End Of Coho	
East Beaver Creek	2384	7818	12-20m	5	H		95	X		Usfs Boundary At 8172 Rd	T3S-R9W Sections 10 And 11 Boundary	
East Beaver Creek	3979	13052	4-12m	5	M			X	TILL	Road X-Ing AT T3S-R9W-1SW	End Of Coho	
East Creek	456	1495	4-12m	5	M	YES	90	X		Detrick Ranch	East Cr Road X-Ing At Sec 15	
East Creek	738	2420	4-12m	5	N			X		East Cr Rd X-Ing At Sec. 15	End Of Coho	
East Creek	2670	8757	4-12m	5	L	YES	90	X		East Cr. Road X-Ing At Sec 15	End Of Coho	
Farmer Creek	797	2613	4-12m	5	H		95	X		Nestucca River	Tj At Road 1024 Jct	
Horn Creek	3331	10924	4-12m	5	N	YES		X		TJ/ AT T4S-R11W-17NE	End Of Coho	
Lawrence Creek	495	1625	4-12m	5	N					Three Rivers	End Of Coho	
Moon Creek	2822	9257	4-12m	5	N			X			End Of Coho	
Pollard Creek	422	1384	4-12m	5	N					Three Rivers	End Of Coho	
Sanders Creek	1154	3786	4-12m	5	N					Nestucca River	End Of Coho	
Tony Creek	1470	4820	4-12m	5	N					Nestucca River	End Of Coho	
West Beaver Creek	468	1534	4-12m	5	H					North Beaver Creek	End Of Coho	
West Fork Folund Creek	1631	5349	4-12m	5	N					Foland Creek	End Of Coho	
Wolfe Creek	1400	4591	4-12m	5	N					Nestucca River	End Of Coho	

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Appendix I N. Potential instream enhancement sites for the Upper Nestucca River basin.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Limestone Creek	313	1028	4-12m	2	H					Nestucca River	Forks	
Powder Creek	2114	6935	4-12m	2	U					Nestucca River	End Of Coho	
Niagara Creek	180	590	4-12m	2	L					Buelah Creek	Pheasant Creek	
Slick Rock Creek	2022	6631	4-12m	2	U	YES				Nestucca River	End Of Coho(Falls)	
Testament Creek	1151	3775	4-12m	2	U					Nestucca River	End Of Coho	
Bear Creek(Upper Nestucca)	1150	3771	4-12m	2	M					Nestucca River	End Of Coho	
Clarence Creek	225	739	4-12m	3	H	YES				Nestucca River	End Of Coho(Falls)	
Bear Creek(Upper Nestucca)	1753	5751	4-12m	3	L		94	X	TILL	Nestucca River	End Of Coho	
Niagara Creek	881	2888	12-20m	4	H					Nestucca River	Buelah Creek	
Niagara Creek	1005	3295	4-12m	4	N					Pheasant Creek	End Of Coho	
Elk Creek	436	1429	4-12m	4	M		X	X	TILL	Nestucca River	End Of Coho(Falls)	
Nestucca River	1646	5398	12-20m	4	H		X	X	FG	Elk Creek	End Of Coho(Barrier)	
Limestone Creek	177	580	4-12m	5	N					Nestucca River	Forks	
Powder Creek	110	360	4-12m	5	U					Nestucca River	End Of Coho	
Clarence Creek	1088	3568	4-12m	5	M	YES				Nestucca River	End Of Coho(Falls)	
Niagara Creek	1796	5889	12-20m	5	H					Nestucca River	Buelah Creek	
Niagara Creek	695	2280	4-12m	5	L					Buelah Creek	Pheasant Creek	
Niagara Creek	3568	11702	4-12m	5	N					Pheasant Creek	End Of Coho	
Pheasant Creek	2641	8663	4-12m	5	N					Niagara Creek	End Of Coho	
Bible Creek	2082	6830	4-12m	5	U					Nestucca River	End Of Coho(Barrier)	
Bear Creek(Upper Nestucca)	777	2549	4-12m	5	L		X	X		Nestucca River	End Of Coho	
Bear Creek(Upper Nestucca)	2779	9116	4-12m	5	M		X	X		Nestucca River	End Of Coho	
Elk Creek	1760	5771	12-20m	5	H		X	X		Nestucca River	End Of Coho(Falls)	
Elk Creek	2100	6887	4-12m	5	M		X	X	TILL	Nestucca River	End Of Coho(Falls)	
Nestucca River	12665	41542	12-20m	5	H		X	X		Elk Creek	End Of Coho(Barrier)	
Upper Nestucca River Trib 1	597	1957	4-12m	5	N					Nestucca River	End Of Coho	

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Appendix I O. Potential instream enhancement sites for the Little Nestucca River and Neskowin Creek basins.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Baxter Creek	1126	3693	4-12m	1	H			X		Louie Creek	End Of Road Access	
Louie Creek	1164	3819	4-12m	1	H			X		Little Nestucca River	Hwy 22 X-Ing	
Neskowin Creek	430	1412	4-12m	1	H			X		Sloan Creek	End Of Coho	
Sourgrass Creek	1039	3409	4-12m	1	H			X		Little Nestucca River	TJ/ AT T5S-R9W-27SE	
Sourgrass Creek	143	469	4-12m	1	M			X		TJ/ AT T5S-R9W-27SE	End Of Coho	
South Fk Little Nestucca River	997	3270	4-12m	1	M	YES		X		S Fk L Nestucca Trib C	End Of Coho	
Little Nestucca River	484	1587	12-20	2	H			X		Sourgrass Creek	End Of Coho(Falls)	
South Fk Little Nestucca River	390	1279	12-20	2	M	YES		X		Little Nestucca River	S Fk L Nestucca Trib C	
Bear Creek(Little Nestucca)	1415	4640	4-12m	2	M		X	X		Little Nestucca River	End Of Coho	
Butte Creek	395	1296	4-12m	2	M			X		Hawk Creek	End Of Coho	
Fall Creek	1974	6476	4-12m	2	M					Little Nestucca River	End Of Coho(Barrier?)	
Hawk Creek	1023	3354	4-12m	2	H	YES		X		Butte Creek	End Of Coho	
Lewis Creek	423	1386	4-12m	2	H			X		Neskowin Creek	End Of Coho	
Louie Creek	489	1602	4-12m	2	N			X		Hwy 22 X-Ing	End Of Coho	
Louie Creek Trib A	1537	5041	4-12m	2	U					Louie Creek	End Of Coho	
McKnight Creek	555	1819	4-12m	2	U					Little Nestucca River	End Of Coho	
Neskowin Creek	1053	3454	4-12m	2	H			X		Sloan Creek	End Of Coho	
Prospect Creek	311	1020	4-12m	2	H			X		Neskowin Creek	End Of Coho	
S FK L Nestucca Trib A	8	25	4-12m	2	N					S Fk L Nestucca	End Of Coho	
S FK L Nestucca Trib C	588	1928	4-12m	2	M					S Fk L Nestucca River	End Of Coho	
South Fk Little Nestucca River	350	1148	4-12m	2	M	YES		X		Little Nestucca River	S Fk L Nestucca Trib C	
South Fk Little Nestucca River	418	1370	4-12m	2	M	YES	95	X		S Fk L Nestucca Trib C	End Of Coho	
Bowers Branch	2097	6877	4-12m	3	H			X		Little Nestucca River	End Of Coho	Agricultural Land
Kellow Creek	1246	4088	4-12m	3	M	YES		X		Little Nestucca River	End Of Coho	
Little Nestucca River	1832	6008	12-20	4	H			X		Sourgrass Creek	End Of Coho(Falls)	
Neskowin Creek	4492	14733	12-20	4	H			X		Hwy 101 X-Ing	Sloan Creek	
South Fk Little Nestucca River	390	1279	12-20	4	M	YES		X		Little Nestucca River	S Fk L Nestucca Trib C	
Baxter Creek	507	1662	4-12m	4	N			X		End Of Road Access	End Of Coho	
Fall Creek(Neskowin)	292	956	4-12m	4	L			X		Neskowin Creek	End Of Coho	
Hawk Creek	1603	5257	4-12m	4	N	YES		X		Butte Creek	End Of Coho	
Kautz Creek	354	1163	4-12m	4	N					S Fk L Nestucca	End Of Coho	
Kellow Creek	1276	4184	4-12m	4	N	YES		X		Little Nestucca River	End Of Coho	
Little Nestucca River	1720	5640	12-20	5	H			X		Sourgrass Creek	End Of Coho(Falls)	
Neskowin Creek	845	2773	12-20	5	H			X		Hwy 101 X-Ing	Sloan Creek	
South Fk Little Nestucca River	1183	3880	12-20	5	M	YES		X		Little Nestucca River	S Fk L Nestucca Trib C	
Austin Creek	1864	6114	4-12m	5	N					Little Nestucca River	End Of Coho	

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Appendix I O continued. Potential instream enhancement sites for the Little Nestucca River and Neskowin Creek basins.

Stream Segment	Length (m)	Length (ft)	Channel Width	Priority	Access	Habitat Survey	Work '90-'96	Field Verified	ODF District	From	To	Note
Baxter Creek	1046	3431	4-12m	5	N			X		End Of Road Access	End Of Coho	
Bear Creek(Little Nestucca)	827	2712	4-12m	5	M		X	X		Little Nestucca River	End Of Coho	
Fall Creek(Neskowin)	661	2167	4-12m	5	L			X		Neskowin Creek	End Of Coho	
Hiack Creek	1852	6075	4-12m	5	H					Little Nestucca River	End Of Coho	
Kautz Creek	370	1212	4-12m	5	N					S Fk L Nestucca	End Of Coho	
Lewis Creek	638	2092	4-12m	5	N			X		Neskowin Creek	End Of Coho	
Louie Creek	1270	4164	4-12m	5	N			X		Hwy 22 X-Ing	End Of Coho	
Neskowin Creek	1565	5133	4-12m	5	H			X		Sloan Creek	End Of Coho	
S FK L Nestucca Trib A	1842	6042	4-12m	5	N					S Fk L Nestucca	End Of Coho	
S FK L Nestucca Trib B	289	947	4-12m	5	N					S Fk L Nestucca Trib A	End Of Coho	
Sloan Creek	504	1652	4-12m	5	H					Neskowin Creek	End Of Coho	
Sourgrass Creek	1705	5592	4-12m	5	M			X		TJ/ AT T5S-R9W-27SE	End Of Coho	
South Fk Little Nestucca River	513	1683	4-12m	5	M	YES		X		S Fk L Nestucca Trib C	End Of Coho	
Stillwell Creek	728	2388	4-12m	5	N					Little Nestucca River	End Of Coho	
Stillwell Creek	1047	3433	4-12m	5	H					Little Nestucca River	End Of Coho	
West Fork Austin Creek	1273	4176	4-12m	5	N					Austin Creek	End Of Coho	

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