Policy's Questions not addessed by E-Fishing Group	Number of Caucuses High	Medium	Low
1 Do protocol surveys achieve FFR/HCP targets for precision and accuracy (95% and shared risk)?	3		6
2 Do the current default criteria for presumption of fish use surveys achieve FFR/HCP targets for precision and accuracy (95% and shared risk)?	3		6
4 Is the current extent of fish use different from historic? How?		4	5
5 How much fish habitat has been recovered by reducing fish blockages?		1	8
6 Does fish distribution vary by season or year? If so, is the observed variability operating at the site-scale due to identifiable factors or more broadly across all streams in general?	3	2	4
7 Does fish abundance affect the upper extent of fish distribution?		3	6
8 What proportion of habitat used by fish is occupied intermittently?		2	7
9 Are off-channel habitats used by fish seasonally correctly classified?	3		6
11 Do single visit surveys underestimate the extent of habitat used by fish?	3	1	5
14 Do fish in general move upstream in winter (survey window inappropriate)?	3		6
18 Is fish distribution above man-made barriers different that sites with no manmade barrier?			9

21 Do under-classification errors and associated Type N protections applied to fish streams have a negative impact on fish?	2	2	5
22 How long does recovery take following disturbance?		2	7
23 Do barriers define the end of fish habitat?	1		8
25 What proportion of the stream network has had fish use verified by protocol surveys or (by virtue of being downstream) has known fish populations?		1	8
26 What proportion of the stream network has had fish habitat identified by protocol surveys, ID Teams, or other means?		1	8
27 What proportion of the stream network modelled as fish habitat has not been verified by protocol surveys, ID Teams, or other means?			9
28 What has been the trend in the use of e-fishing in the Water Type Modification process since 2000? Is the use increasing or decreasing?			9
29 How does the presumed distribution of ITP species (such as SSHIAP, draft federal recovery plans) compare spatially to proportion of the stream network modelled as fish habitat has not been verified by protocol surveys, ID Teams, or other means?		1	8
30 What is the distribution of species of last fish encountered in protocol surveys? What is the proportion of ITP species?		1	8
32 How annual and/or seasonal variability affects the upper distribution of fish.	4		5
37 How to determine which habitats are likely to be restored.	3		6
38 Have WTMF approvals and/or ID teams been constrained by the concept that we are not yet regulating "habitat", but emergency rule (e.g. Lenny Memo). This is important when the pilot model or protocol surveys are compared with approved WTMFs/ID teams to determine success.	2	1	6

Recommended Approach to Resolve	Assumptions	Estimated Time
Initiate a study to evaluate the precision and accuracy of protocol surveys making use of existing data and studies	Need to collect new data	3 years
Collect data from stakeholders via interviews and synthesize the information.	No need to collect any data	1 year
Review fish distribution data as exists. Identify models that may be relevant.	Data may exist at a watershed scale through Wash Cons. Commission limiting factors reports; WDFW; Tribes	1 year
Work with appropriate permitting agencies (WDFW, DNR, DOT), Tribes, and landowners to identify areas where fish passage has been restored.	Data exists for recent actions, but is not complete. Extensive GIS expertise would be needed.	1 year
Start with literature synthesis and then conduct monthly surveys established at sites along with physical measurements at the site and basin scales to provide context.	Currently available data will inform research; 2 year field study and 1 year of synthesizing results.	3 years
Literature synthesis.	Research exists on the relationship between population size and pioneering fish.	1 year
Research project.	Extensive surveys necessary to document populations and distribution. Large sample sizes needed to capture population accurately and seasonal sampling needed to test the occupancy and patterns of movement. Radio telemetry and/or PIT tagging likely.	5 years
Review of current rules and compare that to off-channel habitats.	Literature exists to capture off-channel habitat.	6 months
Review existing literature and data on extent of fish use. Combine that into a study. Cost depends on necessary level of precision (region/species specific characteristics).	Pilot study would capture whether or not this is an issue. Cost is based on a pilot study.	2.5 years
Review literature for species specific information.	Literature is sufficient to address this question.	6 months
Literature synthesis.	Literature is sufficient to address fish habitat preferences. Assumptions about food webs will be made.	8 months

Research Project would be the best way to objectively deal with this. It would be very difficult to differentiate the differences between N buffers and F buffers using a literature review.	Would require direct research.	5 years
Would need to define recovery and the type of disturbance. A literature review could give insight to address this question.	Assuming a definition of recovery and disturbance.	6 months
Look at literature from USGS and USFS on barriers along with data.	Assuming information and literature exists sufficient to represent FFR lands.	1 year
A GIS exercise	Assuming protocol survey data are available	6 months
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A GIS exercise	Assuming protocol survey data are available	6 months
A GIS exercise comparing recovery plans, SSHIAP, etc., with Forest Practices data.	Assuming data are available in GIS format	8 months
Review of existing data from multiple sources.	Assuming data would be available and shared	6 months
Start with literature synthesis and then conduct monthly surveys established at sites along with physical measurements at the site and basin scales to provide context.	Currently available data will inform research; 2 year field study and 1 year of synthesizing results.	3 years
Meta-analysis and literature review.	Assumption that "restored" can be defined.	6 months
Survey of stakeholders involved in WTMF approvals.	Assumed participants in survey would respond and provide accurate information.	6 months

Estimated Cost
$250,000
$75,000
$125,000
$150,000
$500,000
$125,000
$500,000
$50,000
$170,000
$60,000
$75,000

$750,000

$60,000

$100,000

$75,000

$75,000

$75,000

$75,000

$90,000

$60,000

$500,000

$60,000

$70,000