Letter of Intent for 2013 Multistate Conservation Grant Program

Project Title: Strengthening the National Fish Habitat Partnership through improved tools and resources for fish habitat assessment, conservation planning, and project effectiveness measurement.

Applicant: Kelly Hepler, Assistant Commissioner, Alaska Department of Fish and Game; Chair, National Fish Habitat Partnership (NFHP) Board
Phone: 907-242-1907, email: Kelly.hepler@alaska.gov

If awarded, the grant will be administered by the Association of Fish and Wildlife Agencies, 444 North Capitol Street NW, Washington DC, 20001

Primary Investigators: Gary Whelan, Michigan Department of Natural Resources – Fisheries Division, Program Manager; Co-chair NFHP Science and Data Committee
Phone: 517-373-6948, email: whelang@michigan.gov

Andrea Ostroff, U.S. Geological Survey, Aquatic GAP Operations Manager; Co-chair NFHP Science and Data Committee
Phone: 703-648-4070, email: aostroff@usgs.gov

Primary 2013 NCN addressed: Subject 1: Strengthening the National Fish Habitat Partnership

Project Length: 3 years in duration

Project beneficiaries: The outcomes of this project will benefit all 50 states.

Estimated MSCGP funding request: $1,782,000

Funding Source: Sport Fish Restoration fund

Funds requested would be used to fill critical data and analytical gaps identified by National Fish Habitat Board (Board) and Fish Habitat Partnerships (FHPs) in the 2010 National Fish Habitat Assessment (Assessment) and to develop new effectiveness measurements for FHPs. To fill data gaps, we will: 1) characterize network connectivity at multiple scales and develop an approach to characterize hydrology at a national scale; 2) incorporate socioeconomic metrics into the assessment framework; and 3) coordinate refining the coastal assessment. By filling these critical data gaps, the value of the national assessment to the Board and FHPs as a conservation planning tool will be greatly enhanced. Additionally, this proposal will develop effectiveness measures for fish habitat conservation projects which will improve the outcome analysis and reporting abilities of FHPs along with identifying data gaps that must be addressed in the future.

Narrative

NCN Needs and Target Area. This LOI addresses all of the specified objectives, needs and outcomes identified in NCN Subject 1 (Strengthening the National Fish Habitat Partnership) by:

addressing identified Assessment gaps in representing stream network connectivity, hydrology and socioeconomic information in a manner compatible with Board data standards; developing new tools and analytical approaches to conduct landscape habitat analyses to include approaches for integrating detailed process level information; and developing new fish habitat conservation project effectiveness measures and measurement tools. All of these items will directly address the objectives and needs stated in the desired proposals and results/expected benefits of the NCN along with the Board's 2015 Assessment Strategy under review at this time. Since FHPs are now distributed throughout all 50 states, this proposal will directly benefit all 50 states.

Proposal Goals. This proposed project will have the overall goals of increasing available information and analytical capability of the Assessment and ability for the Board and FHPs to measure conservation effectiveness of projects and programs designed to address fish habitat needs. The specific goals of this proposal are:

- *Assessment Refinement*. Incorporate improved representation of network connectivity at a national scale, develop initial approaches to incorporate hydrologic and socioeconomic metrics, and coordinate incorporation of all available estuarine and coastal fisheries and shellfish data along with fish/shellfish-habitat relationships into the improved 2015 Assessment. Identify or develop FHP demonstration projects to develop approaches to incorporate fine-scale information into future Assessments.

- *Socioeconomic Information Incorporation*. Assemble available socioeconomic data and information and provide access to all partners and stakeholders of the National Fish Habitat Partnership. Develop a socioeconomic evaluation framework to allow quick and consistent evaluations of the complete economic footprint of NFHP investments. This will include assistance in interpreting and communicating socioeconomic impacts of NFHP-supported fish habitat conservation projects.

- *Effectiveness Evaluation.* Develop methods and tools for evaluating effectiveness of NFHP-supported fish habitat conservation projects for use by the Board and FHPs. This will include incorporating and attributing fisheries and habitat management objectives into the national assessment spatial framework.

Activities, Actions and Measureable Outcomes. The Board, acting through its fiscal agent, the Association of Fish and Wildlife Agencies will distribute funds to coordinate with FHPs and assemble improved data of small barriers to better characterize habitat fragmentation and related network connectivity metrics. From these improved available data, initial approaches will be explored to address incorporation of hydrology data into the NFHP spatial framework. These data will be combined with available fisheries data to refine the habitat-fish community relationships and to identify metrics to improve Assessment scoring. This effort will require additional statistical analysis that will yield new analytical tools for the landscape analysis of fisheries habitat.

For coastal areas, this proposal will coordinate refinement of the estuarine/coastal assessment to the same analytical standard as the inland assessment. Available estuarine and potentially coastal

fisheries and shellfish data will be attributed to the NFHP coastal geospatial framework and the appropriate statistical analysis will be conducted to develop fish/shellfish-habitat metrics.

The 2010 Assessment and geospatial framework lacked socioeconomic information. Available economic information will be collated and attributed for local, regional and national partners. Current socioeconomic data will be enhanced by providing economic values of: restoring threatened and endangered species; improving water quality; non-fishing benefits; and other values not captured in the current data. The final component of this objective will be to educate the Board and FHPs to increase their use and understanding of these data and to identify key gaps in the economic data to address in future work.

To ensure that a full accounting of NFHP project benefits is available to the Board and to FHPs, this project will develop case studies using "Waters to Watch" focusing on an evaluation component comparing project goals, management objectives and/or conservation targets to project outcomes. This project will also assemble and evaluate existing approaches, determine the best fit, and inform a process for developing consistent measures that can be used by the Board and FHPs to evaluate effectiveness of future conservation actions.

Finally, the Assessment needs to begin to move from broad-based landscape to detailed process level variables that can be directly influenced by FHP actions. This proposal will explore this approach by incorporating improved connectivity metrics and conduct specific demonstration projects with interested FHPs to exhibit the potential of developing similar methodologies for other process variables in the future.

Project Timeline and Tasks

***January 2013 – Spring 2013*:** Initiate project development and hire contractors (two Post-docs or post-graduate interns (for 3 years), socioeconomic staff (for 2 years) and two data managers (for 3 years)). Develop approaches for each objective. Coordinate collection and attribution of data for coastal fish/shellfish communities, connectivity and socioeconomics.
***Summer 2013 - Winter 2013*:** Coordinate collection and attribution of data for estuarine and coastal fish/shellfish communities, connectivity and socioeconomic data. Assist in developing analytical approaches for coastal assessment and connectivity. Collect all effectiveness measurement options and begin development of NFHP effectiveness measurement process. Provide initial socioeconomic information and analyses and initiate socioeconomic assistance to Board and FHPs.
***Winter 2013 - Fall 2014*:** Complete analyses for estuarine and coastal fish/shellfish communities and habitat stressors. Complete development of new connectivity layer and analyses. Develop NFHP effectiveness measurement process to on "Waters to Watch". Initiate and complete scoping work on hydrology layer. Initiate development of detailed process level demonstration project approach. Complete development of socioeconomic data layer and analysis, complete module report, and provide socioeconomic assistance and gap analysis to Board and FHPs.
***Winter 2014- Fall 2015*:** Complete development of initial approach for attributing hydrology data and analyses for refined hydrology metric(s). Implement related demonstration projects with

interested FHPs. Complete work on NFHP effectiveness measurement process to include analysis of designated "Waters to Watch" and development of best practices document. Complete reports on all project areas.

Project Budget – Three Years	Cost	
	Direct	Indirect
Salaries and Benefits	$0	$0
Total Project related Expenses – Contracted Services	$1,600,000	$160,000
Oversight Travel	$ 20,000	$ 2,000
MSCGP request (Sport Fish Restoration source)	**$1,782,000**	
Partnership Funds (Waiver of 14% IDC by AFWA)	**$ 226,800**	
Total Cost of Project	**$2,008,800**	

Summary. This proposed project will address critical gaps in the 2010 Assessment, provide new analytical tools for landscape-scale analysis of fish habitat, and provide new methods and tools to measure FHP project effectiveness that will benefit all 50 states. Additionally, this proposal will begin to integrate socioeconomic information and detailed process level information into the spatial framework data, steps that will greatly enhance the utility of future Assessments. The products from this proposed project will: greatly improve the 2015 and future National Fish Habitat Assessments as conservation planning tools; provide new analytical tools for FHPs and the Board to examine fish habitat priorities; develop new tools to measure project effectiveness; and develop the approach to integrate detailed process related data into the Assessment framework.

Qualifications

Kelly Hepler, Chair National Fish Habitat Board
Kelly Hepler began working at ADF&G in 1979 as a fisheries biologist and has held increasingly complex positions throughout his career. Kelly served as director of the Division of Sport Fish and most recently as a special assistant for the previous commissioner. He represents the department in numerous national forums and is presently chair of the National Fish Habitat Board. Kelly holds a B.S. in Fish and Wildlife Management from Montana State University.

Gary Whelan, Co-chair, National Fish Habitat Board – Science and Data Committee
Gary Whelan has over 29 years of fisheries experience, most of which is with the Michigan Department of Natural Resources where he manages four key fisheries programs. He was a member of the core team that developed the National Fish Habitat Action Plan and a co-chair of the Science and Data Committee since its inception. Gary holds a B.S. in Fisheries Management from the University of Wyoming and a M.S. in Fisheries Management from the University of Missouri.

Andrea Ostroff, Co-chair, National Fish Habitat Board – Science and Data Committee

Andrea Ostroff is a Biologist with the United States Geological Survey implementing informatics and technology approaches that promote data standards and best practices to enable data-driven science. She is involved with a number of initiatives through which she collaborates with a wide variety of federal, NGO, and state partners and cooperators. Andrea holds a B.S. in Agricultural Sciences from the University of Delaware and a M.S. in Environmental Biology from Emporia State University in Kansas.

Project oversight assistance will be provided by *Matt Menashes, Director of Operations, Association of Fish & Wildlife Agencies*, the NFHP Science and Data Committee members, AFWA, USFWS, NOAA, state agencies and other partners such as NGO's.