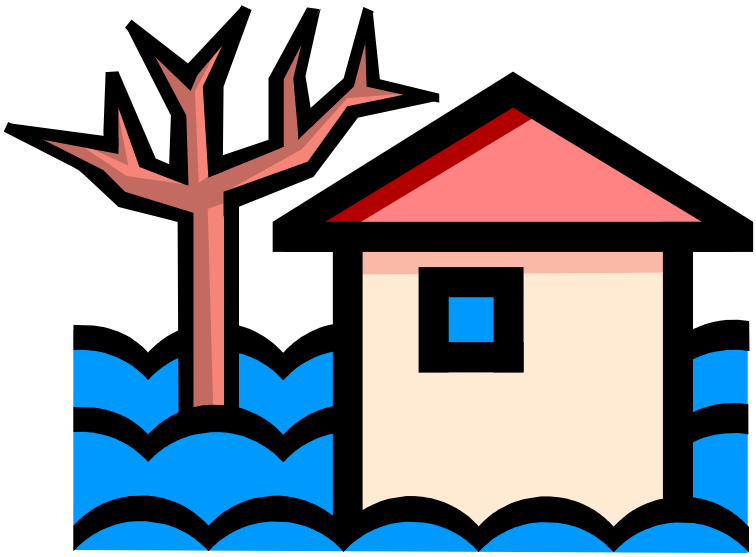
WASHINGTON DEPARTMENT OF ECOLOGY

FLOODPLAIN MANAGEMENT
FIVE YEAR WORK PLAN

Federal Fiscal Years 2005-2009



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FIVE-YEAR FLOODPLAIN MANAGEMENT WORK PLAN

Washington State Department of Ecology

Purpose

The purpose of this plan is to identify strategies and practices that will ensure the enhancement of the effectiveness and efficiency of the State Floodplain Management Program for Washington and assist its communities in maintaining or improving floodplain management programs at the local level. A major method of accomplishing this is through our partnership with the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in the National Flood Insurance Program (NFIP). It is through the NFIP's Community Assistance Program – State Support Services Element (CAP-SSSE) grant that some of the funding is provided for the State of Washington's efforts. The purpose of the CAP-SSSE is to provide, through the state grant mechanism, a means to ensure that communities participating in the NFIP are achieving the flood damage reduction goals of this program. CAP-SSSE is intended to accomplish this by funding for this and other states to provide technical assistance to NFIP communities. This funding allows us to monitor and evaluate community performance in implementing NFIP floodplain management activities with the ancillary goal of building community floodplain management expertise and capabilities.

I. State Authorities

The essence of Washington's floodplain management law is found in the Revised Code of Washington (RCW) Chapter 86.16, *Flood Plain Management*. The entire Chapter 86 of the RCW, *Flood Control,* is devoted to addressing flood control issues as it has evolved from the initial act in 1935. Chapter 86.16 states that the prevention and alleviation of recurring flood damages to public and private property and the threats posed to public health and safety are a matter of statewide public concern. This law place regulatory oversight for floodplain management among the responsibilities of the Department of Ecology. Chapter 86.16 RCW is cited in floodplain management literature, including FEMA's National Assessment, as one of the first and strongest in the nation. This law requires local governments to adopt local regulations that at a minimum equal the National Flood Insurance Program requirements and encourages locals to adopt ordinances that exceed the minimum standards. These regulations shall be exercised over the planning, construction, operation and maintenance of any works, structures and improvements, public or private, which might, if improperly implemented, adversely influence the regimen of a stream or body of water or might adversely affect the security of life, health, and property against damage by flood waters. In addition to the state law, administrative rules are adopted to implement and support it under the Washington Administrative Code (WAC) which has the force and effect of state law. Chapter 173-158 of the WAC clarifies and details requirements and responsibilities for floodplain management actions. A major challenge to the law in 1978, *Maple Leaf Investors v.*

Ecology, is cited in legal references to floodplain management issues. The courts upheld the law, declaring that denial of a permit to build residential structures in the floodway was a valid exercise of police powers and did not constitute a taking.

In addition to Chapter 86.16 RCW, there are three other statutes that, along with their WAC's also address floodplain management activities in the state. Chapter 86.12 RCW, *Flood Control by Counties*, authorizes county governments the power to levy taxes, condemn properties and to undertake flood control activities directed toward a public purpose. Chapter 86.26 RCW, *State Participation in Flood Control Maintenance*, establishes the Flood Control Assistance Account program (FCAAP) which provides funding for local flood hazard management efforts and sets criteria for the use of these funds. Chapter 86.24 RCW, *Flood Control by State in Cooperation with Federal Agencies, Etc.*, authorizes cooperation with the U.S. Army Corps of Engineers and other federal agencies to reduce flood hazards in the interest of the state.

II. Five Year Vision for Floodplain Management

Background

The State of Washington has a lengthy history as a leader among States in the discipline of floodplain management. In 1935, following severe flooding across the state in 1933, the State Legislature enacted one of the first State floodplain management laws in the nation, which initiated a program that gave the State authority to issue permits for construction in designated Flood Control Zones (FCZ). These FCZ's covered approximately one-third of the flood prone communities in the State. Subsequent legislative initiatives expanded and improved floodplain management practices. This prepared Washington well for the implementation of the National Flood Insurance Program established in 1968 and the passage of the Flood Disaster Protection Act of 1973. In 1987 the Legislature amended the 1935 law so that it was more in synch with the floodplain management efforts at the Federal level. This placed the onus on managing and permitting development in floodplain areas on the local jurisdictions and prohibited new residential development in designated floodways. Prior to this in 1984, the Flood Control Assistance Account Program (FCAAP) was re-established and re-configured to assist local governments in comprehensive flood control planning and maintenance efforts. Since that time the impetus of this program has evolved from the philosophy of flood control to the tact of managing the impacts of flood hazards. The Department of Ecology administers this program and distributes matching grants out of the FCAAP account to cities, counties, and special purpose districts to assist them in working toward reducing the impacts of flood hazards. This is a unique program, one of the very few in the nation, that provides grant funding to local governments for floodplain management planning and hazard mitigation implementation actions.

Current Efforts

The Community Assistance Program – State Support Services Element (CAP-SSSE) is currently operated within the Washington State Department of Ecology, Shorelands and Environmental Assistance (SEA) Program, Floodplain Management Team. In addition to the CAP-SSSE duties, this Team administers the Flood Control Assistance Account Program (FCAAP) providing grants (up to $3.2 million biennially) to local governments and other organizations for flood hazard reduction efforts and related coordination and technical assistance duties. This Team consists of a staff of four floodplain management professionals, including a team leader/manager at headquarters and a licensed Professional Engineer/Geologist among the regional staff, representing a combined sixty plus years of experience in the floodplain management field. Additionally, the Team includes a Mapping/GIS Specialist, a portion of a Contracts & Grants Coordinator, and a portion of a Hydrogeologist. Furthermore, we have available the services of Wetlands Specialists, Botanists and Biologists, Shoreline Land Use Planners, and Conservation Corps crews from the SEA Program and engineers from the Dam Safety Section of Ecology's Water Resources Program and Stormwater Specialists from Ecology's Water Quality Program.

The Floodplain Management Team annually engages in a variety of CAP-SSSE tasks as detailed in the grant Scope of Work in support of NFIP objectives. In fiscal year 2004 the Team was scheduled to conduct 42 CAV's, 20 CAC's, 22 Floodplain Ordinance Assistance Reviews, conduct 2-4 workshops for local governments, publish 4 newsletter articles, coordinate with the FEMA Region X office and other federal and state agencies, provide general technical assistance to the full array of client groups, and assist with Presidentially-declared disasters (DR-1499 occurred during the first quarter). Additionally, all Team members have assisted with Map Modernization tasks, which include activities as a Cooperating Technical Partner (CTP). We would like to maintain these efforts and expand and enhance them when and where possible.

Strengths and Weaknesses

The strengths of our current floodplain management efforts are our dedicated staff and the funding available through our FCAAP grant program as described above. The primary weaknesses are limited financial resources and limited access to other staff resources. This occurs due to state budget constraints that have reduced the number of staff available due to reduced legislative appropriations and mandated staff vacancies, which is compounded by our broad scope of activities. In FY 2004 the impacts of budget reductions resulted in our FCAAP fund being reduced by $2 million and the loss of one and a half (1.5) FTE's while we operated with half-time regional and headquarters positions. The CAP-SSSE grant has provided us with a steady funding source that was thankfully supplemented above historic levels during this fiscal year. Another weakness has been the lack of a consistent, dependable funding source for our Map Modernization efforts. This situation caused us to eliminate our Mapping Coordinator position and our Mapping/GIS Specialist position continues to be classified as a project position, the

tenuous nature of which makes the well-qualified and skilled occupant of that position insecure and subject to the lure of potentially more secure employment outside our agency. Without these services we would be unable to significantly participate in the Map Modernization initiative. Fortunately, additional funding for Map Modernization activities has been made available by FEMA but the uncertainty of its adequacy and stability makes this an ongoing concern.

Vision

The mission of the Washington State Department of Ecology is to protect, preserve, and enhance Washington's environment and promote the wise management of our air, land, and water for the benefit of current and future generations. The goal of our current efforts in floodplain management is to reduce the negative impacts of flood hazards to people, property, and the environment by encouraging and mandating wise land use and construction practices in our floodplain areas. Methods to accomplish this include providing technical and financial assistance to local governments and technical assistance to our broad customer group which includes: other state and federal agencies, environmental groups, land developers, realtors, the engineering community, lending institutions, the insurance industry, and the general public. Our vision is to maximize the effectiveness of the financial and staff resources of our agency, and other state agencies with a stake in floodplain management, to increase and enhance the floodplain management capabilities of local governments through coordination and cooperation and the use of modern technologies to achieve the flood loss reduction goals of the NFIP and to provide for public safety, protection of public infrastructure and private property, and to preserve the functions and values of the natural floodplain resource.

III. Strategy to Improve Floodplain Management

This section of the Five Year Floodplain Management Plan identifies a proposed strategy to maximize the effectiveness of floodplain management efforts in Washington State. Some of the objectives and activities may or may not be attainable due to resource or administrative/political constraints but it offers a possible scenario that could lead to the goal of maximizing effectiveness for the state as a well as for each individual community. The strategy draws upon the existing Community Assistance Program grant tasks and suggests enhancement and expansion of these activities to improve effectiveness. It does not represent nor supplant the proposed Performance Measures described in Section VI of this document. It offers innovations that could be implemented, given the appropriate conditions that would lead to overall improved floodplain management. However, should these actions be implemented they would likely improve the success rate of the Performance Measures. Each of the objectives that follow will include identification of the CAP-SSSE grant task and the performance measure to which they are related.

There are 317 communities in Washington State including counties (39) and municipalities (278). Of that total, 286 communities, or 89.3%, participate in the

National Flood Insurance Program while the vast majority of the remaining 31 communities have no recognized flood hazard. As the State's designated coordinating agency for the NFIP, Ecology receives an annual grant from FEMA's Community Assistance Program-State Support Services Element (CAP-SSSE) to provide technical assistance and support to those 286 communities enrolled in the NFIP. Our services, except for FCAAP grants, are available to all communities regardless of their NFIP participation status. However, no CAP-SSSE funds are used for services to non-participating communities unless the task involved is NFIP enrollment. In this role Ecology staff conducts Community Assistance Visits (CAV's) and Community Assistance Contacts (CAC's) to assess local regulatory programs for compliance with state and federal requirements. In addition to these major CAP/SSSE grant tasks, Ecology staff provides floodplain management ordinance review and enhancement, flood loss reduction assistance through workshops and public outreach efforts, coordination with FEMA Region X and other federal and state agencies, mapping assistance, and general technical assistance on the full array of related topics from insurance questions to hazard mitigation alternatives.

Since actual floodplain management like hazard mitigation is local in focus the overall goal of a strategy for improvement should be to make individual communities more self-reliant by helping them improve their floodplain management capabilities. In keeping with this goal we offer the following objectives:

Future Objective 1 – Establish a five year cycle to conduct CAV's on all 286 participating communities within that time frame.

Over the past few years Ecology has conducted an average of 35 CAV's per year. While this represents a significant effort, it is not sufficient to meet the desired target of conducting CAV's in all 286 participating communities within a five year cycle. Since the CAV's represent an intensive effort by meeting with communities' staffs involved in planning, building, public works, and emergency management and examining their activities, it provides a superior method of conveying floodplain management information and assuring compliance with regulatory standards. To improve on this effort we propose the following actions:

- Classify communities by need using a variety of categories such as: a decile ranking system as used in Map Modernization prioritization, considering population size and number of flood insurance policies; the degree of flood hazard; development pressure due to growth; and CRS status. We will need to balance the high need versus the smaller limited resource communities to avoid excluding any participating communities.
- Establish a coordination system with FEMA Region X to ensure coverage on an annual basis among the State, FEMA, Region and any contractors if needed.
- Encourage communities to prepare written procedures for implementing their floodplain management regulations.
- Automate CAV's to the extent possible by exploring the use and/or modification of the Digital CAV program to reduce the staff time devoted to this task and expedite information flow. This includes exploring the merging capabilities of PhotoShop with Appendix G data.

- Develop standardized findings and comments for the CAV narrative where possible.
- Explore the possibilities for the purchase and use of laptop/notebook computers for expediting the inputting of field data and creation of reports.
- Explore the possibilities for the creation of a network or tie-in with the FEMA Region, Ecology Headquarters and Regions, and perhaps with the local governments being CAV'd. This includes exploration of the potential for coordination with the CIS.
- Develop an automated message system for CAV findings and status for enabling notification of other interested parties such as; State Emergency Management Division; Department of Community, Trade and Economic Development; ISO; of CAV findings and status.

This objective relates to Performance Measures 3-8 and the CAV CAP grant task.

Milestones – In 2005 evaluate communities that need to have CAV's conducted on a regular basis and categorize those with CRS standing, significant development, and minimal floodplains. In 2006 develop schedule based on categorizations and begin implementing it while exploring the feasibility of the other action items. Throughout the five year period promote the institution of written floodplain management procedures.
Partnerships – FEMA Region X, ISO, WA State EMD.

Future Objective 2 – Establish a cycle for conducting CAC's that will assure that each community is contacted at least once between CAV's. This will also serve as a feeder system for the CAV's.
CAC's, while not as intensive as CAV's, allow for maintenance and continuity of familiarity and awareness with floodplain management issues between Ecology and the communities. The CAC also allows for a specific focus on individual community concerns. Ecology averages 24 CAC's per year with some resulting from specific technical assistance contacts. The use of this method could be expanded as well or could serve as a feeder mechanism for increasing the number of CAV's. During this fiscal year an internal policy decision was made to classify as CAC's only those that include a face-to-face contact either as a site visit by Ecology staff or an office visit to Ecology by community staff. To improve on this effort we propose the same action items as found in ***Future Objective 1.***

Future Objective 2 relates to Performance Measures 1-8 and to the CAC CAP grant task.

Milestones – Concurrent with CAV schedule.
Partnerships – FEMA Region X, ISO, EMD, WA Dept. of Community, Trade and Economic Development (CTED).

Future Objective 3 – Encourage and support more restrictive floodplain management ordinances in order to increase the number of communities adopting such ordinances and track them.

Ordinance assistance is included in all CAV's and most CAC's and, in addition, other communities ordinances are reviewed based on technical assistance contacts, community ordinance update cycles, community actions (such as annexations), or financial assistance requests to our supporting FCAAP grant program. Therefore, many more ordinances are reviewed than are initially planned for under the CAP/SSSE grant, thus Ecology always exceeds the target of 20-25 ordinance reviews. In the FFY 2005 CAP grant Statement of Work this cumulative number of ordinances will be identified. This trend should continue and become more institutionalized as we continue to make progress on refining the State Model Flood Damage Prevention Ordinance in consultation with FEMA Region X staff. Another factor at work here is the Washington Growth Management Act which requires all communities to adopt and revise periodically their Critical Areas Ordinances. This includes Frequently Flooded Areas and other natural resource or hazardous areas. This activity requires Ecology to coordinate with the State's Department of Community, Trade and Economic Development and other resource agencies as well. To improve on this effort we propose the following actions:

- Research all local government regulations and identify those communities with higher standards and what those standards are. This includes assuring staff access to the most up to date codes, perhaps through the Municipal Research System.
- Develop a compendium of higher regulatory standards.
- Organize and categorize standards that exceed the minimums and analyze them to identify patterns and relationships.
- Research the degree of success for these higher standards by community and standard. Identify how and why they were developed and adopted, the advantages and problems related to their implementation/enforcement, and the length of time they have been in force. Annotations describing these would be included in the compendium and success stories could be included in website newsletter articles.
- Research and document the use of higher regulatory standards nationwide.
- Compile an electronic library of ordinances for all communities that documents specific provisions and automate ordinance review to allow for an expedited process and notification system for concerned agencies.
- Prepare standard community support strategy including letters to elected officials, testimony at council/commission hearings, website articles, press/broadcast releases, and information packets for legislators.
- Speak at selected agency and professional organization conferences to extol the benefits of higher regulatory standards.
- Develop workshops on higher regulatory standards utilizing to the extent possible local government representatives as presenters.
- Explore the potential for using FCAAP funds to assist communities in developing such standards.
- Encourage, support, and provide information about extraordinary or innovative hazard mitigation efforts as well. This may include development of written or video material of success stories related to these efforts.

This objective relates most directly to Performance Measure 3 but could serve the others as well. It also relates to CAP grant tasks for Floodplain Ordinance Assistance, State Model Ordinance Research and Development, Flood Loss Reduction Assistance, and General Technical Assistance.

Milestones – In 2005 complete the inventory and develop community support strategy. In 2006 develop a plan for creation of electronic library and prepare electronic assessment form and linkages. In 2007 implement plan and use of forms and determine the feasibility of the other action items.
Partnerships – Ecology's Information Systems Program, FEMA Region X, EMD, CTED.

Future Objective 4 – Enhance and improve coordination with other agencies involved in floodplain management.
Program coordination between Ecology and FEMA Region X, including interaction with other states as well as our state partners at the Emergency Management Division (EMD) of the WA State Military Department, is important to maintain continuity and consistency in operations and discuss emerging issues. Ecology staff serves on EMD grant application review committees for HMGP, FMA, and PDM cycles and EMD staff does the same for FCAAP grant cycles. Presently, we participate in one regularly scheduled multi-day coordinators' conference at the Region Office annually. While we often meet informally among these partners, we are working toward quarterly meetings at least between Ecology and FEMA Regional staff in order to be proactive on all concerns. To improve on this effort we propose the following actions:

- Establish a system of quarterly or at least semi-annual meetings with FEMA Region X and EMD at a minimum with the possibility of expanding the group and/or using new technologies like video-conferencing.
- Explore the use of an automated messaging system via computer network for scheduling meetings and continuing updates on activities of interest.
- Fully reconstitute or enhance the State Floodplain Management Task Force (ESHB 3110 Committee).
- Endeavor to match missions with other agency partners by finding connections between effective floodplain management and other desirable goals. For example, more restrictive floodplain setbacks or buffers from water courses equates to better habitat conservation supporting USFWS, NOAA Fisheries, and WDFW.
- Match land use planning methods and practices with conservation, protection, and restoration of natural resources. Encourage interaction among these efforts at the state, local, and federal levels.
- Explore ways to apply floodplain management and hazard mitigation actions to economic sustainability to identify how communities can derive economic and social benefits from wise use of floodplain resources or land conservation.
- Explore ways to utilize and encourage multi-objective management.

This objective relates indirectly to all the Performance Measures and to CAP grant task Regional/State Program Coordination.

Milestones – In 2005 coordinate with involved agencies to determine participants and tentative schedules. In 2006 implement agreed upon schedule. Throughout the five year period attempt to implement the other action items.
Partnerships – FEMA Region X, EMD, CTED. COE, WA State Dept. of Transportation (WSDOT), WA Dept. of Fish & Wildlife (WDFW), USGS.

Future Objective 5 – Maximize floodplain management capabilities at the local government level by keeping communities informed about their floodplain management roles and responsibilities, including regulatory changes and policy issues.
Flood loss reduction assistance is another task under the CAP/SSSE grant that includes workshops for local officials and newsletters. The aim of both of these efforts is to provide information and training to local floodplain managers and administrators to increase awareness of flood hazards and communicate program changes and new techniques in flood loss reduction. Presently, we conduct two to four workshops and publish four newsletter articles per year. In regard to workshops, we believe that these are valuable and provide an effective method of conveying important information to a select audience. However, there are limitations in terms of timing and logistics, especially in assuring that the appropriate persons attend these sessions. Newsletters for us have evolved from the traditional magazine-style printed media to posting articles on our website. The traditional method proved to be too costly and cumbersome. The electronic model is more efficient and far less expensive. Website publications are more readily available to a wider audience and more convenient for the users. In fact, although workshops will still have their place, some of that effort may be subsumed by improvements in website technology. To improve on this effort we propose the following actions:

- Enhance the Ecology floodplain management website to provide information to our target audience and the general public in a timely manner that is more accessible and integrates training modules where feasible with feedback and evaluation tools. Add video and interactive features with FAQ's and quick reply feature.
- Explore the feasibility of implementing an automatic notification system with distribution list that assures information is provided to the appropriate parties.
- Develop training presentations on specific topics of interest, e.g., crawlspace issue, to focus attention on critical issues. These could be offered to communities as separate workshops or through the CAC process.
- Explore the possibility of providing "mini" workshops or giving specific presentations at selected conferences for associations or organizations that involve those related to floodplain management, i.e., Association of Cities, Society of Engineers, Association of Building Officials, etc.
- Explore the possibility of including floodplain management articles of interest in the newsletters of selected agencies and organizations.
- Prepare articles and video clips for press and broadcast release.

This objective relates to all of the Performance Measures and to the CAP grant tasks Flood Loss Reduction Assistance, Mapping Assistance, and General Technical Assistance.

Milestones – In 2005 investigate available technologies and methods, determine costs and feasibility, and develop a list of target agencies and organizations including the identification of their conferences and newsletters or other media outlets. Also, in 2005 identify and initiate development of specific topics for focused presentation/training offerings. In 2006 develop plan and schedule for implementation in 2007.
Patrnerships – Ecology's Information Systems Program FEMA Region X, EMD, CTED, ASFPM, NORFMA, Associations of Cities & Counties, and other potential user groups.

Future Objective 6 – Quantify and evaluate the number and types of technical assistance provided by CAP-SSSE staff.
General technical assistance is the mainstay of floodplain management efforts to the full array of our client groups. We must be available to provide timely assistance to local governments, other state and federal agencies, the development and engineering communities, insurance and lending industries, and the general public to help them make wise decisions regarding the use floodplain resources. Sometimes these activities lead to further, more intensive tasks such as ordinance reviews, CAC's or CAV's, and workshops. Ecology includes information on technical assistance activities in the quarterly CAP/SSSE progress reports to FEMA Region X by identifying phone calls, E-mails, letters, office and field visits that are in response to inquiries about flood hazard reduction methods and practices, flood insurance concerns, and policy interpretations. During this fiscal year we have assumed the additional duty of investigating "submit for rate" cases. We will continue to perform these duties and endeavor to improve response time and quality of information on an on-demand basis. To improve on this effort we propose the following actions:

- Develop a log sheet/tracking system to better quantify the number and types of assistance and issues to which we are responding that will allow for evaluating the frequency and volume of the specific geographic and policy areas addressed.
- Explore methods for computerizing such a system and how in could be coordinated with CIS.
- Provide information that is consistent and up to date by assuring that all staff are knowledgeable about the typical issues and have the most recent informational materials available.
- Decisions will be made regarding standard messages and informational packets to be provided, subsequent to collection and analysis of the data this system will obtain.

This objective relates to all of the performance measures and to CAP grant tasks for General Technical Assistance, Mapping Assistance, and CIS data entry.

Milestones – In 2005 explore methods and formats available in conjunction with other electronic technology enhancements and begin collecting and analyzing information on a preliminary format. In 2006 develop and test forms. In 2007 implement tracking system.
Partnerships - Ecology's Information Systems Program, FEMA Region X.

Future Objective 7 – Assist in developing a system that will improve our disaster response and recovery capabilities as an agency in terms of timeliness and effectiveness
Disaster response and recovery is another task that we continue to perform on an as needed basis. This is an important function that enhances the response capabilities of the interagency team that addresses the emergency needs of the citizens and local governments during a time of crisis. During this fiscal year there was a Presidentially-declared flood disaster (DR-1499) in Washington for which we provided the following services: staffing the Emergency Operations Center and the Disaster Field Office, performing preliminary damage assessments, reviewing disaster survey reports, conducting floodway assessments, performing substantial damage assessments, assisting in community informational briefings and follow-up meetings, and performing coordination/liaison functions among the several involved agencies, among other duties. We plan to continue to support FEMA and the State Emergency Management Division with these efforts as they arise. To improve on this effort we propose the following actions:

- Develop written procedures for Ecology floodplain management staff to follow when the State Emergency Operations Center is activated or a disaster is declared.
- Establish protocols for specific duties at the EOC and DFO for Ecology staff.
- Explore the possibility of establishing a special staff position (outside of CAP funding) or formalizing the identification of certain existing positions for coordination of disaster duties.
- Coordinate the above actions with State EMD and FEMA Region X.

This objective does not relate to any of the performance measures but is directly related to the CAP grant task Disaster Response and Recovery.

Milestones – In 2005 discuss this issue with partners in coordination meetings and prepare draft procedures and protocols. In 2006 finalize procedures and protocols and develop plan for system design and needed resources. In 2007 develop and execute needed formal agreements (MOU/MOA). In 2008 secure resources as possible and implement system.
Patrnerships – Ecology's Administrative Services, WA Conservation Corps (WCC), & Spills Response Programs, FEMA Region X, EMD, COE, and other potential stakeholders.

Estimated Percentages of Time Spent on Each Activity

The chart below depicts the estimated percentages of time spent on each CAP-SSSE activity for fiscal years 2004-09. Because this chart shows only percentages of time for those staff funded directly by this grant and excludes staff functions funded by FCAAP or Map Modernization Management Support grant funds, the 100-percent figure does not represent the full range of floodplain management activities performed by Ecology staff.

	% Time Spent on Activity					
Activity	**FY04**	**FY05**	**FY06**	**FY07**	**FY08**	**FY09**
5-Year Plan	2.5	1.5	1.5	1.5	1.5	1.5
Ordinance Assistance	6.5	10	10	10	10	6.5
CAV	30	25	30	30	30	30
CAC	15	12	10	9	10	15
CIS Entry	2	2	2	2	2	2
Newsletters/Website	5	5	3	3	2	2
Workshops/Training	3	3	2	2	2	2
Technical Assistance	25	30	30	30	30	30
Mapping Assistance	3	5	6.5	7.5	7.5	6
Coordination with Others	5	6.5	5	5	5	5
Disaster Assistance	3	*	*	*	*	*

*Cannot be predicted

Activity Mix Variations

The mix of CAP-SSSE activities will vary during this five year period to accommodate changes in emphasis as directed by FEMA guidance but at this point chiefly in regard to Map Modernization activities. This is especially true in the State of Washington because we are CTP partners with the Region. More effort will be placed on mapping assistance as more communities engage in the modernization process, especially those that are incorporating new hydrologic/hydraulic data. Other factors that may cause variations include: CRS enrollment and re-evaluation, state mandated cycles for Critical Areas Ordinance updates, HMGP, FMAP, and PDM grant activities, disaster response and recovery duties. Therefore, the above chart reflects only gross projections at this time.

IV. Needs Analysis and Gap Assessment

Current Federal funding levels (approximately $102,770 per year) are not quite sufficient to accomplish the tasks currently established for the CAP-SSSE grant program without using state FCAAP funds beyond the required match. During fiscal year 2004 we received an additional $30,000 of federal dollars which would represent adequate funding for the portion of staff directly involved with CAP-SSSE activities, especially if we are to meet future objectives. This total amount seems in keeping with funding formulas for a state with our population and policy base. Even without that additional funding we plan to implement enhancements that may allow for additional staff time for some tasks by expediting some of the other tasks we currently perform. We have the ability to do this because of the funds available through FCAAP. Any reduction in that fund source would negatively impact our ability to implement any enhancements and may limit our Mapping Assistance efforts or cause us to adjust our projected efforts downward in other areas to accommodate these duties. Assistance with mapping activities, ordinance assistance, and general technical assistance are areas where we expect increased workload because of Map Modernization efforts. We will attempt to fully support these efforts to the degree

possible by assisting our Mapping/GIS Specialist with outreach, assessment of mapping needs, and participation in scoping meetings and other meetings required under map development and adoption procedures. The additional funding through Map Modernization Management Support ($125,000 spread over two fiscal years) is welcome and allows us of to fund approximately 0.7 FTE of our Mapping/GIS Specialist position, which is supplemented by FCAAP and CTP funds. However, if continued additional funding for Map Modernization Management Support is curtailed we would be unable to maintain that position. This would preclude our participation as a CTP and would limit our support role to FEMA or the Regional Mapping Consultant.

Adjustments will be made to task focus depending on funding allocations and workload indicators. All such adjustments will be negotiated with FEMA Region X. Finally, there are concerns regarding legislative and/or executive decisions regarding state budget allocations or administrative changes. As part of our coordination task with FEMA Region X we will share information on such issues at the earliest possible time. If the FCAAP is fully funded, we plan on making some of those funds available to assist local governments with mapping projects.

V. Map Modernization Activities

The Washington Department of Ecology recognizes the value of modernizing and updating the existing flood hazard maps and supports the effort to provide communities with accurate, up to date, and readily accessible maps. The position funded under our Map Modernization Management Support (MMMS) grant is our Mapping/GIS Specialist. He worked with CAP-SSSE staff to develop the *Map Modernization Business Plan* internally incorporating staff input from their extensive knowledge of working with the local communities and through surveys and community contacts. The plan identifies mapping priorities for the State of Washington and fully integrates all of our current floodplain management activities. The plan was developed in accordance with FEMA guidelines and Department of Homeland Security objectives and is designed to accomplish the following:

- Express the need for Washington State to have updated flood hazard maps.
- Prioritize the State's needs for flood hazard mapping.
- Demonstrate how the Department of Ecology (DOE) will manage the effort.
- Detail a strategy for producing new flood hazard maps.
- Outline performance goals, project tracking and management tools.
- Provide mapping metrics and cost indices.
- Plan for a variety of budget scenarios.
- Itemize flooding sources for re-mapping.
- Develop schedules for digital conversions.

The Map Modernization efforts are correlated with the CAP-SSSE activities to provide for mutual information exchange and support in carrying out the duties for each. Discussion of the Map Modernization Program and identification of mapping needs is routinely discussed at all CAV's and CAC's. Ecology's regional Floodplain

Management Specialists accompany our CAP-MMMS person on preliminary meetings with communities to build support, provide information, and demonstrate the cohesiveness of these parallel efforts. Flood hazard maps and floodplain management practices are inextricably linked, since the maps are the major tool to establish floodplain management jurisdiction. Better, more accurate maps with improved accessibility should only lead to improved, more effective floodplain management programs.

Washington State currently has capacity and staff resources to accomplish the following Map Modernization activities:

- ***Project planning and Scoping*** – The State has dedicated its full resources to the planning phases of Map Modernization and given adequate funding will continue to dedicate staff towards individual project scoping meetings.
- ***Due Process activities*** – The State has capacity to perform due process activities such as time and cost meetings, final meetings, map adoption, and process appeals.
- ***Outreach*** – the State has capacity to perform several outreach strategies including scoping workshops, web-based guidance materials, in-house technical and policy expertise, and extensive knowledge of the issues and concerns of Washington's flood prone communities. In addition, the state will integrate CAP-SSSE activities into Map Modernization outreach components such as: Community Assistance Visits (CAV's), Community Assistance Contacts (CAC's), the State's Flood Control Assistance Account Program (FCAAP), and attendance at public and final meetings.
- ***Ordinance Review & Assistance*** – CAP-SSSE staff will, when reviewing ordinances, look for the use of the inclusive or automatic roll-over provision in the BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD that reads "and any revisions thereto" regarding the maps and Flood Insurance Study. Staff will encourage the addition of this provision to any community that does not already have it in their Flood Damage Prevention Ordinance. Ecology received an opinion from the State Attorney General's office that this provision is legally appropriate and acceptable. Therefore, communities in Washington State that have this provision in their ordinance should present no problems in adopting new flood hazard maps.

Washington State can also provide the following services to advance the Map Modernization Objectives if funding levels are adequate and interest is high.

- Services to communities focused on improving ordinances and CRS rankings**.**
- Workshops and training sessions on items such as: Map Modernization, DFIRM preparation and maintenance, and LIDAR topography applications. Utilization of DFIRMs, map reading, coordination of DFIRMs with local GIS platforms, explanation of additional benefits of Map Modernization for all hazard identification, hazard mitigation planning and response and recovery. Coordinate the collection of historic data, particularly for calibration or mapping of unmapped areas.

Criteria for Ranking Map Updates and Digital Conversions
The State developed criteria for ranking and prioritizing mapping activities. One of the objectives of the process was to identify communities with known or chronic mapping problems and those communities that may have map adoption issues. All identified restudies will be coordinated with the regional floodplain specialists to determine if ordinance assistance is needed.

Performance Measures and Tracking Tools.
Ecology will monitor and track progress using several tracking tools developed by DOE and Region X to evaluate program performance. The following table is excerpted from Appendix A of the *Map Modernization Business Plan* and reflects the ranking and prioritization process.

County Conversion Schedule

County Name	Decile Rank	County-wide Conversion	Target Dates	Panels	People/Panel	Est. Conversion Cost
Adams	9	Ready For Conversion	2007	**35**	**470**	$105,000
Columbia	8	Ready For Conversion	2007	**15**	**274**	$45,000
Ferry	9	Ready For Conversion	2007	**27**	**269**	$81,000
Garfield	9	Ready For Conversion	2007	**18**	**129**	$54,000
Grays Harbor	2	Incorp. Restudies	2007	**94**	**728**	$282,000
Island	3	Ready For Conversion	2007	**41**	**1830**	$123,000
Lincoln	8	Ready For Conversion	2007	**41**	**246**	$123,000
Pacific	4	Ready For Conversion	2007	**25**	**831**	$75,000
Pend Oreille	7	Ready For Conversion	2007	**45**	**267**	$135,000
Total						$1,023,000
Asotin	7	Ready For Conversion	2006	**9**	**2273**	$27,000
Benton	2	Ready For Conversion	2006	**96**	**1566**	$288,000
Clallam	3	Incorp. Restudies	2006	**80**	**829**	$240,000
Franklin	6	Ready For Conversion	2006	**92**	**573**	$276,000
Okanogan	5	Ready For Conversion	2006	**47**	**834**	$141,000
San Juan	7	Minimal work needed	2006	**12**	**1214**	$36,000
Stevens	5	Ready For Conversion	2006	**62**	**654**	$186,000
Wahkiakum	5	Ready For Conversion	2006	**20**	**190**	$60,000
Walla Walla	5	Ready For Conversion	2006	**53**	**1059**	$159,000
Whitman	5	Ready For Conversion	2006	**115**	**353**	$345,000
Total						$1,731,000

Leading the mapping efforts are a series of scoping activities aimed at documenting and outlining the mapping process. This includes community contacts, identification of potential obstacles, and outreach activities needed to ensure a complete process. The following is an example of a Mapping Activity Statement and the scoping activities required up-front. These serve as a mechanism for identifying our specific activities with the communities we will work with in our role as a CTP.

Scoping
The Scoping Task has been broken down into 22 sub-tasks to approximately correspond with the "Guidelines and Specifications for Flood Hazard Mapping Partners" with only those applicable to the CAP-SSSE grant included here.

Initial Community Contact
Scope: Coordinate with the FEMA Regional Project Officer to contact the jurisdiction and notify them that FEMA and Washington State (SC) has selected them for a map update, and that they will be working with the communities to develop the project scope. Topics to be reviewed with the communities include:

- Purpose of the Flood Map Project (i.e., the update needs that have prompted the map update);
- The community's perception of its mapping needs;
- Target schedule for completing the project;
- Possibility of the community participating as a CTP (if it isn't already); and
- The community's engineering, planning, and Geographic Information System (GIS) capabilities.

Potential Obstacles
Scope: The Project Management Team shall identify potential obstacles in an effort to learn of any issues that could delay or prohibit the Flood Map Project. Some examples of potential obstacles to completing the project in a timely fashion are the following: inability to address mapping needs adequately with available funding; difficulty coordinating community funding with FEMA funding; lack of an available base map meeting FEMA minimum specifications, hydrologic and/or hydraulic issues; community concerns; reliance on other studies or data that will not be available within the project's scheduling constraints; needs not having as high a priority as originally identified; and other considerations. As noted above under staff activities to support the Map Modernization effort, local ordinance adoption for new maps should not pose a problem. However, Ecology plans to provide ordinance assistance where necessary and will assist in securing map adoption by affected local governments.

Outreach, Coordination & Consultation
Scope: By proactively reaching out to all key stakeholders as early in the Flood Map Project as possible, the maps can be used to their full potential. The likelihood of appeals may also be reduced or eliminated. Washington State shall develop an Outreach plan by determining the best way to accomplish the following: establishing two-way communication to address the needs of, inform and obtain feedback from, the stakeholders; ensuring compliance with due process requirements; interacting with technical representatives to ensure production of accurate and up-to-date maps; enhancing ownership by communities; tracking, monitoring, and evaluating outreach activities and adjusting efforts according to ongoing feedback and evolving project needs.

Map Modernization Outreach Plan
The Department of Ecology (DOE) has the capacity to perform several outreach strategies including scoping workshops, interim and final meetings, web-based guidance materials, in-house technical and policy expertise easily accessible by the local communities, and extensive knowledge of the issues and concerns of Washington's flood prone communities. DOE will also provide outreach activities through public and organizational workshops, NORFMA, ASFPM, professional organizations, and inter-agency coordinated efforts focusing on Map Modernization activities including mapping schedules, map formats, technical tools, map adoption, and enrolling new communities into the NFIP.

County-wide formats
A primary focus of Ecology's outreach activities will be to spearhead the county-wide conversion process and minimize any issues that may arise, such as: community provided GIS data, political boundary questions, and local concerns. DOE will do this by preparing letters to all NFIP communities informing them of Map Modernization goals and objectives. One of the goals highlighted will be the county-wide digital format objective and how the jurisdictions can work together with DOE to ensure a smooth transition to county-wide formats. DOE will follow-up this outreach strategy with direct communication with the communities regarding project scoping, unmapped communities within the county, data availability assistance, base map preparation, refining community needs assessment, contact information within each jurisdiction, and location and contact of County GIS staff.

Workshops
Workshops and training sessions can be provided to communities on items such as: Map Modernization, mapping priorities, CTP requirements, DFIRM preparation and maintenance, and digital topography. An important outreach activity will be to familiarize the communities with the new DFIRM tools and promote local ownership of the products. This is ideal for workshop environments where Ecology's expertise can provide hands-on training of new digital data and tools such as GIS viewers, understanding digital topography, and custom products. Further outreach activities can also be provided by DOE in workshop environments such as: CRS, elevation certificates, model ordinances, Comprehensive Flood Hazard Management Planning (CFHMP)**,** and preparation for Community Assistance Visits.

Website
Web-based outreach activities will be provided by DOE as supplementary and complimentary components of the Outreach Plan. DOE's current Floodplain Management website contains excellent information on various facets including: Links to FEMA's Map Modernization Site, FEMA's map service center, emergency information, floodplain ordinances and insurance rates, flood fact sheets, links to a multitude of flood-related sites and partners, links to available data, and community specific contact information. DOE will further enhance this web site to include Q&A sections, items of interest, Map Modernization specific materials, and outreach documents.

For a detailed description of our role in Map Modernization please see our *Map Modernization Business Plan for Washington State*.

VI. Evaluation of State Performance

The overriding goal of floodplain management as a field of endeavor is to protect lives and properties from destruction or damage by flooding. Effective floodplain management programs at state and local levels provide a variety of benefits beyond this important purpose. Measuring success in terms of performance measures can be difficult because of the nature of the desired outcome, which is to prevent something from occurring.

Taken to the level of the CAP-SSSE grant this proposition of establishing goal-oriented performance measures becomes slightly less problematic since the tasks on which these measures are based are assumed to lead to the desired outcome. The real successes can only be measured at the local level where the results of the CAP-SSSE efforts can actually be observed. Therefore, the performance measures that Ecology proposes on behalf of the State of Washington are mostly local in focus relying on the CAP-SSSE reporting mechanism to capture the specific activities of the grant tasks for the State.

Some of the suggested measures are not appropriate for Washington because of previous efforts that obviate or reduce their significance. For example, the measure "Increase the number of flood prone communities enrolled in the NFIP", would not be useful or significant since 89.3% of all communities in Washington are participating in the NFIP and the remaining 31 are small communities with no recognized flood hazard. A similar situation is true for CRS enrollments, the vast majority of those communities with the commitment, need, and resources are already enrolled in CRS. These facts will not preclude us from making efforts to enroll new communities in either the NFIP or the CRS if there is need and benefit for the community. However, the value of tracking such performance measures would be minimal.

The performance measure proposed for the purposes of this plan are as follows:

Performance Measures

1. **Maintain or improve the Percentage (%) of communities that adopt new maps by the FIRM effective date.** This is a required measure that will compare the number of communities receiving new maps with the number of those that have adopted the new maps and have compliant ordinances. We do not expect to have any communities suspended for failure to adopt. The target percentage for this measure for all years is 100%.

2. **Increase or maintain the percentage (%) of communities that adopt new maps prior to the thirty day letter being sent.** This is a preferred measure that will compare the number of communities that received a 30-day letter in FY 2004 with the number in subsequent years. Those adopting prior to the 30-day letter represent a cost savings by precluding the need for the preparation and mailing of the letter and the *Federal Register* publication requirements. The target for this measure is 95%.

3. **Increase the number of communities that adopt and enforce higher regulatory standards.** This is a selected measure that will compare the number of communities with higher regulatory standards in FY 2004 with the number of communities adopting higher standards in subsequent years. This will be implemented upon completion of our ordinance review compilation efforts during FY 2005 and updated as new information is received. The target for this measure is an additional 4 communities per year.

4. **Effectively relate fish habitat buffers to floodplain management in Washington**. The Endangered Species Act (ESA) is providing an excellent floodplain management tool in our State, particularly with regard to the required establishment of fish habitat buffers which often result in "no build" zones that match or exceed the FEMA floodway. This is a selected measure that Ecology will, through the CAV process, attempt to document existing practices regarding these buffers in the first year and then track their application over the next five years. Their effectiveness, including practices that allow buffer averaging, will be assessed and increases the number of these buffers and their effectiveness will be tracked through the next five years. A reasonable percentage increase for future years will be established after the inventory is completed.

5. **Increase Channel Migration Zone (CMZ) regulations in Washington.** This is a selected measure that will establish an inventory of the number of communities with CMZ delineations and regulations, then track increases in their numbers through the next five years. The Washington Shoreline Management Act, which also regulates development in many floodplain areas, requires that communities address CMZ's in their Shoreline Master Programs. Funding through our Flood Control Assistance Account Program (FCAAP) is available to help communities establish CMZ's. A key activity is the development and implementation of regulations to establish CMZ's (there are several CMZ delineation methodologies but only one known set of regulations in the State to implement the delineations). This is a subset of the Higher Regulatory Standards performance measure. Through the CAV process, Ecology floodplain management staff will develop an inventory of those communities that have CMZ delineations and regulations and determine the effectiveness of them in complementing and supplementing floodplain management regulations. Increases in the number of CMZ's will be tracked

through the next five years. A reasonable percentage increase for future years will be established after the inventory is completed.

6. **Increase the use of Increased Cost of Compliance (ICC) in Washington.** This is a selected measure that will track and hopefully encourage the use of ICC in our State. Since the ICC was instituted in 1997 there have been very few claims with the ICC coverage in the State of Washington. Ecology staff will prepare a letter that will be ready to be sent to communities that experience flood damage in the 2004-05 flood season and beyond. The letter will emphasize the substantial damage requirement and lead local officials to the availability and use of ICC coverage. An article will also be posted on the Ecology website. This performance measure will relate to the current incidence of ICC use as can be gleaned from FEMA records, i.e., it will be a measure of the increase in the use of ICC by a percentage over the current use up to the end of FFY 2004. This will vary depending on the incidence of flooding over the next five years.

7. **Increase mitigation of repetitive loss structures.** This is a selected measure that will develop a list of repetitive loss structures for each community that has repetitive losses in Washington. Communities with a substantial number of repetitive losses will be apprised of these structures in order for them to be prepared to apply for Hazard Mitigation Grant Program (HMGP) assistance should a disaster occur during FFY 2005 or be prepared to enter the FEMA grant cycle for Flood Mitigation Assistance (FMA) funds should there be an increase in funding per the National Flood Insurance Reform Act of 2004. This performance measure will be a reduction in the number of repetitive loss properties by 40% in FFY 2009, depending on the number and size of declared disasters.

8. **Increase the number of communities that have written procedures to implement floodplain management regulations.** This is a selected measure that will build upon efforts begun in FFY 2004. Procedures to implement local floodplain management regulations will generally be required for communities for which CAV's are performed during FFY 2005. These, together with procedures that had been established in prior CAV's during the preceding year, will be tracked during the next CAV cycle in these communities. There should be a reduction in CAV findings in these communities due to the elimination of uncertainty over roles and responsibilities regarding floodplain management regulations and this reduction should be measurable compared to those communities that do not have written procedures.