Granby

Granby is a rural residential community located in northwest Hartford County on the Massachusetts border. It covers a land area of 40.7 square miles and has an estimated population of 11,100. Granby’s elevation ranges from about 160 to 1,100 feet on the western ridge, and its land area drains to the Farmington River Basin. The main watercourses running through Granby include Beech, Bissell, Dismal, Higley, Hungary, Mountain and Salmon (East and West Branches) Brooks. Major transportation routes include state routes 10/202, 20, 189 and 219.

Challenges

Granby contains significant forested lands, including state forest and the privately held properties of the McLean Game Refuge and Granby Land Trust, and therefore has more concern over forest fires than most other towns in the region. It also has hillier terrain than many towns in the Region, and thus has more concern for the impacts of winter storms on its transportation network.

Goals, Objectives and Strategies

Goal: Reduce property damage due to unsafe conditions resulting from winter storms

Objective 1:
Improve snow removal equipment and techniques.

Strategies:
1.1 Pursue increased funding for equipment and labor.
Lead: Public Works, Administration
Priority: Medium

1.2 Continue to pursue opportunities for service and equipment sharing with neighboring communities through CRCOG’s service sharing initiative and otherwise.
Lead: Public Works, Administration
Priority: Medium

1.3 Improve Public Works personnel contracts to ensure adequate staffing for storm situations.
Lead: Administration
Priority: Medium

Objective 2:
Remove and prevent impediments to snow removal operations.

Strategies:
2.1 Educate private snow-removal contractors and residents on not obstructing roads and the right-of-way.
Lead: Police and Fire
Priority: Medium
2.2 Enforce existing ordinance prohibiting roadway obstructions.

**Objective 3:**
Educate public on hazardous conditions during storm events - promote safe driving techniques.

**Strategies:**
3.1 Continue to issue press releases and advisories.

**Goal:** Implement guidelines and regulations to reduce exposure to property damage and loss of life as a result of flooding

**Objective 1:**
Restrict development of buffer areas in flood prone zones and promote best development practices for minimizing environmental impacts.

**Strategies:**
1.1 Continue to work with FEMA and DEP to maintain zoning, subdivision and wetlands regulations current with best practices.

**Objective 2:**
Maintain waterways, drainage and other structures in critical flood areas.

**Strategies:**
2.1 Address priority bridge, culvert and other drainage projects identified in Capital Improvement Plan.

**Objective 3:**
Ensure traffic safety during flood events.

**Strategies:**
3.1 Improve communications with neighboring communities on road closures and detour routing.

   Lead: Police, Fire
   Priority: High

3.2 Educate police personnel on detour routing protocols to ensure alternative routes can accommodate trucks.

   Lead: Police
   Priority: Medium

**Goal:** Reduce personal property damage and power failures caused by high winds

**Objective 1:**
Aggressively work with utility companies to identify high risk areas and promote tree trimming.

**Objective 2:**
Relocate high density utility facilities underground.

**Strategies:**

2.1 Create a long range plan for undergrounding existing facilities.

   Lead: Planning, Emergency Management
   Priority: Low

2.2 Pursue opportunities to relocate wires where they are vulnerable: areas of repetitive power failure.

   Lead: Emergency Management, Planning
   Priority: Medium

**Objective 3:**
Promote an ongoing tree maintenance program along public rights-of-way.

**Strategies:**

3.1 Seek to increase local budget for tree trimming.

   Lead: Public Works, Administration
   Priority: Medium

**Goal:** Reduce personal property damage and loss of life resulting from forest fires

**Objective 1:**
Promote forest management to reduce fire risks.

**Strategies:**

1.1 Develop and implement timber management program for town-owned property.

   Lead: Public Works, Parks
   Priority: Medium
1.2 Promote timber management planning with other major landholders including McLean Game Refuge, Granby Land Trust and the State.
   Lead: Public Works, Parks
   Priority: Medium

Objective 2:
Determine and implement best practices to facilitate forest-fire fighting.

Strategies:
2.1 Promote and implement best practices, such as fire roads, dry hydrants, etc.
   Lead: Planning, Engineering
   Priority: Medium

2.2 Consider regulations requiring dry hydrant installations in new developments.
   Lead: Planning
   Priority: Medium
Map 28: Granby Critical Facilities and Population Density

Critical Facilities & Population Density: 2000 Census Persons per Square Mile by Census Block

- Hazardous Materials
- Hospitals & Medical Facilities
- Emergency Management Centers
- Fire Stations
- Police Stations
- Rivers and Streams
- Freeways
- Major Arterials
- Minor Arterials
- Waterbodies

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Map 29: Granby Repetitive Flood Loss Claims, Dams, Flood Zones and Open Space

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Hartford

Hartford, Connecticut’s Capital City, is an urban community centrally located within the Region. It has a land area of 17.3 square miles and an estimated population of 124,500. The elevation ranges from approximately 30 to 150 feet above sea level. Hartford drains to two watersheds – the Connecticut River to the east and the Park River Watershed to the west. In addition to the Connecticut and Park Rivers, other watercourses within the City include Cemetery and Gully Brooks. Interstates 91 and 84 intersect in Hartford. State routes 44, 187 and 189 also traverse the City. Hartford is home to the Capitol and numerous state office buildings and other facilities. Brainard Airport is located in the southeastern corner of the City. Numerous industries and businesses operate throughout Hartford, including many insurance companies. The City also houses two major hospitals: Hartford and St. Francis, Trinity College and the University of Hartford. Finally, Hartford attracts many visitors throughout the year to its historic, arts and cultural venues including among others the Convention Center, the Expo Center, and the Bushnell Theater.

Challenges

The Army Corps of Engineers built a dyke in Hartford along the Connecticut River following historic floods in 1936 and 1938. The City has maintained the levee system for 70 years, and recently began a $10 million capital improvement program devoted to the system. The flood control system is considered a Provisionally Accredited Levee under FEMA’s map modernization project. The City is working to supply the required data and information to FEMA in a timely manner in order to obtain certification of the levee system.

In addition to the map modernization project, the Metropolitan District Commission’s (MDC) Clean Water Project also poses significant opportunities and challenges to the City. As planning for the separation of stormwater and sewer lines in the City and region, much of which discharges to the Connecticut River in Hartford, it is critical for the City to monitor potential impacts on flood control infrastructure.

Goals, Objectives and Strategies

Goal: Reduce loss of life, property and economic consequences as a result of natural disasters

Objective 1:
Reduce the likelihood of flooding by improving existing natural and artificial drainage systems.

Strategies:
1.1 Pursue priority drainage projects identified in Capital Improvement Plan.

Lead: Public Works, Administration
Priority: High

Objective 2:
Address combined sewer overflows.

Strategies:
2.1 Continue to participate in the MDC’s Clean Water Project planning process.
2.2 Ensure that the City’s flood control pump stations can handle changes that may result from MDC measures to address combined sewer overflows.

Lead: Engineering, Public Works, Administration
Priority: High

Objective 3:
Ensure proper maintenance of flood control system.

Strategies:
3.1 Continue to implement necessary repairs and upgrades required by FEMA and the Army Corps of Engineers to retain certification.
Lead: Public Works, Engineering
Priority: High

3.2 Update the flood control system maintenance manual.
Lead: Public Works
Priority: Medium

3.3 Train City employees, according to updated manual, in proper maintenance techniques.
Lead: Public Works, Administration
Priority: Medium

3.4 Upgrade flood control facilities to automate warning systems and as many other features as possible to increase safety.
Lead: Public Works, Administration
Priority: Medium

Objective 4:
Develop system for identifying and addressing potential debris hazards.

Strategies:
4.1 Pursue priority debris related projects, especially along the North Branch of the Park River, identified in the Capital Improvement Plan
Lead: Public Works
Priority: Medium

4.2 Inspect and clean Park River relief conduit.
Lead: Public Works
Priority: Medium

Objective 5:
Improve the ability of emergency responders to prepare and respond to natural disasters.
Strategies:

5.1 Continue with National Incident Management System (NIMS) and Incident Management Team training, with a particular focus on response to natural disasters.

   Lead: Police, Fire, Emergency Management
   Priority: High

5.2 Investigate communications systems that will allow for emergency personnel to communicate in currently uncovered areas, and will facilitate interdepartmental communications along the flood control system.

   Lead: Emergency Management, Police, Fire
   Priority: Medium

5.3 Research, identify means, including potential acquisition of public address systems, for facilitating communications with residents, especially those in low-income areas vulnerable to disasters.

   Lead: Emergency Management, Police, Fire
   Priority: Medium

Objective 6:
Improve the ability of emergency responders to serve special needs populations during natural disasters.

Strategies:

6.1 Take full advantage of the Reverse-911 system.

   Lead: Police, Fire, Emergency Management
   Priority: Medium

6.2 Continue training for evacuation of special needs populations.

   Lead: Police, Fire, Emergency Management, Health
   Priority: Medium

6.3 Support regional assessments of how to identify, maintain and use databases of special needs populations.

   Lead: Emergency Management, Health
   Priority: Medium

Objective 7:
Improve emergency communications to residents prior to and during natural disasters.

Strategies:

7.1 Continue to offer educational forums for residents on personal emergency planning.

   Lead: Health, Emergency Management
   Priority: Medium
7.2 Consider applying to FEMA’s Community Rating System (CRS) program to help reduce flood insurance premiums for property owners.

Lead: Emergency Management, Planning
Priority: Medium

Objective 8:
Ensure ability of City to safely shelter in place, and when necessary, evacuate residents and visitors.

Strategies:
8.1 Participate in local and regional hurricane evacuation training.

Lead: Emergency Management, Police, Fire
Priority: High
Map 30: Hartford Critical Facilities and Population Density

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Map 31: Hartford Repetitive Flood Loss Claims, Dams, Flood Zones and Open Space

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation

Projection: Connecticut State Plane 1983 feet

For Planning and Analysis Use Only

Prepared: Spring 2007
Hebron

Hebron is a rural community in Tolland County, in the southeast corner of the Capitol Region. The land area covers 37 square miles with an estimated population of 9,200. The elevation in Hebron ranges from 300 to over 650 feet above sea level. Most water drains to the Salmon River Watershed, but a small portion in the northeast drains to the Willimantic Watershed. The principal watercourses in Hebron are Fawn, Mint, Raymond and Senate Brooks. Major transportation routes through Hebron include state routes 66, 85, 207 and 316.

Goals, Objectives and Strategies

Goal: Assure adequacy of response to winter storms

Objective 1:
Provide adequate equipment, staff and other resources to maintain passable roads and facilitate power restoration.

Strategies:
1.2 Maintain and implement equipment replacement schedules.
   Lead: Public Works
   Priority: Medium

1.3 Investigate regional service sharing initiatives.
   Lead: Public Works, Administration
   Priority: Medium

1.4 Continue informal arrangements with private contractors.
   Lead: Public Works
   Priority: Medium

1.5 Continue with tree maintenance program.
   Lead: Public Works
   Priority: High

1.6 Expand salt/sand storage facilities.
   Lead: Public Works, Administration
   Priority: Medium

Objective 2:
Educate public on how to prepare for hazardous conditions.

Strategies:
2.1 Continue to maintain special needs population list for monitoring during emergency situations.
   Lead: Police
   Priority: High
2.2 Develop and disseminate public outreach materials to citizens.

Lead: Emergency Management
Priority: High

Goal: Optimize mitigation activities against natural hazards

Objective 1:
Minimize risk of forest fires.

Strategies:
1.1 Continue to encourage installation of dry hydrants in new developments without water sources.

Lead: Planning
Priority: High

1.2 Develop and implement timber management plan for town-owned forested land.

Lead: Planning, Public Works
Priority: Medium

Objective 2:
Minimize risk from flooding.

Strategies:
2.1 Continue to monitor bridges and culverts for adequate flow capacity.

Lead: Public Works
Priority: High

2.2 Continue to enforce development regulations to minimize impacts on wetlands and flood zones.

Lead: Planning, Engineering
Priority: High
Map 32: Hebron Critical Facilities and Population Density

Persons per Square Mile by Census Block

- Hazardous Materials
- Hospitals & Medical Facilities
- Emergency Management Centers
- Fire Stations
- Police Stations
- Rivers and Streams
- Freeways
- Major Arterials
- Minor Arterials
- Waterbodies

- Less than 800
- 801 - 1600
- 1601 - 3200
- More than 3200

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Map 33: Hebron Repetitive Flood Loss Claims, Dams, Flood Zones and Open Space

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Manchester

Manchester is a fully suburban community of about 55,600 located east of East Hartford. The Town covers about 27.3 square miles. Elevation ranges from about 80 to 500 feet above sea level and Manchester’s land area drains primarily to the Hockanum River and its watershed. Small areas along the southern border of the town drain to the main stem of the Connecticut River Watershed. In addition to the Hockanum River, other major waterways in Manchester include: Bigelow, Birch Mountain, Lydall and Porter Brooks. Several regionally significant transportation routes run through Manchester including Interstates 84, 384 and 291, as well as state routes 44/6 and 83. Principal industries include: engineered fibers, steel metal fabrication, plastics, machine tool companies, printing, warehouse/distribution facilities, electronic equipment, aircraft and missile components. Manchester is also home to one of the largest regional retail concentrations in New England. The Buckland Hills area includes over 3 million square feet of retail and services anchored by the Buckland Hills Mall, over 300 hotel rooms, restaurants, and movie theaters. The Town also boasts the Cheney Brothers National Register Historic District which includes historic mills and housing, and the downtown Main Street National Historic Register district.

Goals, Objectives and Strategies

Goal: Minimize loss to critical infrastructure due to flooding, winter storms, hurricanes and high winds

Objective 1:
To reinforce, renovate and upgrade existing critical town facilities.

Strategies:
1. Implement needed improvements to build a new Emergency Operations Center, when funding is available, at the Department of Public Works facility to withstand hurricanes and other disasters.

   Lead: Facilities Management
   Priority: High

1.2 Implement needed upgrades to electrical system at the Senior Center, which is the primary emergency shelter to allow year-round use.

   Lead: Facilities Management, Human Services
   Priority: High

1.3 Install operating generators at all primary and tertiary shelters and designated alternate care sites.

   Lead: Facilities Management
   Priority: Medium

Objective 2:
To upgrade existing transportation infrastructure in order to allow for continuity of operations.

Strategies:
2.1 Upgrade identified flood prone roadways to reduce potential for access being blocked due to flooding.
Lead: Public Works, Engineering  
Priority: High

2.2 Maintain list of on-call consultant engineers who can provide necessary assistance for structural and other specialized engineering assistance in response to impacts from natural disasters.

   Lead: Public Works, Engineering  
   Priority: Medium

2.3 Upgrade bridge and/or other structure replacements based upon potential impact from flood hazards.

   Lead: Public Works, Engineering  
   Priority: Medium

**Objective 3:**
To upgrade existing communication system in order to facilitate efficient emergency response in a natural disaster.

**Strategies:**
3.1 Upgrade Emergency Operations Center communications system, including any necessary building upgrades.

   Lead: Police, Fire, Facilities Management  
   Priority: High

*Goal: Reduce the likelihood of flooding damages through monitoring and increased public awareness*

**Objective 1:**
Coordinate with the Town of Vernon to monitor dams and potential flooding along Hockanum River.

**Strategies:**
1.1 Continue communications with Vernon emergency management personnel.

   Lead: Emergency Management  
   Priority: High

**Objective 2:**
Raise awareness of flooding risks among property owners.

**Strategies:**
2.1 Determine real estate disclosure practices in high risk areas.

   Lead: Planning  
   Priority: High

2.2 Implement an educational system for property owners, including appropriate materials and means for information dissemination. (Include information on importance of properly maintaining private trees).
Objective 3:
Raise awareness of public health concerns from flooding of private wells and/or on-site septic systems.

Strategies:
3.1 Continue to update identified private properties including businesses, food service establishments, daycares and group homes served by private wells and/or on-site septic systems located within known flood risks.
   Lead: Health, Environmental Health Services, GIS staff
   Priority: High

3.2 Implement an educational program for private owners including materials and recommendations for appropriate remediation of private utilities that have been subjected to flooding, for health protection and promotion.
   Lead: Health, Environmental Health Services
   Priority: Medium
Map 34: Manchester Critical Facilities and Population Density

Critical Facilities & Population Density: 2000 Census Persons per Square Mile by Census Block

- Hazardous Materials
- Hospitals & Medical Facilities
- Emergency Management Centers
- Fire Stations
- Police Stations
- Rivers and Streams
- Freeways
- Major Arterials
- Minor Arterials
- Waterbodies
  - Less than 800
  - 801 - 1600
  - 1601 - 3200
  - More than 3200

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation
Projection: Connecticut State Plane 1983 feet
For Planning and Analysis Use Only
Prepared: Spring 2007
Map 35: Manchester Repetitive Flood Loss Claims, Dams, Flood Zones and Open Space

Repetitive Flood Loss Claims, Dams, Flood Zones & Open Space Land Ownership

- **Dams w/ At Least Moderate Risk**
- **Freeways**
- **Major Arterials**
- **Minor Arterials**
- **Rivers and Streams**
- **2 - 4 Repetitive Loss Claims**
- **5 - 9 Repetitive Loss Claims**
- **10 - 17 Repetitive Loss Claims**
- **18 - 44 Repetitive Loss Claims**
- **100 Year Flood Zone**
- **500 Year Flood Zone**
- **Waterbodies**
- **Private Ownership Open Space**
- **Municipal OS & Rec Property**

Data Sources: Connecticut Department of Environmental Protection, Flood Zones, Dams, Repetitive Loss Data, Town Boundaries, Hydrography and Streams; Connecticut Department of Transportation

Projection: Connecticut State Plane 1983 feet

For Planning and Analysis Use Only

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