Massachusetts Emergency Support Function 1

TRANSPORTATION

Responsible Agencies

State Agencies

Primary State Agency

Massachusetts Department of Transportation (MassDOT)

- Highway Division
- Rail & Transit Division
 - Massachusetts Bay Transportation Authority
 - Regional Transit Authorities
- Aeronautics Division
- Registry of Motor Vehicles Division

Supporting State Agencies

Massachusetts Department of Conservation and Recreation
Massachusetts Port Authority
Massachusetts State Police
Steamship Authority

1.0. INTRODUCTION

1.1. Purpose

The Massachusetts Emergency Support Function 1 (MAESF-1) *Transportation* provides a framework for coordination and cooperation across state agencies regarding transportation needs, issues, and activities before, during, and after a disaster, emergency, or planned event in the Commonwealth. In addition, this Annex details how the Commonwealth will provide transportation related support and assistance to local jurisdictions in the event local needs exceed available local resources during an emergency.

1.2. Scope

This annex is applicable to agencies and departments in the Commonwealth, as well as affiliated transportation partners, with a role in supporting transportation-related activities in response to a disaster or a planned event. For purposes of MAESF-1, transportation infrastructure includes roadways, bridges, tunnels, airports, seaports, ferries, railroads, subways, vehicles (buses, trucks, etc.), and other similar structures.

The following are the objectives of MAESF-1:

- Establish a framework for state-level emergency related transportation preparedness, mitigation, response, and recovery activities.
- Coordinate transportation response and recovery operations at the state level to maximize the use of all modes of public and private transportation for the purpose of moving people, materials, goods, and services to and from impacted areas as efficiently as possible.
- Share information and coordinate response activities across pertinent state agencies regarding transportation related requests for assistance in a manner that ensures consistency with established state transportation policies and procedures.
- Monitor and mitigate potential effects of a disaster on critical state-level transportation infrastructure before, during, and after an incident, with particular attention to problems that may threaten public safety or disrupt response activities.
- Provide situational awareness and expertise on the status of transportation infrastructure in Massachusetts and neighboring states.
- Provide resources to support evacuation and re-entry decision-making processes.
- Monitor and control road, rail, air, and water traffic to ensure the safety of the general public and the efficient flow of personnel, assets, and commodities into areas threatened or impacted by a disaster.
- Coordinate resources to assist and support evacuation activities, including vehicles, message boards, etc.

- Coordinate resources to assist and support the staging, transportation, or distribution of commodities.
- Coordinate resources to conduct emergency clearance of debris and obstructions from impacted transportation infrastructure.
- As required, coordinate resources to make emergency repairs to transportation infrastructure to maintain and/or restore the flow of personnel, assets, and commodities into impacted areas.
- Coordinate resources to assist in the re-entry of residents to evacuated areas.

1.3. Policies

- This annex supports and does not supplant local, state, or federal transportation plans or policies.
- Governor's Executive Order #144 requires all executive branch state agencies to designate a minimum of two liaisons to MEMA for the purposes of coordinating resources, training, and operations.
- Local transportation assets will remain in the control of the respective jurisdiction.
- Transportation resources will be prioritized for use within the owner agency for appropriate needs before they can be made available to support external requests ("state assistance").
- State assistance provided to cities and towns may consist of personnel, equipment, facilities, materials and supplies, and/or subject matter expertise.
- State assistance requests will be vetted to ensure they meet the currently established emergency priorities and can be fulfilled without impacting operational needs.
- State assistance will be prioritized in the following manner:
 - 1. Life safety, including evacuation of individuals from at-risk areas.
 - 2. Restoration of critical infrastructure to support emergency response, including power restoration.
 - Commodities movement and distribution.
- State assistance for emergency repairs to or debris clearance from critical transportation infrastructure is intended to support the re-opening of transportation corridors to facilitate the passage of emergency traffic, not to restore damaged transportation infrastructure to pre-disaster conditions. Permanent repairs and final debris removal/disposal following an emergency or disaster remain the responsibility of local governments.
- Depending on weather conditions, highway speed limits may be lowered and/or permitted vehicles (such as tandems and tankers) may be prohibited from using the Massachusetts Turnpike by joint decision of MassDOT and the State Police.

- Tolls may be waived on toll roads, bridges, and tunnels during emergency events by decision of MassDOT.
- MBTA and regional transit service may be restricted or shut down as conditions warrant.
- If warranted by conditions, a ban on highway travel may be implemented if ordered by the Governor. Such a ban will normally exclude those supporting an emergency response.

2.0 SITUATION AND ASSUMPTIONS

2.1. Situation

Disasters or emergency incidents impacting Massachusetts will likely impact one or more elements of transportation infrastructure. This will adversely affect life safety in affected areas by impeding evacuations, access by first responders, or the flow of aid to disaster survivors. While any type of disaster can potentially affect transportation infrastructure, historically transportation infrastructure has been most frequently impacted by snow and ice accumulation during winter storms, debris from windstorms, tropical storms, or hurricanes, and flooding from rain events or storm surge.

A planned or spontaneous evacuation of large numbers of people from areas threatened or affected by a disaster impact transportation infrastructure access and capacity, even when no damage to the infrastructure itself has occurred.

In addition, disasters and large-scale planned events may strain transportation infrastructure access and capacity, and may result in transportation corridors being closed to vehicular traffic for extended periods of time.

2.2. Planning Assumptions

- Local governments have emergency management resources, plans, and procedures already in place.
- Many incidents, such as vehicle accidents, construction-related road closures, etc., affect transportation infrastructure, but are local in scope and can be addressed by local or state agencies as part of their normal day-to-day operations using resources readily available to them.
- When an incident occurs, local governments will use their own response resources first, supplemented as needed by resources available through mutual aid or private sector contracts. Local governments will request state assistance when its ability to respond to the incident exceeds or is expected to exceed their own capacity.
- Demand on local resources in anticipation of or response to a major threat may quickly overwhelm local transportation capabilities for personnel, equipment, and fuel.
- In a "no-notice" incident, local resources may be damaged and potentially unavailable to support evacuation or commodities distribution, requiring immediate state assistance.

- State assistance from MAESF-1 agencies will be available so long as the agencies' internal operational resource needs are met.
- Access to impacted areas will be severely limited and may be accessible only via air or water transportation assets.
- MAESF-1 agencies have developed internal plans and procedures for implementing this annex.
- Maintaining coordination and situational awareness across transportation agencies regarding resource needs, ingress and egress information, damage assessments, and transportation route and mode information will be vital to conducting effective prevention, preparedness, response, recovery, and mitigation activities;
- The state has resources and expertise that can be used to supplement local efforts. Federal assistance may be requested to support state and local efforts if an incident exceeds state and local capabilities.
- Depending on the magnitude of the incident, resources from other states or the federal government may not be available for use in Massachusetts until as long as 72 hours after the incident occurs.

3.0. CONCEPT OF OPERATIONS

3.1. General

This annex will be activated at the direction of MEMA when there is potential for or an actual disaster situation or planned event impacting transportation infrastructure or requiring state transportation resources. MEMA will notify the primary agency at the time of State Emergency Operations Center (SEOC) activation to provide overall coordination of MAESF-1 and to ensure staffing of MAESF-1 with appropriate representatives given the incident type and resource needs. MAESF-1 representatives will provide direction to and work in conjunction with all other MAESF-1 agencies to cohesively coordinate the activities of MAESF-1.

MAESF-1 reports to the SEOC Operations Section, with an indirect report to the Planning Section. Depending on the size, scope, and complexity of the incident, the SEOC organizational chart may be expanded, to ensure proper Span of Control is maintained. To accommodate this, the ESFs may be aligned in appropriate Branches, with similar MAESF's grouped together. In this scenario, MAESF-1 will be organized under the Infrastructure Branch, together with MAESF's 2, 3, 12, and 17.

3.2. Organization

- All personnel and activities associated with MAESF-1 will operate under the Incident Command System.
- Mass DOT has been designated the primary agency for MAESF-1

 MAESF-1 agencies that fall under the MassDOT umbrella have collectively designated a team of persons, each of whom can serve on behalf of all MassDOT agencies at the SEOC to support MAESF-1 activities. Each of them will have the capability and authority to reach back to MassDOT agencies to request resources and obtain necessary information to support the response to the incident.

3.3. Notification

MEMA will notify the MAESF-1 primary agency when there is or will be an SEOC activation requiring MAESF-1 representation. This may include coordination and implementation of transportation-related requests for assistance, and maintenance of situational awareness on the status and capacity of transportation infrastructure.

3.4. Activities

Responsible agencies for MAESF-1 should conduct the following actions:

a. Prevention Actions

- Communicate and share information across agencies with transportation responsibilities.
- Collaborate and coordinate on transportation related prevention and security initiatives.
- Identify opportunities to collaborate on protection of critical transportation related infrastructure and key resources in the Commonwealth.
- Identify potential emergency transportation issues and collaborate to develop or recommend protocols, procedures, and policies to prevent or mitigate their effects.

b. Preparedness Actions

- MEMA will convene regular meetings of MAESF-1 stakeholders and/or Emergency Support Function Team to review and update this annex and standard operating procedures.
- Develop and maintain internal agency operational plans and procedures, resource directories, and emergency contact lists to support MAESF-1 activities.
- Ensure procedures are in place to access directory information and quickly notify personnel in support of this plan.
- Maintain current inventories of agency facilities, equipment, and materials and supplies by transportation mode.
- Complete appropriate training.
- Ensure that MAESF-1 agencies have pre-designated staff available to support this annex and SEOC operations.
- Ensure that MAESF-1 stakeholders notify MEMA of staff changes.

• Participate in exercises and training in order to test, validate, and provide working experience for MAESF-1 liaisons on this annex and related procedures.

c. Response Actions

Pre-Impact

Upon receiving notification to report to the SEOC in preparation of an incident or planned event, MAESF-1 agencies and organizations will complete the following actions commensurate with emergency priorities within the state and based on the availability of resources:

- Provide appropriate representative(s) to the SEOC to support MAESF-1 pre-incident planning activities.
- Maintain communications with the SEOC, obtain status reports, and keep the SEOC informed of progress of assigned tasks.
- Notify the appropriate points of contact at each respective agency and organization to pre-position resources and response personnel as needed.
- Review existing plans and procedures.
- Ensure agency decision makers are kept informed of the situation.
- Test communications systems.
- Coordinate information to verify available transportation resources and capabilities and report this information on a regular basis to the SEOC Operations Section.
- Provide situational awareness information for reports and/or statements to the SEOC Planning Section as needed.
- Coordinate with other functional areas in anticipation of projected transportation related needs and coordinate appropriate response efforts.
- Identify and coordinate the mobilization and pre-positioning of response resources preincident once it is apparent that state transportation resources will be required, or as requested by the SEOC Manager.
- As needed, coordinate with MAESF-15 Public Information and External Affairs on public messaging that can be posted on variable message boards and other transportationrelated information portals.

Initial Response

- If not already done, provide appropriate representative(s) to the SEOC to support MAESF-1.
- Designate appropriate staff to support response
- Verify inventories of available resources and capabilities and provide a summary listing to the SEOC Operations Section.

- Establish communications with appropriate agency field personnel to coordinate response efforts.
- Provide information as needed to the SEOC Planning Section to facilitate the development or update of Situation Reports, Situational Awareness Statements, and the SEOC Roster. In addition, use information provided by the SEOC Planning Section to plan effective response actions.
- Monitor transportation infrastructure and maintain situational awareness on threats or impacts to transportation infrastructure.
- Identify and coordinate the staging of transportation response resources.
- Pre-position recovery resources at the nearest staging area(s), as needed.
- Coordinate resources to support the emergency repair of damaged transportation infrastructure to ensure an uninterrupted flow of personnel, commodities, and services into affected areas.
- Coordinate with MAESF-2 Communications, to ensure that access roads leading to communications towers are passable for emergency traffic.
- Coordinate with MAESF-3 Public Works and Engineering, to commit agency resources for the emergency clearance of debris, construction work, and other public works-related tasks as needed.
- Communicate and coordinate with MAESF-6 Mass Care, Emergency Housing, Human Services, to identify needs related to transportation of evacuees to shelters during evacuations:
- Communicate and coordinate with MAESF-10 *Hazardous Materials and Environmental Protection*, to identify any known hazardous materials transporters such as oil tankers, barges, or trucks that could be affected by an emergency or disaster and could have a bearing on the commitment of transportation resources.
- Communicate and coordinate with MAESF-13 *Public Safety and Security*, for transportation related and traffic control needs concerning public safety and security.
- As needed, coordinate with MAESF-15 Public Information and External Affairs on public messaging that can be posted on variable message boards and other transportationrelated information portals.
- Implement predetermined cost accounting measures for tracking overall MAESF-1 personnel, equipment, materials, and other costs incurred during emergency response actions.
- Coordinate with Federal Emergency Support Function (ESF) counterpart as needed.

Continuing Response

• Coordinate resources to support resource requests, including evacuation and the transportation of personnel, commodities, and services.

- Conduct ongoing re-assessment of priorities and strategies to meet the most critical of transportation needs.
- Track committed transportation resources and provide regular updates to the SEOC Operations Section on the status of all missions assigned to MAESF-1.
- As needed, continue to coordinate with MAESF-2 *Communications*, to ensure that access roads leading to communications towers remain passable for emergency traffic.
- As needed, continue to coordinate with MAESF-3 Public Works and Engineering, to commit agency resources for debris removal, construction work, and other public worksrelated tasks as needed.
- As needed, continue to communicate and coordinate with MAESF-6 Mass Care, *Emergency Housing, Human Services*, to identify needs related to transportation of evacuees to shelters during evacuations.
- As needed, continue to communicate and coordinate with MAESF-10 *Hazardous Materials and Environmental Protection*, to identify any known hazardous materials transporters such as oil tankers, barges, or trucks that could be affected by an emergency or disaster and could have a bearing on the commitment of transportation resources.
- As needed, continue to communicate and coordinate with MAESF-13 Public Safety and Security, for transportation related and traffic control needs concerning public safety and security.
- As needed, continue to coordinate with MAESF-15 *Public Information and External Affairs* on public messaging that can be posted on variable message boards and other transportation-related information portals.
- Coordinate with other MAESFs as appropriate to anticipate projected transportation needs and/or coordinate appropriate response efforts.
- Provide information to the Planning Section as needed to update Situation Reports, Situational Awareness Statements, and the SEOC Roster.
- Draft recommendations for after-action reports and other reports as appropriate.

d. Recovery Actions

- As needed, coordinate resources to support the return of evacuees to impacted areas.
- Provide assistance and technical expertise to MEMA damage assessment teams.
- Anticipate and prepare to provide technical assistance, personnel, and resources for ongoing restoration of transportation infrastructure.
- Coordinate with support agencies to ensure financial tracking of all deployed assets and adequate cost accounting measures are being used. Generate summary reports and share with the SEOC.
- Participate in after-action reviews.

e. Mitigation Actions

- Identify potential emergency transportation issues and collaborate to develop or recommend plans, protocols, procedures, and policies to prevent or mitigate their effects.
- As needed, conduct assessments of MAESF-1 capabilities to identify potential resource shortfalls.
- As needed, develop plans to mitigate identified shortfalls of resources or capabilities.

4.0. RESPONSIBILITIES

4.1. MAESF-1 Primary Agency Responsibilities

Prior to an activation:

- Meet regularly with support agencies and MEMA to discuss and resolve issues relating to MAESF-1 administration and technology.
- Regularly meet and coordinate with MAESF-1 supporting agencies, to:
 - Maintain a list of critical contacts, noting any changes to MEMA
 - Maintain a list of ESF-specific assets which could be deployed during an emergency
 - Maintain the ESF-1 Toolkit
 - Report any unmet needs to MEMA
- Revise documentation and maintain technology needed to support activation.
- Maintain Situational Awareness, monitor weather conditions, and ensure a state of readiness for the ESF.
- As needed, pre-stage resources to support MAESF-1 requirements.
- Train and educate new MAESF-1 staff as needed and provide refresher training to existing staff as needed.
- Participate in planning for special events.
- Develop written guides and procedures to implement MAESF-1 responsibilities outlined in the CEMP.

During an activation:

- While Primary Agencies are designated in advance, this may be subject to change during an SEOC Activation, dependent on the specific circumstances and needs of the incident, and therefore the agency most appropriate to take the primary assignment.
- Staff the MAESF-1 work station at the SEOC.

- Identify and coordinate MAESF-1 staffing requirements at the SEOC and MEMA Regional Emergency Operation Centers (REOCs).
- Coordinate with support agencies and MEMA to manage transportation resources and prioritize transportation needs based on the protection of life and property.
- Receive resource requests and assess them to determine whether they a) meet current urgency criteria and b) whether MAESF-1 agencies are able to fulfill given current operational needs.
- Process and fulfill approved resource requests by coordinating with the appropriate MAESF-1 agency points of contact.
- Coordinate with other MAESFs to obtain information related to vendors, volunteer groups, and other organizations that may be able to supplement local and state transportation resources.
- Identify facilities for possible use as staging, refueling, or maintenance areas for transportation assets. Provide regular updates on ongoing MAESF-1 operations to the SEOC Command staff.
- Prepare and issue situational awareness updates regarding transportation agencies and status of key services, roadways, facilities.

After activation:

- If warranted, conduct an after action meeting and/or report for MAESF-1.
- Organize files and documents and restore technology to ensure readiness for next activation.
- As needed, support the collection of MAESF-1 costs incurred during the response, for potential reimbursement through the Stafford Act. This may include Preliminary Damage Assessments, costs, and other storm related expenses.

a. Massachusetts Department of Transportation (MassDOT)

- The MassDOT Security and Emergency Management Department will serve as the lead coordinator for all agencies falling under the MassDOT umbrella. The Security and Emergency Management Department will:
 - Train and maintain a qualified team of MAESF-1 representatives from all MAESF-1 agencies.
 - Coordinate regular meetings and discussions between MAESF-1 agency representatives on topics relating to MAESF-1.
 - Oversee and maintain technology solutions such as file sharing and shared e-mail utilized by the MAESF-1 team.
 - Serve as primary point of contact for all MEMA and other statewide initiatives and projects relating to both transportation and emergency management in any significant manner.

- The MassDOT Facilities and IT departments will provide MAESF-1 team with situational awareness on the status of MassDOT facilities and IT infrastructure.
- Ensure that necessary cost accounting measures are implemented and that summary reports are generated as needed and shared via SEOC liaisons with SEOC Command staff.

Highway Division

- Provide MAESF-1 team with situational awareness on status of state roads, the Massachusetts Turnpike, the Sumner/Callahan/Ted Williams tunnels, the Zakim Bridge, and pertinent interstate roadways.
- Coordinate with Massachusetts State Police to determine if weather conditions warrant lowered speed limits or restriction of permitted vehicles on the Massachusetts Turnpike or elsewhere.
- Coordinate obtaining the authority to waive tolls on the Massachusetts Turnpike if conditions warrant.
- Provide resources to clear debris and perform emergency repairs to keep routes passable for emergency traffic.
- Provide resources to support the repair or replacement of missing or non-functional traffic control signs and signals in affected areas.
- Provide subject matter experts to conduct damage assessments, as requested.
- Provide resources to support requests for emergency debris clearance and emergency repairs to keep routes passable for emergency traffic.
- Make appropriate MassDOT facilities available for use as commodity or asset staging areas, as requested.
- Provide resources to assist in the movement and/or staging of commodities as needed.

Rail & Transit Division

Massachusetts Bay Transit Authority (MBTA)

- Provide MAESF-1 team with situational awareness on the status of railroads and of MBTA operated facilities and assets, including buses, trolleys, trackless trolleys, and rapid transit systems in the MBTA service area.
- Provide buses or other transportation assets as requested to facilitate evacuations or movements of people.
- Provide resources to assist in the movement and/or staging of commodities as needed.

Regional Transit Authorities (RTAs)

- Provide MAESF-1 team with situational awareness on status of regional transit authority (RTA) facilities and operations, including any service restrictions or cancellations.
- Provide buses or other transportation assets as requested to facilitate evacuations or other movements of large numbers of people.

• Provide resources to assist in the movement and/or staging of commodities as needed.

Aeronautics Division

- Provide MAESF-1 team with situational awareness on status of public- and privatelyowned public use airports, seaplane bases, and private-use landing areas.
- Coordinate closure of airspace as needed.
- Coordinate the provision of air assets for damage assessment or personnel transport as requested.

Registry of Motor Vehicles Division

Provide MAESF-1 team with situational awareness on status of RMV branches.

4.2. MAESF-1 Supporting Agency Responsibilities

NOTE: Agency responsibilities are always dependent on proper vetting of resource request and the individual agency's ability to provide the requested resource given current operational needs.

a. Massachusetts Department of Conservation and Recreation

- Provide MAESF-1 team with situational awareness on status of DCR facilities and roadways.
- Provide resources to clear debris and perform emergency repairs to keep roadways passable for emergency traffic.
- Provide resources to ensure repair or replacement of missing or non-functional traffic control signs and signals on roads in affected areas.
- Provide resources to assist in the movement and/or staging of commodities as needed.
- Provide subject matter experts to teams conducting damage assessments, as requested.
- Provide resources to support requests for debris clearance and emergency repairs to keep routes passable for emergency traffic.
- Ensure that necessary cost accounting measures are implemented and that summary reports are generated as needed and shared via SEOC liaisons with SEOC Command staff.

b. Massachusetts Port Authority (Massport)

- Provide MAESF-1 team with situational awareness on status of Massport facilities, including commercial and general aviation facilities at Logan, Hanscom, and Worcester Airports; maritime facilities at the Port of Boston including the Black Falcon and Conley terminals; and the Logan Express facilities and operations.
- Make appropriate Massport facilities available for use as commodity or asset staging areas, as requested.

- Provide resources to assist in the movement and/or staging of commodities as needed.
- Provide resources as needed to support transportation-related resource requests.
- In coordination with the US Coast Guard, ensure notification to harbor officers in affected areas of any requirements to secure access to drawbridges and restrict harbor traffic.
- Ensure that necessary cost accounting measures are implemented and that summary reports are generated as needed and shared via SEOC liaisons with SEOC Command staff.

c. Massachusetts State Police

- Provide MAESF-1 team with situational awareness on road conditions statewide.
- Coordinate with MassDOT Highway Division to determine if weather conditions warrant lowered speed limits or restriction of permitted vehicles on state roadways.
- Provide assistance with closing or restricting access to areas impacted by a disaster.
- Assist with traffic control as requested.
- Coordinate the provision of air assets for damage assessment or personnel transport as requested.
- Coordinate convoys or escorts for emergency materials, commodities, or vehicles.
- Ensure that necessary cost accounting measures are implemented and that summary reports are generated as needed and shared via SEOC liaisons with SEOC Command staff.

d. Steamship Authority

- Provide MAESF-1 team with situational awareness on status of Steamship Authority facilities and operations, including reduction or cancellation of ferry service to Martha's Vineyard and Nantucket.
- Provide resources to assist in the movement and/or staging of commodities as needed.

4.3. Other Agencies

Other agencies not explicitly named in this annex may have authorities, resources, capabilities, or expertise required to support MAESF-1 activities. These agencies may be requested to support MAESF-1 activities as needed.

5.0. ADMINISTRATION AND LOGISTICS

5.1. Staffing

As required by Massachusetts Executive Order 144, all MAESF-1 responsible agencies must designate at least two personnel to act as SEOC liaisons. As such, MAESF-1 liaisons will be drawn from all MAESF-1 agencies, as available. Each will be knowledgeable about the resources and capabilities of their respective agencies as well as MAESF-1 agencies in general. Each should also have access to the appropriate authorities for committing said resources and capabilities.

5.2. Mutual Aid

The process for requesting mutual aid from entities either within or outside of Massachusetts is described in the "Mutual Aid" section of the State CEMP Base Plan.

5.3. Annex Review and Maintenance

This annex will be updated every two years at a minimum, in accordance with the Emergency Management Program Administrative Policy, and will ensure that appropriate stakeholder input is incorporated into updates. Additionally, the annex will be reviewed following any exercise or activation of the plan that identifies potential improvements. Revisions to this annex will supersede all previous editions and will be effective immediately.

6.0. AUTHORITIES, RESOURCES, AND REFERENCES

6.1. Authorities

See Authorities section of the State CEMP Base Plan.

6.2. Resources

See Resources section of the State CEMP Base Plan.

6.3. References

- Massachusetts Comprehensive Emergency Management Plan
- Massachusetts Executive Order 144
- Massachusetts Radiological Emergency Response Plan
- Cape Cod Emergency Traffic Plan
- Massachusetts Evacuation Coordination Plan
- Critical Transportation Needs (CTN) Evacuation Coordination Plan
- Massachusetts Debris Management Plan
- Hurricane Evacuation Study (HES)
- Massachusetts Department of Transportation Emergency Management Plan
- SEOC ESF SOP Guidance Document
- Threat Hazard Identification and Risk Assessment (THIRA)
- Hazard Identification and Risk Assessment (HIRA)
- State Hazard Mitigation Plan