

# The Value of Priority Habitat and Species Management Recommendations to Land Use Planning

## A User Survey Summary

Washington Department of Fish and Wildlife

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## ABSTRACT

The Washington Department of Fish and Wildlife surveyed professional land use planners to identify the value they place on the [Priority Habitat and Species \(PHS\) Management Recommendations](#). Results of a similar survey from 2003 (given to a similar group of users) were compared with current result. Overall use of PHS by this group increased dramatically between the survey periods. Problems with PHS identified in the earlier survey seemed to have been worked out. Specifically, respondents in 2003 pointed out that PHS did not provide adequate recommendations for conserving habitat in urban and suburban landscapes. Far fewer respondents expressed that same concern in the current survey. One reason for this change may be the recent release of a PHS publication that specifically addresses the management of wildlife in developing landscapes.

In addition to these more general questions, we asked a series of questions focused on two PHS publications. One was the recently released [Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas](#). Some respondents said they have used this new publication. Most who have used it said they found it to have value for answering land use planning-related questions. The other publication we assessed through the survey was WDFW's [Management Recommendations for Washington's Priority Habitats: Riparian](#). This older publication (published in 1997) is one that WDFW is looking into possibly updating. To assess if an update is warranted, we wanted to know who was using it. We also wanted to know what other publications were being used to address riparian habitat management. Most respondents said they still used the PHS riparian recommendations. Those that said they use other publications provided us with a wide range of titles.

## INTRODUCTION

Between April 11 and May 7, 2011 the Washington Department of Fish and Wildlife (WDFW) surveyed readers of the agency's [Fish and Wildlife Planner](#) newsletter about WDFW's Priority Habitat and Species (PHS) management recommendations. Newsletter readers served as the best survey sample because they are the primary users of the Department's PHS tools (i.e., professional land use planners).

The survey was designed to address the following objectives:

- determine what proportion of the state's land use planning community are using the PHS management recommendations;
- assess the ability of the management recommendations to address the needs of land use planners;
- evaluate how land use planners are using specific priority habitat publications;
- gather feedback on how to improve the value of the management recommendations; and
- compare the result to a survey that was submitted to a similar group in 2003.

By addressing each of these objectives, WDFW is interested in determining how well changes to PHS management recommendations have been received by land use planning professionals. The Department is also interested in learning what can be done to further improve the value of the management recommendations.

The following is a summary of the results. Conclusions are drawn throughout and recommendations for how to further improve the value of the management recommendations are included. These recommendations will be used to guide the content of future PHS management recommendations.

## GENERAL MAKEUP OF SURVEY PARTICIPANTS

The Fish and Wildlife Planner's distribution is primarily targeted at Washington's professional land use planning community. With just over 3,000 subscribers, the Planner goes out to a large group who are known to rely upon PHS publications. During a period of just under a month, 191 of the newsletter's subscribers participated in this survey. The sample included statewide and professional representation (Figure 1). Although the majority stated they work in the public sector, the largest individual response group was made up of those who work in private consulting. Geographically, more than half of the respondents said they were based out of Puget Sound. Although the bulk of the respondents were from western Washington, a representative proportion was based out of eastern Washington.

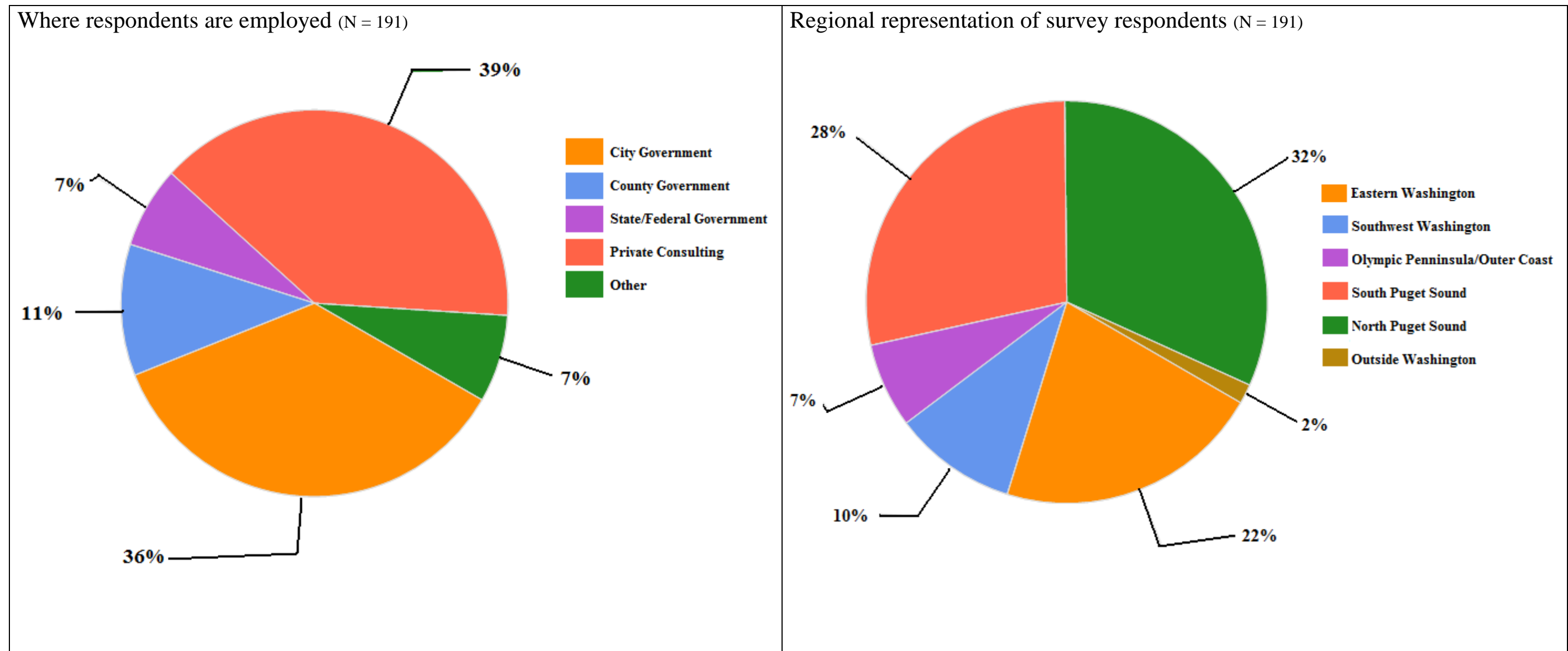


Figure 1. General makeup of the survey respondents.

## OVERALL USE OF THE PHS MANAGEMENT RECOMMENDATIONS

We wanted to determine who uses PHS. To do this we asked respondents to tell us if they had a “working knowledge of the PHS publications. This same question was asked in a previous PHS survey administered to a similar group of respondents back in 2003 (Azerrad and Nilon 2006). Therefore, we were able to assess the proportion of planners familiar with PHS and also measure any changes in response since 2003. The most interesting discovery was a significant rise in the number who use our PHS publications (Table 1). Although the survey was not designed to identify why these changes happened, we suspect it partly was the result of our releasing the first issue of the Fish and Wildlife Planner, soon after the 2003 survey. The newsletter was an offshoot of the survey results which taught us we needed to reach out to this important audience. The newsletter not only targeted the audience who took the surveys in 2003 and 2011, but it has been used to keep them informed of what we are doing at the Department relevant to their work. It is likely the newsletter was able to increase the use of PHS guidelines by land use professionals.

It is also likely that other changes instituted after the 2003 survey helped to increase the use of the PHS management recommendations. Furthermore, changes to administrative rules for the Growth Management Act (GMA) (WAC 365-190-130) and Shoreline Master Program (SMP) (WAC 173-26) may have factored into this increased use. The GMA rules were amended in 2010 to state that PHS should be consulted for identifying and protecting fish and wildlife habitat conservation areas. In 2003, the SMP rules were updated to advise the use of PHS (WAC 173-26-221).

While these changes likely account for some of this uptick in PHS use, the dramatic shift we have seen may also be due to an increase in the number of private consultants who participated in the 2011 survey. In 2003, only 17% of the respondents identified themselves as consultants, while in 2011 consultant represented 39% of the respondents. Although this may explain some of the increases in the overall use of PHS, this probably does not explain it all. One reason for this is that other user groups also showed increases (e.g., a 9% increase for local government planners). And although private consultants made up a smaller proportion of those surveyed in 2003, they still represented a major group in both surveys. Therefore if the makeup of respondents were more similar, the overall increase in the use of PHS probably would still have shown a noticeable increase.

Table 1. Percentage of respondents indicating they have a working knowledge of the PHS recommendations (response rate not given for subsets where there were fewer than 10 respondents or where the response group was not evaluated):

Response Group	2003	2011	% Change
Overall (N = 188 <sup>1</sup> )	41%	65%	+ 25%
<u>Eastern Washington</u> Respondents (N = 41)	39%	51%	+ 22%
<u>Western Washington</u> Respondents (N = 147)	34%	61%	+ 27%
Respondents that indicated they work in <u>private consulting</u> (N = 75)	28%	75%	+ 47%
Respondents that indicated they work in <u>local government</u> (N = 89)	37%	46%	+ 9%
Respondents that indicated they work in <u>state/federal government</u> (N = 13)	--	62%	--
Respondents that said that projects related to <u>residential development</u> have the greatest fish and wildlife impacts (N = 83)	--	51%	--
Respondents that said projects related to <u>industrial/commercial</u> have the greatest fish and wildlife impacts (N = 24)	--	45%	--
Respondents that said projects related to <u>transportation</u> have the greatest fish and wildlife impacts (N = 32)	--	25%	--
Respondents that said projects related to <u>water development</u> have the greatest fish and wildlife impacts (N = 14)	--	64%	--

<sup>1</sup> Number of respondents for each scenario refers only to the 2011 survey.

## THE VALUE OF PHS

Once we identified the PHS users, we wanted to know what they thought about the value of the management recommendations. Similar to the previous question, these value-oriented questions were analogous to questions asked in 2003. We therefore could measure changes in the value respondents placed on the PHS publications. Table 2 and Appendix 1 illustrate this point under a series of different scenarios (e.g., value of PHS for projects in urban areas, small projects, etc.).

In the 2003 survey, respondents told us we could do a much better job addressing activities in urban landscapes through our PHS publications. To address this concern, we began including more information relevant to urban areas in new and revised PHS publications. The Department also published a PHS guide specifically intended to address the management of habitat in developing landscapes, *Landscape Planning for Washington's Wildlife: Managing for Wildlife in the Development Landscape* (WDFW 2009). As a result, some shifts took place regarding the value respondents assigned to PHS for addressing issues in urban landscapes (Table 2). Roughly 50% of the respondents in 2003 stated that PHS was rarely or never valuable for addressing the impacts of projects in developed areas. In 2011, a considerably smaller percentage expresses that same sentiment. Although a greater proportion of the respondents also expressed an increase in the value of PHS for other types of projects (Appendix 1), the percent change for projects in urban areas was most notable.

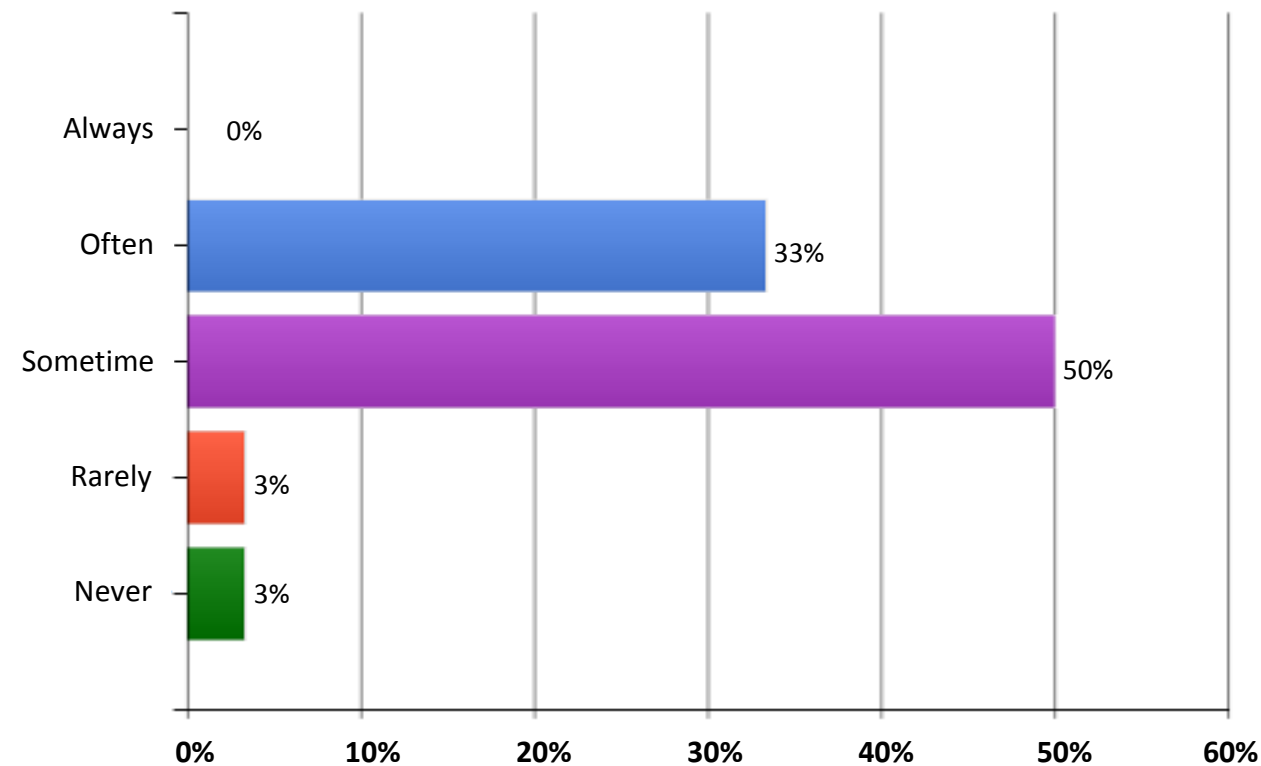
Table 2. Value of PHS for projects in **urban areas**:

<b>Response Group</b>	<b>PHS Always Valuable</b>	<b>PHS Sometimes Valuable</b>	<b>PHS Rarely Valuable</b>	<b>PHS Never Valuable</b>	<b>Percent Change of Always/Sometimes Pooled Responses</b>
Total 2011 (N = 96)	32%	56%	8%	3%	+ 38%
Total 2003 (N = 89)	5%	45%	50%		
Eastside 2011 (N = 20)	25%	55%	15%	5%	+ 27%
Eastside 2003 (N = 15)	0%	53%	47%		
Westside 2011 (N = 76)	34%	57%	7%	2%	+ 41%
Westside 2003 (N = 73)	5%	45%	50%		
Respondents who said development was the greatest impact (N = 43)	21%	70%	7%	2%	
Respondents who said transportation was the greatest impact (N = 21)	38%	43%	14%	5%	

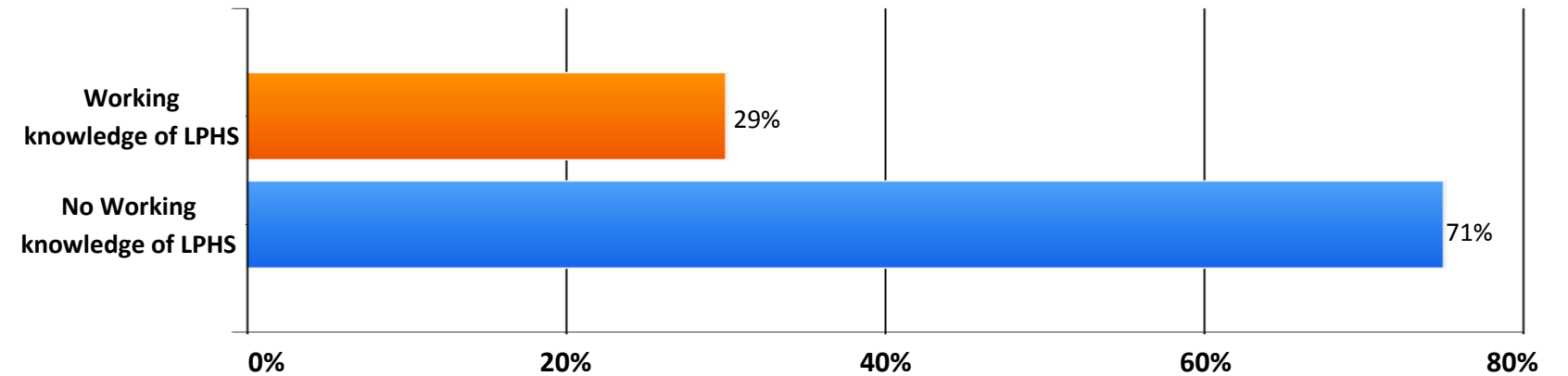
## SPECIFIC PRIORITY HABITAT PUBLICATIONS

In the 2011 survey a series of questions were asked to gather feedback about the value that respondents placed on specific PHS publications. One was a publication that was released in 2009 titled *Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas*. This publication was developed partly to address feedback we received during the 2003 survey. To see how well we addressed some of the planner's concerns, we asked respondents if they have used this new publication and asked what they thought of it. We learned was that just under a third of the respondents identified themselves as having a working knowledge of our landscape planning publication (Figure 2). Of those respondents, most said that the publication often or sometimes included the information they were looking for. Very few said they rarely or never found useful information in the publication (Figure 3).

Overall, it is noteworthy that this publication has been able to reach a relatively wide audience of land use professionals. It also is noteworthy that many of these users have been able to find valuable information in it. Obviously there is more we need to do to reach a wider audience. However, in the short amount of time that this publication has been available, it seems to have had an impact and could be a reason why land use planners indicated that the PHS recommendations are now better at addressing fish and wildlife management in developing landscapes.



**Figure 3.** How often respondents were able to find information in LPHS to address their questions regarding land use planning for fish and wildlife (N = 27).

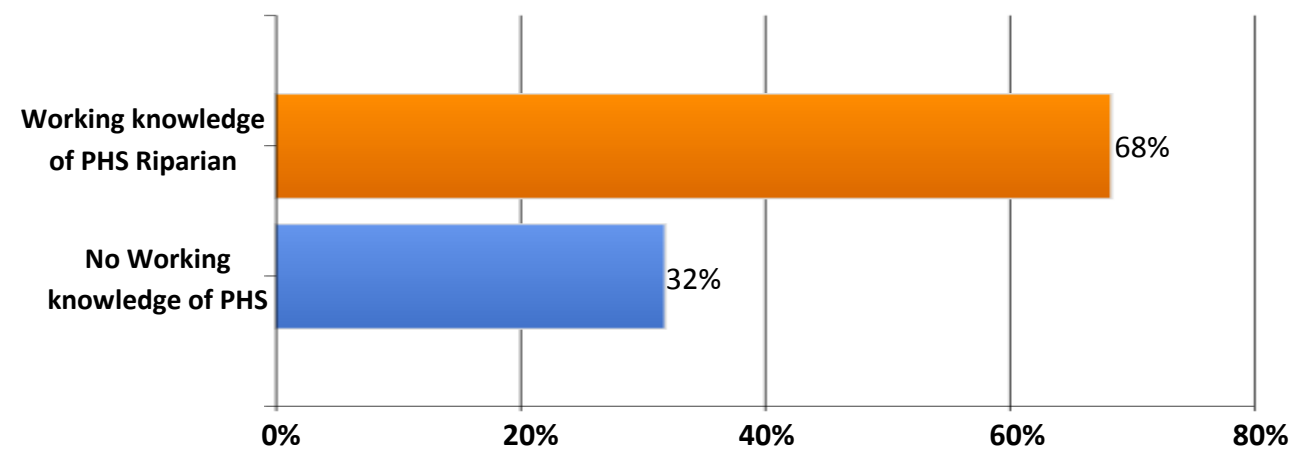


**Figure 2.** Percentage of respondents with a working knowledge of the LPHS publication (N = 105).

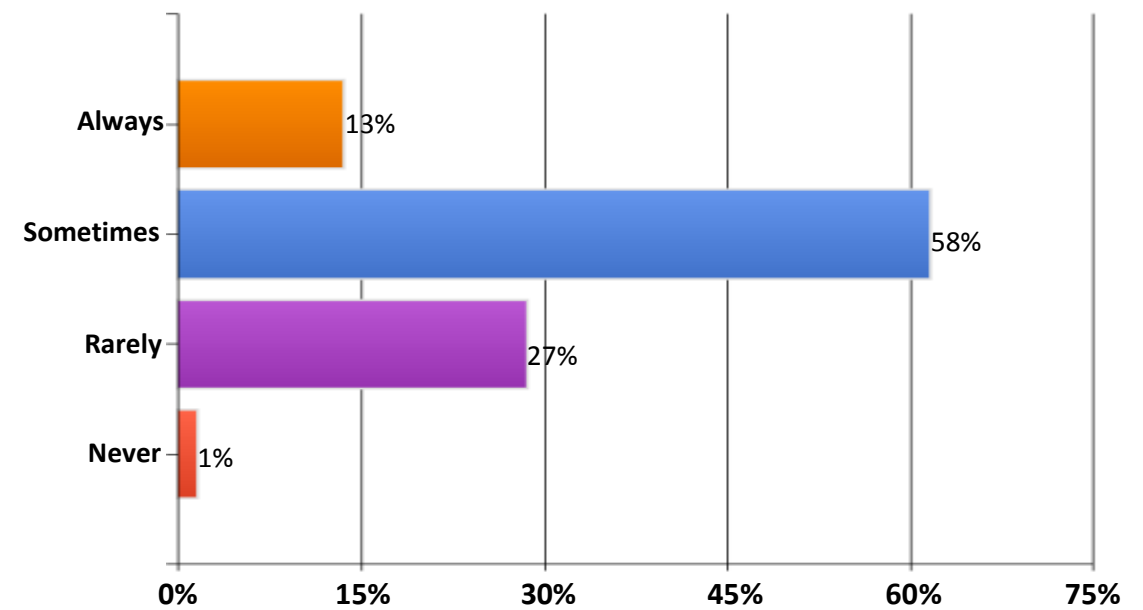
Another publication we examined in this survey is the *PHS riparian habitat management recommendations*. These recommendations were published in 1997 and the agency has been considering updating PHS riparian. To evaluate the need for an update, we included some targeted questions to help us understand what the respondents thought about the riparian management recommendations.

Of the respondents that identified themselves as having a working knowledge of PHS, roughly 70% also used the PHS riparian guidelines (Figure 4a). This was not surprising given how long the publication has been around and that riparian management is a responsibility for land use planners. Of the respondents who said they have used PHS riparian, we asked a series of question to see what they thought about this publication and to determine how they were using it. We were able to find that over three-quarters stated that they often or sometimes refer to PHS riparian when they were in need of guidance (Figure 4b). A small percentage said they rarely or never used the riparian guidelines.

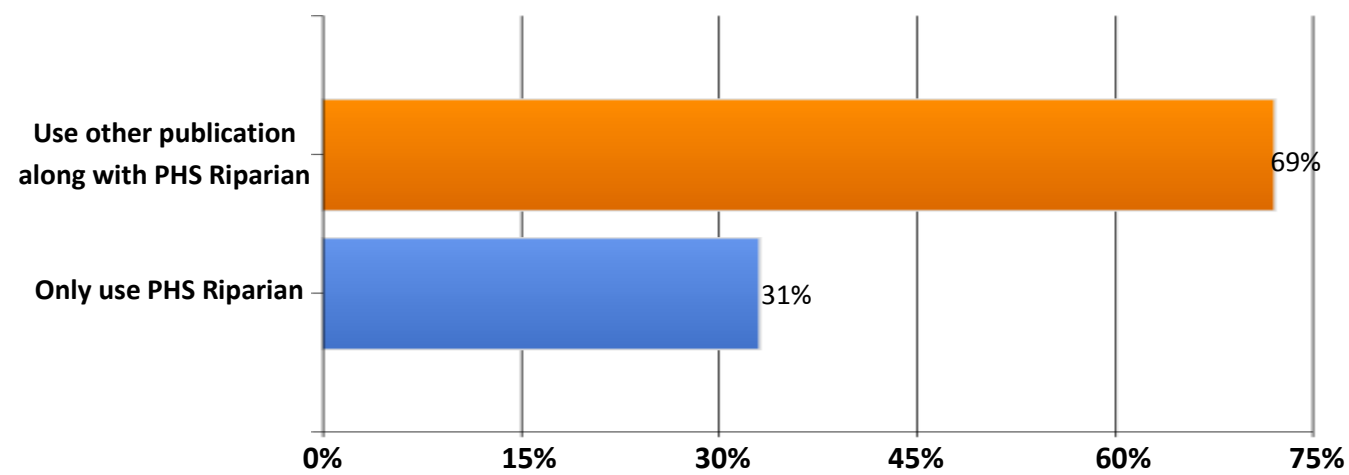
To get a sense of how much respondents were relying on PHS compared to other riparian publications, we asked if they used other publications to provide riparian guidance. About 70% indicated they use other resources in conjunction with PHS riparian, while the remaining 30% said they only used our riparian guidelines (Figure 4c). Of the respondents who indicate they use both PHS as well as other publications, we assessed the value these individuals placed on PHS in comparison to these other publications. What we found was that most respondents relied on PHS just as much as they relied on alternative riparian publications (Figure 4d). Although a good deal of those that answer this question said they were more often relying upon non-WDFW riparian guidelines, the majority use PHS just as much if not more than that of any other publication when searching for guidance. Appendix 2 identifies all the alternate riparian publications that were identified by these respondents.



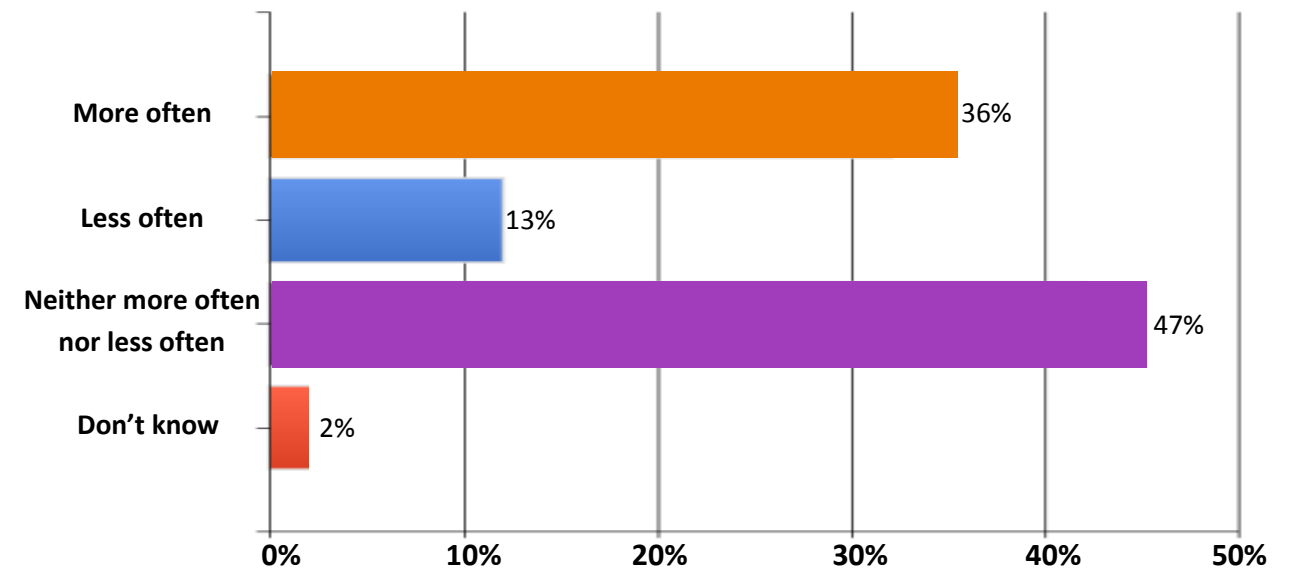
**Figure 4a.** Ratio of respondents who indicated they had a working knowledge of WDFW's PHS Riparian publication (N = 104).



**Figure 4b.** How frequently respondents said they referred to this publication when searching for guidance (N = 70).



**Figure 4c.** Percentages of respondents that use PHS Riparian who also use other publications when searching for riparian guidance (N = 70).



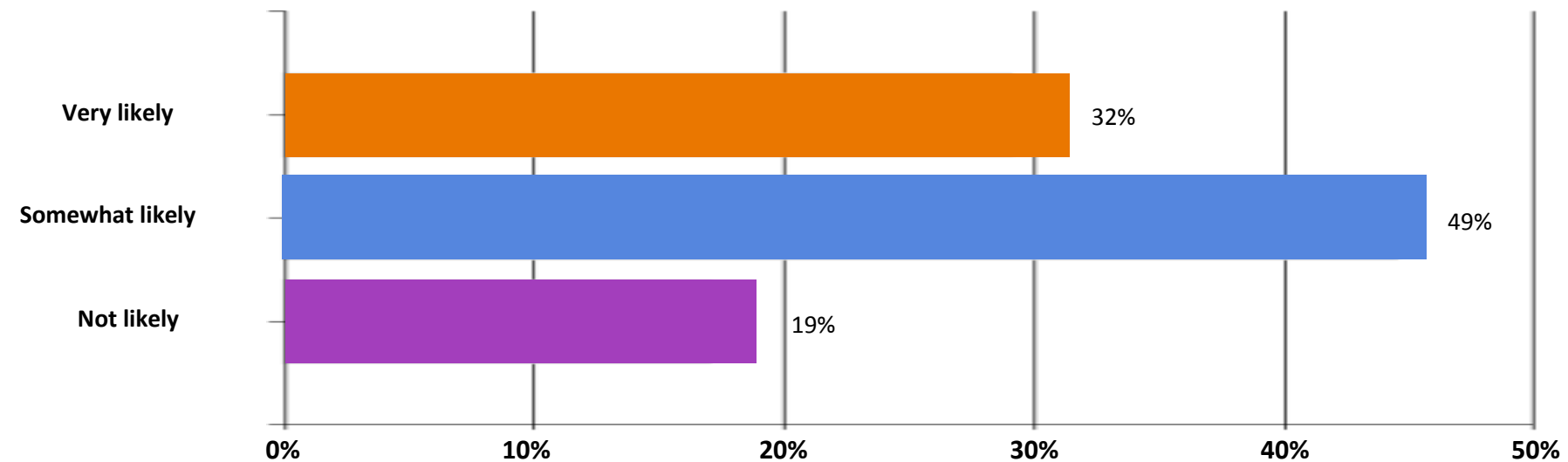
**Figure 4d.** Proportion of respondents that use other published resources more or less often than that of PHS Riparian (N = 43).

**Figure 4.** Series of figures showing the response rate of land use professional to questions about the PHS riparian habitat guidelines.



## FUTURE USE OF PHS AND IMPROVING THE MANAGEMENT RECOMMENDATIONS

The final survey question was tailored to get a sense of how likely respondents would be using the PHS recommendations in the future. We also wanted to know what respondents had to say in terms of what we should do to further enhance the value of the guidelines. With respect to future use, 81% of the respondents stated that it was somewhat to very likely that they would be using the management recommendation over the course of the next 12 months (Figure 5).



**Figure 5.** The likelihood that the respondents will use PHS Management Recommendation over the course of the next 12 months (N = 181):

When asked what WDFW could do to improve the management recommendations, a few topics stood out (Table 3). Similar to the response we received in the 2003 survey, respondents in this survey repeated the call for more and/or better information to address the management of habitat in developing landscapes. Although this result may seem contradictory to the positive responses when we asked an earlier question about the value of PHS in urban landscapes, there may still be room for improvement. Also, it seems some survey participants might be referring to publications that have not yet been updated since the last survey was administered in 2003. One respondent made the point of saying that the PHS riparian recommendations were not suitable to habitat in urban landscapes. Given that PHS riparian has not been updated since 1997, we have yet to incorporate the lessons we learned from the 2003 survey in the riparian habitat guidelines. This may explain why some respondents are still not fully satisfied with the ability of PHS to address the management of habitat in developing landscapes.

With regard to the riparian guidelines, respondents seemed interested in an update of this publication. Some specific requests included adding new elements to the current riparian recommendations, making them more relevant to habitat in urban areas, as well as developing recommendations more appropriate to habitat in Eastern Washington. None of these suggestions comes as a surprise given that these sentiments have been heard by agency staff for some time. The survey responses also showed there are no alternatives that are consistently used by land use professionals statewide (Appendix 2). In addition, the alternative resources mentioned by planning professionals barely address the needs of wildlife that use riparian habitat. This is problematic given that 85% of Washington's terrestrial vertebrate species use riparian habitat (Knutson and Naef 1997) and the only publication that seems to be addressing this issue in a comprehensive manner is our 1997 PHS riparian habitat guidelines.

Lastly, a handful of land use planners expressed an interest in the agency providing training opportunities (Table 3). Although there were a series of questions asked in this survey regarding possible opportunity for training, this was not something that is discussed in detail in this summary. However, we do have some additional information from these questions to help us put together some workshops that could address topics of importance to land use professionals.

Table 3. Responses from an open-ended question asking respondents how we could improve PHS Recommendations (keywords/phrases grouped below).

<p><b>Urban Issues (6):</b></p> <ul style="list-style-type: none"> <li>○ More realistic urban recommendations</li> <li>○ Distinguish more clearly urban vs. rural recommendations</li> <li>○ Create more recommendations for urban areas</li> <li>○ WDFW's urban recommendations are pie in the sky</li> <li>○ More recommendations for urban environments</li> <li>○ Riparian recommendations not suitable for urban areas</li> </ul>	<p><b>Training Needs (4):</b></p> <ul style="list-style-type: none"> <li>○ Provide Classes</li> <li>○ Provide Training</li> <li>○ Networking</li> <li>○ Workshops on how to use</li> </ul>	<p><b>Specificity of PHS Recommendations (2):</b></p> <ul style="list-style-type: none"> <li>○ More quantifiable guidance</li> <li>○ More specific information</li> </ul>
<p><b>Riparian Recommendations (4):</b></p> <ul style="list-style-type: none"> <li>○ Update riparian recommendations</li> <li>○ Eastern Washington riparian recommendations</li> <li>○ Riparian recommendations not suitable for urban areas</li> <li>○ Use of stream-associated forested wetlands and off-channel habitats within OHWM</li> </ul>	<p><b>Compliments (4):</b></p> <ul style="list-style-type: none"> <li>○ Very comprehensive</li> <li>○ Great job</li> <li>○ Highly variable in their specificity and usefulness</li> <li>○ Helpful</li> </ul>	<p><b>Species Distribution (2):</b></p> <ul style="list-style-type: none"> <li>○ Updated distribution and population status for terrestrial priority species</li> <li>○ Distribution of Olympic Mudminnow</li> </ul>
	<p><b>PHS List Issues (3):</b></p> <ul style="list-style-type: none"> <li>○ Improved mature forest definition</li> <li>○ Clarification of what constitutes a mature wetland forest</li> <li>○ Puget bluffs/shorelines need to be priority habitats</li> </ul>	<p><b>PHS Data Issues (2):</b></p> <ul style="list-style-type: none"> <li>○ Get PHS data online</li> <li>○ Keep the PHS data up-to-date</li> </ul> <p><b>Problems Applying Recommendations (2):</b></p> <ul style="list-style-type: none"> <li>○ Hard to understand</li> <li>○ Highly variable in their specificity and usefulness</li> </ul>

## SUMMARY AND CONCLUSIONS

This survey allowed us to look at how our agency can improve the PHS management recommendations, while also giving us the opportunity to compare it to the results of the 2003 survey. Since many of the questions in the two surveys were analogous, we were able to observe some interesting findings. Specifically, we saw:

- a significant increase in the number of planners who are using our management recommendations;
- management recommendations have become more useful for addressing key areas of land use planning (e.g., planning for wildlife in urban landscapes);
- land use professionals are using specific PHS publications (e.g., riparian, LPHS) in relatively high numbers; and
- although improvements have been made for certain issues, there is still room for improvement.

So how can we improve upon our management recommendations? For one thing, we need to make sure that more sought after publications do not become outdated. In 2003, few mentioned anything about updating PHS riparian because at that time the riparian guidelines were only 6 years old. Now that it has been over twice that long since it has been updated, it seems as no surprise that there is an interest to have PHS riparian updated. Given this feedback, it seems that PHS riparian may be the highest priority for an update.

In addition to updating priority publications in a more timely fashion, respondents seemed to be telling us we need to come to them more often. Specifically, they are interested in training opportunities. Given the sheer number of resources the agency develops for the purpose of planning, it is no wonder they want us to explain what tools we have developed, how they can be used, and for what type of projects.

Lastly, we have certainly made strides in making PHS a more relevant resource for managing habitat in developing landscapes. However, some of the responses show there still is room to improve. To do this we need to make sure we coordinate with this audience before developing new publications. We also should make sure that development-oriented recommendations are included in PHS publications that have not been recently updated.

## REFERENCES

- Azerrad, J. M., and C. H. Nilon. 2006. An evaluation of agency conservation guidelines to better address planning efforts by local government. Landscape and Urban Planning 77:255-262.
- Knutson, K . L., and V. L. Naef. 1997. Management recommendfations for Washington's priority habitats: riparian. Washington Department of Fish and Wildlife, Olympia, Washington.
- WDFW. 2009. Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas. Washington Department of Fish and Wildlife, Olympia, Washington.

# APPENDICES

Appendix 1. A series of tables describing the value that respondents assigned to the PHS guidelines under some different scenarios.

Value of PHS for projects in **rural areas**:

Response Group	PHS Always Valuable	PHS Sometimes Valuable	PHS Rarely Valuable	PHS Never Valuable	Percent Change of Always/Sometimes Pooled Responses
Total 2011 (N = 83)	56%	39%	4%	1%	+ 5%
Total 2003 (N = 61)	44%	46%	10%		
Eastside 2011 (N = 15)	47%	53%	0%	0%	+ 7%
Eastside 2003 (N = 14)	43%	50%	7%		
Westside 2011 (N = 68)	59%	35%	3%	1%	+ 5%
Westside 2003 (N = 46)	43%	46%	11%		
Respondents who said development was the greatest impact (N = 35)	54%	40%	6%	0%	
Respondents who said transportation was the greatest impact (N = 19)	63%	37%	0%	0%	

Value of PHS for projects covering **small sites**:

Response Group	PHS Always Valuable	PHS Sometimes Valuable	PHS Rarely Valuable	PHS Never Valuable	Percent Change of Always/Sometimes Pooled Responses
Total 2011 (N = 97)	28%	55%	18%	0%	+ 16%
Total 2003 (N = 79)	14%	53%	32%		
Eastside 2011 (N = 20)	25%	55%	20%	0%	+ 5%
Eastside 2003 (N = 16)	25%	50%	25%		
Westside 2011 (N = 77)	29%	56%	17%	0%	- 12%
Westside 2003 (N = 31)	52%	42%	6%		
Respondents who said development was the greatest impact (N = 46)	24%	57%	21%	0%	
Respondents who said transportation was the greatest impact (N = 20)	20%	60%	20%	0%	

Value of PHS for projects covering **large areas**:

Response Group	PHS Always Valuable	PHS Sometimes Valuable	PHS Rarely Valuable	PHS Never Valuable	Percent Change of Always/Sometimes Pooled Responses
Total 2011 (N = 82)	63%	26%	10%	1%	+ 9%
Total 2003 (N = 72)	38%	42%	20%		
Eastside 2011 (N = 19)	74%	16%	5%	5%	0 %
Eastside 2003 (N = 11)	45%	45%	10%		
Westside 2011 (N = 65)	60%	28%	11%	0%	+ 11%
Westside 2003 (N = 61)	36%	41%	23%		
Respondents who said development was the greatest impact (N = 33)	52%	30%	18%	0%	
Respondents who said transportation was the greatest impact (N = 18)	67%	28%	6%	0%	

Value of PHS for projects for **mitigation projects**:

<b>Response Group</b>	<b>PHS Always Valuable</b>	<b>PHS Sometimes Valuable</b>	<b>PHS Rarely Valuable</b>	<b>PHS Never Valuable</b>	<b>Percent Change of Always/Sometimes Pooled Responses</b>
Total 2011 (N = 99) Total 2003 (N = 79)	45% 19%	46% 57%	7% 24%	1% 1%	+ 15%
Eastside 2011 (N = 21) Eastside 2003 (N = 15)	57% 27%	38% 67%	0% 6%	5% 2%	+ 1%
Westside 2011 (N = 78) Westside 2003 (N = 63)	42% 17%	49% 54%	9% 29%	0% 2%	+ 20%
Respondents who said development was the greatest impact (N = 44)	46%	43%	9%	2%	
Respondents who said transportation was the greatest impact (N = 21)	33%	67%	0%	0%	

Appendix 2. Other published resources that respondents said they use for riparian guidance. Included along with the titles is some relevant information such as the type of guidelines that are provided by each of the publications.

<b>Publication</b> <sup>2</sup>	<b>Year Published</b>	<b>Publisher</b>	<b>Riparian-specific section in publication</b>	<b>Section(s) providing fish/wildlife guidelines</b>
Determining the OHWM on streams in Washington	2010	Washington DOE	No	None
Wetlands guidance for small cities	2010	Washington DOE	No	None
Protecting Nearshore Habitat and Functions in Puget Sound	2010	Envirovision et al.	Yes	Fish
Floodplain Habitat Assessment and Mitigation	2010 (Draft)	FEMA	Yes	None
Estuarine habitat use by young salmon – an annotated bibliography	2010 (Draft)	Parametrix	No	None
Kelp and Eelgrass in Puget Sound	2007	PSNERP	No	None
Overwater structures and non-structural piling white paper	2006	WDFW	Yes	Fish
Riparia: Ecology, Conservation, and Management of Streamside Communities	2005	Academic Press	Yes	None
Wetlands in Washington State: Guidance for Protecting and Managing Wetlands (3)	2005	Washington DOE	No	None
Wetlands, Streams, and Other Waters	2004	Jones and Stokes	No	None
Stream Habitat Restoration Guidelines	2004 (Draft)	Washington State AHG Program	Yes	Fish, Limited Wildlife
King County BAS	2004	King County	No	None
Critical Areas Assistance Handbook	2003	Washington Dept of Commerce	No	None
Effects of Riprap on Riverine and Riparian Ecosystems	2003	U.S. Army Corps of Engineers	Yes	?
Achieving Sustainable Freshwater Systems	2003	Island Press	No	None
Integrated Streambank Protection Guidelines (3)	2002	Washington State AHG Program	Yes	Some fish
Marine and Estuarine Shoreline Modification Issues	2001	WDFW et al.	Yes	Fish
Stream Corridor Restoration Handbook	2001	NRCS	Yes	Fish
Gages Slough Management Plan and Technical Reports	1998	Sheldon and Associates, Inc.	No	None
Puget Sound Chinook Salmon Conservation Plan	?	?	?	Fish
Interagency stream management guide	?	?	?	?
Oregon stream assessment manual	?	?	?	?
WSDOT Stream Survey Protocol	?	WSDOT	?	?
County Codes/CAOs <sup>3</sup> (10)	--	--	--	--
GIS Data (5)	--	--	--	--
SalmonScape (4)	--	WDFW	--	--
Shoreline Planning information <sup>2</sup> (3)	--	Washington DOE	--	--
Various Journal Articles <sup>3</sup> (3)	--	--	--	--
Limiting Factors Analysis <sup>3</sup> (2)	--	Washington Conservation Comm.	--	--
USACE Publications <sup>3</sup> (2)	--	U.S. Army Corps of Engineers	--	--
AHG Guidelines publications <sup>3</sup>	--	Washington State AHG Program	--	--
NMFS publications <sup>3</sup>	--	National Marine Fisheries Service	--	--
PSNERP Publications <sup>3</sup>	--	PSNERP	--	--
FEMA Floodplain Maps	--	FEMA	--	--
Washington Sea Grant Publications <sup>3</sup>	--	Sea Grant Washington	--	--
EPA publications <sup>3</sup>	--	EPA	--	--
NOAA Publications <sup>3</sup>	--	NOAA	--	--
USFWS Publications <sup>3</sup>	--	USFWS	--	--

<sup>2</sup> The number in parentheses beside some titles is meant to indicate the number of respondents who said they reference this publication. All other titles were only mentioned by an individual respondent.

<sup>3</sup> Respondent did not give the name of the specific publication.