

# Projects under EM Cooperative Research Plan

updated November 21, 2014

Type	Project			Who		Time		Notes/tasking from Nov 19-20 meeting	
	Short title	Description	Key Outcomes	Project Lead	Other Team members	Present to SSC in Feb	Before 2015 fieldwork		Due date
Written products	Alternatives	Refine the 'purpose and need' and alternatives document	Discussion draft of 'purpose and need' and alternatives to be analyzed for a Council amendment package, and how the elements of the strawmen mesh with the amendment analysis.	Diana Evans	Jennifer Mondragon, Chris Rilling	<b>X</b> (briefly)		Jan 6	Context document for SSC presentation in February (then will be folded into analysis)
	Fishery Demographics	Summarize the fishery demographics - number of vessels, gear used, landing ports, target fishery. Also, summary of effort (trips, length, hauls per day, length of sets), vessel configurations (side/stern haul, shelter deck or open).	Summary paper that describes demographics of the fixed gear fleet in terms of effort, retained and discarded catch by catch area and/or port.	Diana Evans	Mike Fey, Howard McElderry	(informs ops testing)	<b>X</b>	Dec 5	Mike to breakout longline, provide homeport data - plan teleconf re other issues
	Catch Composition	Summarize the catch composition and disposition	Tables describing the catch composition in each fixed gear target fishery (halibut, sablefish, Pacific cod), and which species are discarded.	Jennifer Mondragon	Mike Fey, Howard McElderry	(informs ops testing)	<b>X</b>	Dec 5	JM/HM to categorize list for mgmt status and species that need inseason data
	Strawman Monitoring Options	There are a series of 'strawman' monitoring options that can be use to address the different alternatives. A 'strawman' is a methods summary of the key elements of each monitoring option and describes how EM technology integrates with other tools to meet management needs. Key elements include vessel size criteria, data requirements for catch estimation, vessel operator responsibilities, EM system operating specifications, EM data collection specifications, analysis requirements, and integration with other tools. The strawman links the data requirements with the specific way EM technology and other tools are being used.	Discussion document to provide a summary of monitoring approach and decision points for an EM configuration that meets the Council's goal for estimating catch; analysis of each approach in terms of overall suitability, the level of difficulty, decision points, strengths and weaknesses and operational feasibility by fishery/fleet.	Howard McElderry	Dan Falvey, David Polushkin, Malcolm Milne, Farron Wallace, Jennifer Mondragon, Brian Lynch, Dave Colpo	(informs ops testing)	<b>X</b>	after Dec-5, before Jan 6	Figure out strawman options for ops plan, based on species list
	Vessel Obligations	Each strawman monitoring option will carry specific vessel obligations in order to ensure the data collection objectives are met. This work task provides a comprehensive description of vessel requirements for each option, including duty of care responsibilities, on board catch handling requirements, ancillary data collection and other reporting obligations.	Discussion document summarizing the vessel requirements for each monitoring option; feasibility evaluation for each fishery/fleet; analysis of strengths and weaknesses of each approach.	Howard McElderry	Dan Falvey, David Polushkin, Malcolm Milne, Farron Wallace, Jennifer Mondragon, Brian Lynch, Dave Colpo		<b>X</b>		

## Projects under EM Cooperative Research Plan

updated November 21, 2014

Type	Project			Who		Time			Notes/tasking from Nov 19-20 meeting
	Short title	Description	Key Outcomes	Project Lead	Other Team members	Present to SSC in Feb	Before 2015 fieldwork	Due date	
Written products	Monitoring Program Deployment and Design	The use of EM technology for fisheries monitoring requires support services to ensure technology is deployed correctly, operator responsibilities are met, and on-board data sets collected and evaluated against dockside information in a timely manner. This task outlines key elements of an operational EM program, tailored to the Alaska fixed gear fishery.	Discussion document outlining the key elements of the monitoring program and relative cost contribution. The report will present different strategies for equipment deployment and examine the impact of the number of service ports.	Howard McElderry	Dan Falvey, David Polushkin, Malcolm Milne, Farron Wallace, Jennifer Mondragon, Brian Lynch, Dave Colpo				longer timeline - preparation for pre-implementation
	Dockside Monitoring Program Design	Some of the monitoring options require dockside monitoring to obtain an independent estimate of landed catch by species. This task summarizes the information requirements, monitoring procedures, and other program elements for a dockside monitoring program.	Discussion document of key elements and decision points of a dockside monitoring program, information needs, monitoring procedures and cost elements.	Howard McElderry	Dan Falvey, David Polushkin, Malcolm Milne, Farron Wallace, Jennifer Mondragon, Brian Lynch, Dave Colpo, Nathan Lagerwey				longer timeline
	Catch Estimation	List potential catch estimation procedures for EM data for a presumed strata (alternative).	Discussion paper that describes the trade offs and assumptions of various catch estimation procedures for expanding catch to the fishery level.	Jennifer Mondragon		?			expands on JM species list work, JM to create a reference table for short term
	Weight	There are a number of potential methods to derive weight for piece counts. Each of these methods will have an accompanying list of assumptions and data collections that will be evaluated.	Summary paper that describes potential ways to derive weight estimates for piece counts.	Farron Wallace	Jennifer Mondragon, Dave Colpo, Bruce Leaman, Bernie Burkholder	?		Jan 6	FW/JM to write up methods to evaluate
6)	Video Review Tradeoffs	Analysis of how much video review is needed	Summary paper describing the tradeoffs of reviewing video for all fish, or only discards; subsampling; etc.	NMFS	Dave Colpo				longer term
	Cost Framework	How will costs be analyzed with respect to EM decision points, what is the framework that will be used in the analysis? What are major cost centers in the program, and how does that affect design or decisionmaking?	Discussion paper framing the range of costs that might be associated with different decisions in the suite of alternatives, and how fieldwork or other methods will be employed to inform those costs.	Sam Cunningham	Diana Evans, Howard McElderry, Dan Falvey, Dave Colpo, Mike Fey; Tom Meyer for Section 313	?	X		Sam prepared to talk to SSC about cost framework, also working with DF re exit interview questions for 2015

## Projects under EM Cooperative Research Plan

updated November 21, 2014

Type	Project			Who		Time		Notes/tasking from Nov 19-20 meeting	
	Short title	Description	Key Outcomes	Project Lead	Other Team members	Present to SSC in Feb	Before 2015 fieldwork		Due date
Written product	Seabird Handling	Seabird procedures	Discussion paper outlining 1) the handling procedures that will be required for seabird interactions when operating EM, and 2) if any permits will be required of EM vessels	Chris Rilling	Kim Rivera, Nathan Lagerwey, Dan Falvey, Howard McElderry, David Polushkin, Don Lopez	(ideally integrate in ops testing)	X	Jan 13	develop appropriate measures for 2015. Trying for meeting in Nov, but otherwise will be added into ops plan later.
	Datasheet data elements	Discussion of what self reported data elements need to be collected to support EM catch estimation	Outline of datasheet fields & how those compare to current IPHC and NMFS logbook data elements	Jennifer Mondragon	Dave Colpo, Malcolm Milne, Heather Gilroy	(informs ops testing)	X		JM, HG to review current list in ops plan
	Data review protocol	Identify which data elements should be extracted from the imagery obtained under the various field studies, and the review processes that should be followed.	Continue to refine the video data review protocol procedure document	Chris Rilling	D Colpo, H McElderry, J Mondragon, F Wallace, S Buckelew, D Falvey, H Gilroy		X	Jan 12 pm	subcommittee to meet and discuss changes for 2015
	<i>(not part of Cooperative Research Plan)</i>	Expanded report on 2014 field research to date	Update PSMFC report with the background/context of what we are doing with video analysis so far, and why. Incorporate Saltwater and AMR reports on vessel activity in 2014.	Dave Colpo	Howard McElderry, Stacey Buckelew			Jan 6	review at Jan 13 meeting (t)
		Introduction to 2015 Cooperative Research Plan - provide project goal and roadmap of how different projects fit together for 2015 fieldwork.	Include short summary of each project: ops testing, std configuration research (w/pot vessel appx), chute research, stereo camera ops research (NPRB), stereo camera length measurement (IPHC), e logbook, pot vessel research (NPFA/NFWF)	Diana Evans	Farron Wallace, Jennifer Mondragon, Howard McElderry, Morgan Wealti	X		Jan 6	

## Projects under EM Cooperative Research Plan

updated November 21, 2014

Type	Project			Who		Time		Notes/tasking from Nov 19-20 meeting	
	Short title	Description	Key Outcomes	Project Lead	Other Team members	Present to SSC in Feb	Before 2015 fieldwork		Due date
Field Testing/ research	Operational testing	Results from the spring 2014 field season and written products (described above) will be used to determine research priorities for the 2015 season. It is expected that the field program will continue to evaluate program operational infrastructure in key ports, continue to socialize EM technology with the fleet, and test some aspects of the strawman monitoring options. This work will be a collaborative effort involving service providers, the fishing industry, NMFS and PSMFC.	The key elements of this program include decision points, operational plans, field work, EM data sets, dockside monitoring data, and a technical report, jointly prepared by PSMFC and service providers.	Howard McDerrery	Dan Falvey, David Polushkin, Malcolm Milne, Farron Wallace, Jennifer Mondragon, Brian Lynch, Dave Colpo, Sam Cunningham	x	x	Jan 6	will be appendix to 2015 Cooperative Research Plan
	Standard configuration research	The research is intended to provide field-tested methods that allow collection of quantifiable image-based data from fisheries that can be used to estimate species-specific catch and at-sea discard amounts. Specifically, we will evaluate the applicability of EM technologies in a standard configuration at the rail to collect catch, effort, and species composition data.	A research document that will describe results of testing: differences in count and species composition data between EM (single and stereo cameras) in a standard configuration at the rail and an at-sea biologist; ability to derive length from stereo camera.	Farron Wallace		x	x	Jan 6	repackage with pot vessel study as appendix to integrated plan
	Chute camera research	Image quality from EM systems are often influenced by environmental conditions and system maintenance reducing our ability to distinguish species, an essential part of estimation. A camera chute system provides a way to collect high definition images constantly thus has the potential to derive lengths and improve reliability of species identification.	A research document that will describe results of testing: differences in count, length, and species composition data between a stereo camera in a chute and an at-sea biologist; ability to derive length from stereo camera; potential for automation of species identification.	Farron Wallace		x	x	Jan 6	repackage as appendix to integrated plan
	Halibut DMR research	Investigate the relationship between release methods and discard mortality rates. IPHC interested in pursuing this for fixed gear as well as trawl vessels.	Research study that will allow IPHC to assign discard mortality rates based on a release method, rather than based on injury codes.	Bruce Leaman	Dan Falvey, Bernie Burkholder				longer term. Looking at 2 streams of research, tagging and non-tagging. Working out issues.