

Chapter 5 – Flood Warning and Operations in the Skagit River Basin

5.0 Introduction

Floods in Skagit County occur from November to February, but can take place throughout the year. ~~Although Skagit River floods can happen at any time, they are most common from November to February.~~ Skagit County has developed a flood warning system to prepare for and respond to flood events. The program is designed to warn residents and agencies of an impending flood so that they can make preparations before flooding occurs. The flood warning system involves river forecasting conducted by the National Weather Service (NWS) and local river monitoring conducted by Skagit County Public Works (SCPW) ~~Surface Water Management Division (SWM).~~ When a flood occurs, a coordinated response effort involving multiple jurisdictions and agencies is carried out at Skagit County's Emergency Operation Center (EOC). This chapter describes the current flood warning system and how it operates in the Skagit River.

5.1 The Mechanics of Flood Warning

5.1.1 Weather

The NWS is the agency responsible for issuing warnings about potential floods. The information used to develop flood warnings is gathered using data collected from the United States Geological Survey (USGS) telemetric gauge network and from regional weather conditions and patterns. These data are integrated into a hydrologic computer model at the NWS's River Forecast Center in Portland, Oregon. Rainfall reports, soil saturation information, snow depth information, and temperature readings may also be included as variables in the computer model. Depending on the results of the model and the severity of weather conditions, the NWS issues a flood watch, flood warning, or flood statement. The NWS also issues river forecasts, which may resemble warning statements or contain detailed stage information, such as the predicted time a river will crest. (Snohomish, 2003) [The Seattle District U.S. Corps of Engineers, Water Management Section, uses these forecasts in declaring a flood emergency.](#)

As knowledge about weather patterns and conditions has developed, the probability of accurately predicting a flood has increased. Recent studies of El Nino and global atmospheric circulation patterns have given weather researchers the ability to identify large-scale weather features that typically lead to flooding (such as rain-on-snow events). Thus, early recognition of threatening weather patterns on a regional scale, combined with statistical data collected from river gauges, provides a relatively long lead-time to prepare for a flood event.

Local conditions, however, vary greatly and may not always be included in the NWS's hydrologic models. As a result, the County conducts its own river monitoring before and during a flood event to supplement NWS's flood statements with information about local conditions that may affect flooding.

5.1.2 Gauges

SCPW uses gauges placed on the Skagit River to monitor river flow and stage. These gauges are used in monitoring river levels.

Two types of river gauges are used to monitor rivers. They include automated and manual gauges. Automated gauges employ telemetric or radio transmissions, from level sensors, to measure specific conditions in the river. Manual gauges, or staff gauges, are large wooden rulers, graduated in feet and tenths, which are observed manually for water level. (Snohomish, 2003) Rating tables allow river storage data in feet to be converted to flow in cfs. River gauges are routinely calibrated to update the relationship between stage and flow.



Mount Vernon Gauge River Mile 31.5 (1995)
(Skagit County Public Works)

5.2 Planning - Flood Awareness Week

The Board of Skagit County Commissioners generally proclaims the third week of October to be Flood Awareness Week (FAW). SCPW and staff from several entities including DEM, Skagit County Planning and Development Services, Skagit County Health, Skagit County Information Services, and Skagit County Geographical Information Services join with local dike and drainage districts and the Seattle District of the U.S. Army Corps of Engineers (USACE) to train during FAW.

5.2.1 Orientation

There are many posts to fill, and each person or entity is assigned a particular area of flood response. The groups discuss procedures and expectations for the season. Each section also

reviews its specific duties during a flood fight, and conducts site visits, if necessary. This is a particularly good time for all involved to familiarize themselves with the system, and meet those new to it.

5.2.2 Sandbag Exercise

During FAW, area high schools are invited to participate in a sandbag exercise at Dike District 12. The USACE teaches the students how to effectively fill and stack sandbags in a pyramid formation. The best team is rewarded with the Ernie Sabo Memorial Cup trophy, which is returned each year for the next sandbag exercise. Getting the high schools involved is a great way to teach each generation the importance of protecting the community, the valley's assets, and roadways during a flood fight.

~~Prior to flood season, staff from SWM, Public Work Roads Maintenance, and Public Involvement and Environmental (PI/E), Planning and Development Services (PDS), and the DEM, and the Corps hold meetings to discuss locations along the Skagit River that are expected to be particularly vulnerable to flooding in the upcoming season. The meetings also provide a chance for these agencies to review the response procedure and coordination process that is implemented during a flood event at the EOC.~~

~~In addition to these meetings, County staff conducts site visits to obtain pre-flood information on each site and to determine what emergency actions to take should they be required. In addition, PI/E staff take pictures of these sites prior to the flood to assist in post-flood repairs should it be required. These areas are monitored closely during a flood if they are accessible, but most assessments are conducted following the flood event because of safety issues.~~

5.3 Operations

Skagit County follows the Incident Command System. It was developed in the 1970s in order to handle catastrophes and events of any type. The system:

- Is a standardized management tool for meeting the demands of small or large emergency or nonemergency situations.
- Represents "best practices" and has become the standard for emergency management across the county.
- May be used for planned events, natural disasters, and acts of terrorism.
- Is a key feature of the National Incident Management System (NIMS).

As stated in NIMS, "The ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organization structure, designed to enable effective and efficient domestic incident management." (FEMA, 2005)

The EOC serves as the central location for coordinating flood response operations. When the NWS issues a flood watch, conditions are viewed as favorable for flooding. A flood warning is issued when flood conditions are expected to develop. This is generally when the EOC is activated. Depending on the level of anticipated flows, depends upon the level of personnel called to work.

5.3.1 Flood Phases

There are five phases to every major flood. Minor floods may only reach Response Phase II.

- **Response Phase I:** National Weather Service issues a "Flood Watch" for the Skagit River (flooding is possible).
 - The Planning Section Chief (PSC) will notify the Directors of Public Works and Emergency Management.
 - Consider updating the employee flood response hotline
 - Consider sending out a flood threat e-mail message.
 - PSC will take these additional actions:
 - Monitor Skagit and Sauk River gauges
 - Monitor weather and river forecasts
 - Update river level hotline with the "Flood Watch" and gauge data for Concrete, Mount Vernon, and possibly Sauk, depending on the situation.
 - Make preliminary preparations for a flood fight.

- **Response Phase II (PSC on 24-hour duty):** The National Weather Service issues a "Flood Warning" for the Skagit River (flooding is now likely).
 - PSC will notify the Directors of Public Works and Emergency Management
 - PSC will take these additional actions:
 - Notify PW Road Maintenance Division Manager and consider deploying Field Observers to Sector F
 - Update the employee flood response hotline
 - Send out flood threat e-mail message (or consider updating, if message was sent out during Response Phase I)
 - Monitor Skagit and Sauk River gauges
 - Monitor weather and river forecasts and crest predictions
 - Update river level hotline with the "Flood Warning" and gauge data for Concrete, Mount Vernon, and possibly Sauk, depending on the situation
 - Contact early call list in Flood Response notebook
 - Public Information Officer (PIO) may issue its first news release about the event, depending on the predicted severity.

- **Response Phase III (Road Maintenance Division likely on 24-hour duty):** Weather Service has updated flood predictions. Flooding is eminent.
 - PSC will notify the Directors of Public Works and Emergency Management
 - The Directors will consider activating the Unified Area Command (UAC)
 - PSC will take these additional actions:
 - Consider deploying Resource Coordinators to the Dike Districts
 - Update the employee flood response hotline
 - Monitor Skagit and Sauk River gauges
 - Monitor weather and river forecasts and crest predictions
 - Update river level hotline with the "Flood Warning" and gauge data and crest predictions approximately each hour
 - PIO issues news release about the event.

- **Response Phase IV:** Skagit River has reached or exceeded flood stage at Concrete, 28 feet. Flood response in full operation. PSC is working under the direction of the UAC at the Multi-Agency Coordination Center (a.k.a. the Emergency Operations Center, or EOC) located at 2911 East College Way, Mount Vernon. With the exception of Road Maintenance Operations, most Public Works Flood Response personnel are working under the direction of the PSC. As directed by the UAC, maximum effort is made to provide resources to cities and Dike Districts for their flood response. Evacuation orders, if any, will come from the Sheriff's Office or the UAC.
 - Resource Coordinators are the official communication link between Dike Districts and the EOC. They keep the Dike District Commissioners apprised of the status of the event based on information from the EOC and they make requests on behalf of the Dike Districts for resources to the EOC.
 - Field Observers patrol and report back on conditions upriver, paying particular attention to low-lying areas normally flooded.

- **Response Phase V:** Flood has receded and clean-up operations beginning.
 - Emergency work on roads and other flood damage to return conditions to functional.
 - Emergency work on roads continues to return conditions to normal as rapidly as possible.

5.3.2 Flood Response Roles and Responsibilities

The following are the roles and responsibilities of each flood response position.

- **Unified Area Commanders:** The Unified Area Commanders are responsible for incident activities including the development and implementation of strategic decisions and for approving the ordering and releasing of resources. The Public Information Officer and the Liaison Officer are part of the Command Staff and report directly to the Unified Area

Commanders in addition to the Planning Section Chief, the Logistics Section Chief, and the Finance/Administration Section Chief who are all members of the General Staff.

- Ensure the safety of all personnel receives priority consideration.
 - Obtain briefing from County Administrator and/or prior Unified Area Commanders.
 - Ensure all coordination center staff is advised of the incident and the need to report for work.
 - Assess incident situation.
 - Brief Command and General Staff.
 - Determine information needs.
 - Conduct strategy meetings, as needed.
 - Approve requests for additional resources and requests for release of all resources.
 - Authorize the release of information to the media and the public.
 - Ensure that an Incident Status Summary (ICS Form 209) is completed twice daily (1000 Hours and 2200 Hours) and disseminated to the following: all Command and General Staff members, Washington State Military Department-Emergency Management Division Duty Officer, Skagit 9-1-1, all flood fight command posts locations, Board of County Commissioners, all Mayors, County Administrator, Assistant County Administrator, Anacortes Water Treatment Plant, all school districts, all county staff, Island County DEM, San Juan County DEM, Snohomish County DEM, Whatcom County DEM, City of Stanwood DEM.
 - Ensure environmental protection needs are considered as part of the incident planning process.
 - Approve a schedule for the orderly closure of the coordination center and advise Board of Skagit County Commissioners, all Mayors, County Administrator, Assistant County Administrator, Command Staff, General Staff, and agency/jurisdiction representatives.
 - Maintain Unit Log (ICS Form 214).
- **Public Information Officer:** The Public Information Officer is responsible for the formulation and release of information about the incident to the news media, local communities, incident personnel, other appropriate agencies and organizations, and for the management of all information officers assigned to the incident.
 - Obtain briefing from Unified Area Commanders.
 - Obtain a copy of the current ICS-209.
 - Prepare an initial information summary as soon as possible.
 - Obtain approval from the Unified Area Commanders for the release of all incident information.
 - Arrange for meetings between media and incident personnel.
 - Provide escort service to the media and very important personnel (VIP).
 - Respond to special requests for information.

- Organize an adequate staff, as needed.
- Keep informed of flood fight developments and progress through planning meetings and contact with other coordination center staff.
- Keep the Unified Area Commanders informed of any potential issues involving the general public and/or news media.
- If needed, organize and staff a Joint Information Center.
- Maintain Unit Log (ICS Form 214).
 - **Liaison Officer:** The Liaison Officer is the point of contact for all assisting and cooperating agency representatives.
 - Obtain briefing from Unified Area Commanders.
 - Provide a point of contact for all assisting/cooperating agency representatives.
 - Respond to requests from incident personnel for inter-organizational contacts.
 - Monitor the incident to identify current or potential inter-organizational problems.
 - Develop and maintain a list of all assisting and cooperating agencies; confirm resource list with Resource unit leader.
 - Participate in planning meetings and provide current resource status, limitations, and capability.
 - Maintain Unit Log (ICS Form 214).
- **Logistics Section Chief:** The Logistics Section Chief is responsible for providing services, and material in support of the incident.
 - Obtain briefing from Unified Area Commanders.
 - Advise Planning Section Chief immediately of critical changes in incident information.
 - Assist the Front Office Coordinator and/or Front Office Staff (as needed) to ensure effective front office operations.
 - If not already accomplished, oversee set-up of the coordination center.
 - Identify service and support requirements for planned and expected activities.
 - Develop an Incident Communications Plan.
 - Ensure telephones, computers, and two-way radios are in working order and installed in the coordination center, as needed.
 - Ensure two-way radios and chargers are in working order and distribute to field observers.
 - If needed, arrange for repair of two-way radios by an authorized vendor.
 - Ensure radio room and established Red Cross shelter sites are adequately staffed with volunteer Radio Amateur Civil Emergency Service (R.A.C.E.S.) personnel.

- Determine feeding requirements and menu planning for all coordination center staff.
- Arrange for the purchase and delivery of two meals per day (0700 Hours and 1800 Hours) for all coordination center staff.
- Ensure the availability of coffee, water, juice, fruit, and snacks for all coordination center staff.
- Maintain the coordination center kitchen in a clean and orderly manner.
- As directed, order resources from outside sources.
- Coordinate all purchases or rentals with the Finance/Administration Section Chief.
- Maintain proper records of all purchases and rentals and provide originals to the Documentation Unit Leader.
- Assist Front Office Staff in dealing with Emergency Management and Fire Marshal issues.
- Maintain Unit Log (ICS Form 214).
 - **Information Technology Technical Specialist:** The roles and responsibilities for this position are not available at this time.
 - **Front Office Coordinator:** The Front Office Coordinator is responsible for overseeing and directing all Front Office Staff working within the coordination center.
 - Ensure Public Works telephones are installed and work space and computers are available for use by Front Office Staff.
 - Upon the request of the Public Works Director (or designee) forward 336-9400 to the coordination center.
 - Coordinate with Public Works Office Receptionist prior to forwarding 336-9400 to the coordination center.
 - Ensure staffing levels are appropriate for answering Public Works, Emergency Management, and Fire Marshal telephone calls.
 - Promptly provide all new incident-related information to the Logistics Section Chief.
 - Ensure river gauge readings and predicted crest levels is disseminated via email and/or fax to: Skagit 9-1-1, all flood fight command posts locations, Board of County Commissioners, all Mayors, Anacortes Water Treatment Plant, all school districts, all county staff.
 - Ensure all road, evacuation, and shelter status information is disseminated via email and/or fax to: Skagit 9-1-1, all flood fight command posts locations, Board of County Commissioners, all Mayors, Anacortes Water Treatment Plant, all school districts, all county staff.

- If needed, assist Front Office Staff in providing current incident status information to the public.
 - If needed, coordinate with Logistics Section Chief to answer Emergency Management and Fire Marshal related questions.
 - Maintain Unit Log (ICS Form 214).
 - **Front Office Staff:** The Front Office Staff are responsible for answering all telephone calls received via the Public Works, Emergency Management, and Fire Marshal lines during activation of the coordination center.
 - Answer all incident-related questions and provide river gauge readings, predicted crest levels, road, evacuation, and shelter status to calling parties as requested.
 - If needed, transfer telephone calls to the most appropriate person in the coordination center or complete a message form for routing to that person.
 - Promptly provide all new incident-related information to the Front Office Coordinator.
 - Assist the Front Office Coordinator in disseminating river gauge readings, predicted crest levels, road, evacuation, and shelter status information.
 - Maintain Unit Log (ICS Form 214).
- **Finance/Administration Section Chief:** The Finance/Administration Section Chief is responsible for all financial and cost analysis aspects of the incident.
 - Obtain briefing from Unified Area Commanders.
 - Participate in planning meetings.
 - Obtain copies of all approved cooperative agreements, if any.
 - Provide input on financial and cost analysis matters.
 - Maintain personnel time records.
 - Process purchase/rental contracts for equipment and supplies.
 - Coordinate with the Documentation Unit Leader to insure all required financial information is properly documented.
 - Brief elected officials and Unified Area Commanders on incident-related business management issues needing attention or follow-up.
 - Maintain Unit Log (ICS Form 214).
- **Planning Section Chief:** The Planning Section Chief is a member of the General Staff and is responsible for the collection, evaluation, dissemination, and use of information regarding the development of the incident, the status of resources, and demobilization of the incident. This information is necessary to understand the current situation, predict the probable course of incident events, prepare alternative strategies, support field operations pertaining to the incident, and provide for the orderly and economic demobilization of the incident.

- Obtain briefing from Unified Area Commanders.
 - Establish information requirements and reporting schedules for all ICS organizational elements for use in preparing the Incident Status Summary (ICS Form 209).
 - Conduct planning meetings.
 - Prepare predictions at periodic intervals or upon the request of the Area Command.
 - Supervise preparation of the Incident Status Summary (ICS Form 209).
 - Perform all duties of the River/Reservoir/Weather Analyst, unless staffed as a separate position.
 - Assemble information on alternate strategies.
 - Perform operational planning for the Planning Section.
 - Ensure planning section units distribute incident information.
 - Advise General Staff members of any significant changes in incident status.
 - Prepare and distribute Unified Command's orders.
 - Ensure information collection and reporting requirements are carried out.
 - Prepare recommendations for release of resources for approval by Unified Command.
 - Ensure environmental protection needs are considered as part of the incident planning process.
 - Approve a schedule for the orderly closure of the coordination center and coordinate closure with Command Staff, General Staff, and agency/jurisdiction representatives.
 - Maintain Unit Log (ICS Form 214).
- **Situation Unit Leader:** The Situation Unit Leader is responsible for the collection and organization of incident status and situation information; the evaluation, analysis, and display of that information for use by the Planning Section Chief, the Unified Command, and all coordination center staff; and the preparation and periodic dissemination of incident status information to the Washington State Military Department, Emergency Management Division and all other concerned parties.
 - Obtain a briefing from the Planning Section Chief.
 - Perform all duties of the Road/Evacuation/Shelter Status Analyst, unless staffed as a separate position.
 - Ensure situation information is obtained from field observers, agency representatives, dike districts, and municipalities regarding flood fight efforts.
 - Collect, analyze and evaluate all incident information.
 - Advise Planning Section Chief and Burlington Road Shop of all road problems as reports are received by Field Observers.
 - Advise Planning Section Chief immediately of critical changes in incident information.

- Prepare predictions at periodic intervals or upon the request of the Planning Section Chief.
- Participate in planning meetings as required by the Planning Section Chief.
- Maintain all Situation Unit records including a Unit Log (ICS Form 214).
- Prepare Incident Status Summary (ICS Form 209) twice daily (1000 Hours and 2200 Hours) and disseminate to the following: all Command and General Staff members, Washington State Military Department-Emergency Management Division Duty Officer, Skagit 9-1-1, all flood response command post locations, Board of County Commissioners, all Mayors, County Administrator, Assistant County Administrator, Anacortes Water Treatment Plant, all school districts, all county staff, Island County DEM, San Juan County DEM, Snohomish County DEM, Whatcom County DEM, City of Stanwood.
- Oversee the display of GIS and incident status information within the coordination center.
- Ensure current information is posted to the Skagit County Web Site.
- Ensure maps are provided, as requested, for field use.
- Provide situation status information on request.
- Ensure all Situation Unit staff coordinate with each other, as necessary, to provide for the protection of life, property, and the environment.
- Prepare a narrative report on the situation from activation through demobilization.
 - **Web Specialist/Display Technical Specialist:** The Web Specialist/Display Technician is responsible for the posting of all public information regarding the incident to the Skagit County Web Site and the display of all current incident status and situation information (excluding maps) within the coordination center.
 - Obtain a briefing from the Situation Unit Leader.
 - Ensure operability of computer services necessary to post public information to the Skagit County Web Site.
 - Establish and maintain contact with the Public Information Officer to insure current public information is posted to the Skagit County Web Site.
 - Upon official release, post updated incident public information to the Skagit County Web Site.
 - Develop and maintain manual and electronic status displays within the coordination center.
 - Update displays, as needed, to reflect the current incident status and situation information.
 - Assist the GIS Specialist in displaying electronic maps within the coordination center.
 - Upon request, assist in troubleshooting computer problems within the coordination center.

- **GIS Technical Specialist:** The GIS Specialist is responsible for coordinating and providing all mapping services needed to assist in managing the incident including coordination center mapping displays, and maps needed by field observers and all flood fight command post locations.
 - Obtain a briefing from the Situation Unit Leader.
 - Arrange for the printing, display, and delivery of various hard-copy maps, as requested by Unified Command and the Planning Section Chief.
 - Update maps, as needed, to reflect the current incident status and situation information.
 - Upon request, coordinate with the Web Specialist/Display Technician to display electronic maps on screens within the coordination center.

- **River/Reservoir/Weather Analyst:** The River/Weather Analyst is responsible for collecting river level and weather data, assisting in the development of strategic flood information and predicting possible flood behavior for use by the Planning Section Chief, Unified Command, and flood fight command post locations.
 - Obtain a briefing from the Situation Unit Leader.
 - Establish and maintain contact with the National Weather Service and the River Forecast Center to insure the most current river and weather information is obtained.
 - Collect and record river gauge and weather prediction data on periodic intervals.
 - Update river gauge readings and predicted crest levels hourly on the *FLOOD HOTLINE*.
 - Post river gauge readings and predicted crest levels in the coordination center.
 - Ensure river gauge readings and predicted crest levels are distributed to: Unified Command, Public Information Officer, Liaison Officer, agency representatives, all coordinator center staff.
 - Participate in planning meetings as directed by the Situation Unit Leader.
 - Prepare a written flood forecast which includes safety considerations for each operational period.
 - Maintain Unit Log (ICS Form 214).

- **Road/Evacuation/Shelter Status Analyst:** The Road/Evacuation/Shelter Status Analyst is responsible for collecting all data regarding the status of roads, areas that are currently or have been evacuated, and emergency shelters.
 - Obtain a briefing from the Situation Unit Leader.
 - Establish and maintain contact with the Burlington Road Maintenance Shop, the Skagit County Sheriff's Office representative, municipal command posts, and the American Red Cross to insure the most current information is available.
 - Participate in planning meetings as directed by the Situation Unit Leader.
 - Collect road, evacuation, and shelter information on periodic intervals and post this information in the coordination center.
 - Ensure road, evacuation, and shelter information is distributed to: Unified Command, Public Information Officer, Liaison Officer, agency representatives, all coordination center staff.
 - As directed, assist the Situation Unit Leader in preparing the Incident Status Summary (ICS Form 209).
 - Maintain Unit Log (ICS Form 214).

- **Field Observers:** Field Observers are responsible for collecting situation information from jurisdiction and/or agency representatives and personal observations within their assigned area and providing this information to the Situation Unit Leader. Field Observers act as a representative of the Skagit County Flood Response Organization and are the "eyes and ears" of the Situation Unit Leader.
 - Report to Area Command; check-in and obtain an electronic key card.
 - Obtain briefing from the Situation Unit Leader.
 - Determine the following: location of assignment, types of information required, priorities, time limits for completion, methods of communication, transportation.
 - Obtain a copy of the most recent: Incident Status Summary (ICS Form 209), Press Release, Gauge Readings and Crest Predictions, Road Closed List.
 - Exchange contact information with the Situation Unit Leader.
 - Conduct field review and monitor situation; note weather, observe water level and rate of rise in low-lying areas, advise Situation Unit Leader of road situation/problems.
 - Make contact with jurisdictions, agencies, and Indian Tribes to determine status and needs; forward requests for equipment and/or supplies to the Situation Unit Leader.

- Report status and situation at 60-minute intervals to the Situation Unit Leader.
 - May establish contact with private property owners, if directed by the Situation Unit Leader.
 - Document in writing and with photos all actions within Sector; record activities, water levels, and other conditions (situation) in Sector Journal.
 - Report immediately any condition observed which may cause danger or a safety hazard to personnel and/or the public.
 - Maintain Unit Log (ICS Form 214) or equivalent.
 - Return electronic key card and check-out at the end of shift.
-
- **Resource Unit Leader:** The Resource Unit Leader is responsible for establishing all incident check-in activities; the preparation and processing of resource status change information; the preparation and maintenance of displays, charts, or lists which reflect the current status and location of flood response resources; and maintaining a master check-in list of resources assigned to the incident. In most cases, these duties will be performed by the Resource Unit Leader. However, during severe and/or complex flood events, it may be necessary to separate duties to adequately manage and coordinate the overall flood response effort. It may be necessary to staff additional positions to separately track equipment and supplies as well as volunteer personnel assigned to the flood response effort.
 - Obtain briefing from Planning Section Chief.
 - Establish and maintain contact with all incident command posts to ensure check-in functions have been established and resources are being tracked.
 - Oversee and obtain resource/incident status and situation information from Resource Coordinators to Incident Command Posts.
 - Ensure the Situation Unit receives all incident status and situation information in a timely manner; immediately when there are any critical changes in incident information.
 - Gather, post, and maintain current incident resource status information including supplies, equipment, and personnel.
 - Maintain a master list of all resources assigned to the incident.
 - Prepare and maintain a display showing the coordination center organization chart for each shift.
 - Prepare and maintain a Flood Response Organization Assignment List (ICS Form 203).
 - Participate in planning meetings as required by the Planning Section Chief.
 - Provide resource summary information to the Situation Unit Leader, as requested.
 - Continually identify resources surplus to flood fight needs.

- Re-assign resources, if possible, to the same geographic area and to the same operational period.
- Maintain Unit Log (ICS Form 214).
 - **Volunteer Coordinator:** The Volunteer Coordinator acts as a central contact point for the purpose of requesting volunteer sandbaggers to report to designated locations to assist in flood fight efforts.
 - Obtain briefing from Resource Unit Leader.
 - Establish and maintain contact with all flood fight command post locations and advise incident commanders to request volunteer sandbaggers through a central contact point.
 - Upon request, coordinate release of public information requesting volunteer sandbaggers to report to specific sites to assist with flood fight efforts.
 - Maintain a list to track the number of volunteer sandbaggers at each location.
 - Maintain Unit Log (ICS Form 214).
 - **Resource Status Tracker:** The Resource Status Tracker is responsible for tracking all county-owned and corps-contracted equipment (trucks, loaders, dozers, etc.) as well as supplies (sand and sandbags) assigned to the flood fight. In addition, the Resource Status Tracker should make every effort to obtain a list of all assigned equipment and quantities of available sand and sandbags at each command post location.

In addition, the Resource Status Tracker is responsible for overseeing and obtaining resource status, incident status and situation information from all Resource Coordinators to Incident Command Posts assigned to the incident. These duties may be performed by the Resource Unit Leader. However, during severe and/or complex flood events, it may be necessary to separate these duties to adequately manage and coordinate the flood fight effort.

- Obtain briefing from Resource Unit Leader.
- Gather, post, and maintain current incident resource status information including equipment and supplies.
- Maintain a master list of all resources assigned to the incident.
- Prepare and maintain a display within the coordination center showing an organization chart as well as allocation and deployment of resources.
- Maintain Unit Log (ICS Form 214).
- Obtain electronic key cards from the Check-In Coordinator and distribute to Resource Coordinators to Incident Command Posts.

- Establish and maintain contact (telephone/radio) with all Resource Coordinators to Incident Command Posts assigned to the incident.
 - Insure situation information is obtained from Resource Coordinators to Incident Command Posts and forwarded to the Situation Unit Leader on periodic intervals.
 - Participate in Planning Meetings as directed by the Resource Unit Leader.
 - Maintain Unit Log (ICS Form 214).
 - Collect electronic key cards and return to Check-In Coordinator.
- **Resource Coordinators to Incident Command Posts (Dike Districts 1, 3, 12, 17 & 22):** Resource Coordinators to Incident Command Posts are responsible for collecting situation information from personal observations of issues and activities within Dike District jurisdiction and providing this information to the Resource Unit Leader or, if activated, the Resource Status Tracker. Resource Coordinators to Incident Command Posts act as a representative of, and are the “eyes and ears” of, the Resource Unit Leader.
- Report to Area Command; check-in and obtain an electronic key card.
 - Obtain briefing from the Resource Unit Leader or Resource Status Tracker.
 - Determine the following: location of assignment, types of information required, priorities, time limits for completion, methods of communication, transportation.
 - Obtain a copy of the most recent: Incident Status Summary (ICS Form 209), Press Release, Gauge Readings and Crest Predictions, Road Closed List.
 - Exchange contact information with the Resource Status Tracker or Resource Unit Leader.
 - Obtain necessary equipment and supplies.
 - Report to the assigned Incident Command Post and advise the Incident Commander and the Corps of Engineers representative you are in the area and exchange names and contact information.
 - Perform duties such as: observe current water level and rate of rise, obtain situation information from the Incident Commander and report incident status to the Resource Status Tracker or Resource Unit Leader.
 - Forward requests for equipment and supplies to the Resource Status Tracker or Resource Unit Leader.
 - When a situation arises where equipment or materials are to be delivered as a result of a request made to the Resource Status

- Tracker, the Resource Coordinator (Sector person) stands by the location until the delivery is made or a replacement County representative appears at the site to take over.
- May establish contact with private property owners, if directed by Resource Status Tracker or Resource Unit Leader.
 - Document in writing and with photos all actions within Sector and later enter it into the Sector Journal.
 - Record high water levels and other conditions in Sector Journal.
 - Report immediately any condition observed which may cause danger or a safety hazard to personnel and/or the public.
 - Maintain Unit Log (ICS Form 214) or equivalent.
 - Return electronic key card and check-out at the end of shift.
- **Documentation Unit Leader:** The Documentation Unit Leader is responsible for maintaining accurate and complete incident files, providing duplication and fax services as well as operating the message center within the coordination center.
 - Obtain briefing from Planning Section Chief.
 - Establish and maintain check-in function within the coordination center.
 - Establish and maintain a supply of all necessary forms for use within the coordination center and distribute as needed.
 - Establish and maintain a central message center for coordination center use.
 - Ensure messages are time/date stamped and distributed as necessary.
 - Maintain a copy of all messages as part of the official incident file.
 - Coordinate with the Finance/Administration Section Chief to insure all required financial information is properly documented.
 - Provide duplication and fax services for the coordination center.
 - Retain and file duplicate copies of official forms and reports.
 - Establish and organize incident files.
 - Check on accuracy and completeness of records.
 - Coordinate with Emergency Management staff for final filing of all incident-related documents upon demobilization of the coordination center.
 - Maintain Unit Log (ICS Form 214).
 - **Copy/Fax/Forms Coordinator:** The Copy/Fax/Forms Coordinator is responsible for providing duplication and fax services within the coordination center. In most cases, these duties will be performed by the Documentation Unit Leader. However, during severe and/or complex flood events, it may be necessary to separate duties to adequately manage and coordinate the overall flood fight effort. It may be necessary to staff additional positions to provide duplication and fax services within the coordination center.
 - Obtain briefing from the Documentation Unit Leader.

- Insure an adequate supply of paper and toner is available for coordination center use.
- Provide duplication and fax services for the coordination center.
- Maintain a copy of all duplicated and faxed documents as part of the official incident file.
- **Check-In Coordinator/Message Runner:** The Check-In Coordinator/Message Runner is responsible for checking in all and issuing electronic key cards to all coordination center staff as well as collecting and distributing all messages within the coordination center and assisting the Documentation Unit Leader or the Copy/Fax/Forms Coordinator in providing duplication and fax services within the coordination center. If needed, additional Message Runner positions may be staffed to meet coordination center needs.
 - Obtain briefing from Documentation Unit Leader or Copy/Fax/Forms Coordinator.
 - Check message out-boxes frequently to insure all messages are logged and distributed in a timely manner.
 - Provide additional message forms to coordination center staff, as needed.
 - Upon request, assist the Documentation Unit Leader or the Copy/Fax/Forms Coordinator in providing duplication and fax services.

Each of these positions works a 12-hour shift alternating between day and night. In the event of a major flood, Skagit County Public Works' office is temporarily closed. (SCPW, 2009)

5.4 References:

Federal Emergency Management Agency (FEMA). 2005. *ICS-300: Intermediate ICS for Expanding Incidents – Student Manual*. USA.

Skagit County Public Works (SCPW). 2009. *Flood Response Notebooks*. Information compiled by SCPW and Skagit County Emergency Management. Mount Vernon, WA.

Snohomish County. 2003. *Draft Public Review Stillaguamish River Comprehensive Flood Hazard Management Plan*. Snohomish County, WA. Snohomish County Public Works.