

### 3. Natural Features and the Environment

#### 3.1 Natural Setting

Montpelier is located in the upper watershed of the Winooski River. This river cuts a path through the Green Mountains and connects the region with Chittenden County and the communities of the Champlain Valley. The surrounding Green Mountains play a key role in the landscape of the region and the city. Many of the higher peaks of the main range and of the Worcester Range are visible from within the city, including Camel's Hump, Worcester Mountain, and Mount Hunger.

Montpelier's natural setting is particularly attractive. Its location at the confluence of the Winooski and North Branch Rivers has influenced development not only along the valleys, but also on the hillside slopes that overlook the valley. Higher elevations are 400 to 500 feet above these valleys, providing a contrast strong enough to be apparent anywhere in the city.

Figure 4 indicates this general pattern of topography which shapes development and the city's image, form, and character. Montpelier's steeper slopes provide a strong visual benefit and physical edge to the downtown area, and are an important feature which defines Montpelier's central business district (Figure 5). Vistas along several downtown streets, such as State and Main Streets, are terminated by the steeper wooded slopes that occur at the base of the surrounding hills.

#### Montpelier Land Area:

- 6,611 acres
- 10.3 square miles
- 287,984,600 square feet

#### Elevation:

- 550 ft above sea level
- 507 ft near lower State Street
- 1,123 ft near upper Main Street

The city's open spaces provide important recreation, visual and environmental benefits (see Figure 11, Open Space Network and Figure 17, Sensitive Environmental Features). The City has made an effort to protect outlying open areas, such as upper Elm Street, outer Terrace Street, Towne Hill Road and Old Country Club Road. Generally they are not served by public infrastructure which would encourage development.

Montpelier's four rivers are important features within the city's landscape. The Winooski River runs northwest to southeast through the central area, and extends approximately four and one-half miles within the City limits. The smaller North Branch extends for a similar length to the city's northern border and the Wrightsville Reservoir. A small portion of the city's southeastern boundary is formed by the Steven's Branch of the Winooski River; the Dog River forms a portion of the western boundary.

Although flooding along these riverbanks, both from runoff and ice damming has been partly mitigated through flood mitigation programs implemented by the City, the potential for future flooding still remains. According to the "Montpelier Flood Hazard Mitigation Plan" (July, 1998), over 478 acres, or 7.2% of the entire city is in the 100 year flood plain; an additional 86.5 acres is in the 500 year flood plain. While most of the areas affected by flooding are near the waters' edge, nearly the entire downtown area is within the 100-year floodplain (Figure 6). The City's ongoing mitigation measures include early warning and emergency response, building and property improvements, public awareness and education, and participation in programs such as the Community Rating System and Flood Mitigation Assistance Program through the Federal Emergency Management Agency.

The Montpelier Conservation Commission has proposed six River Conservation Corridors (Figure 7), and recommends the following types of development within each corridor:

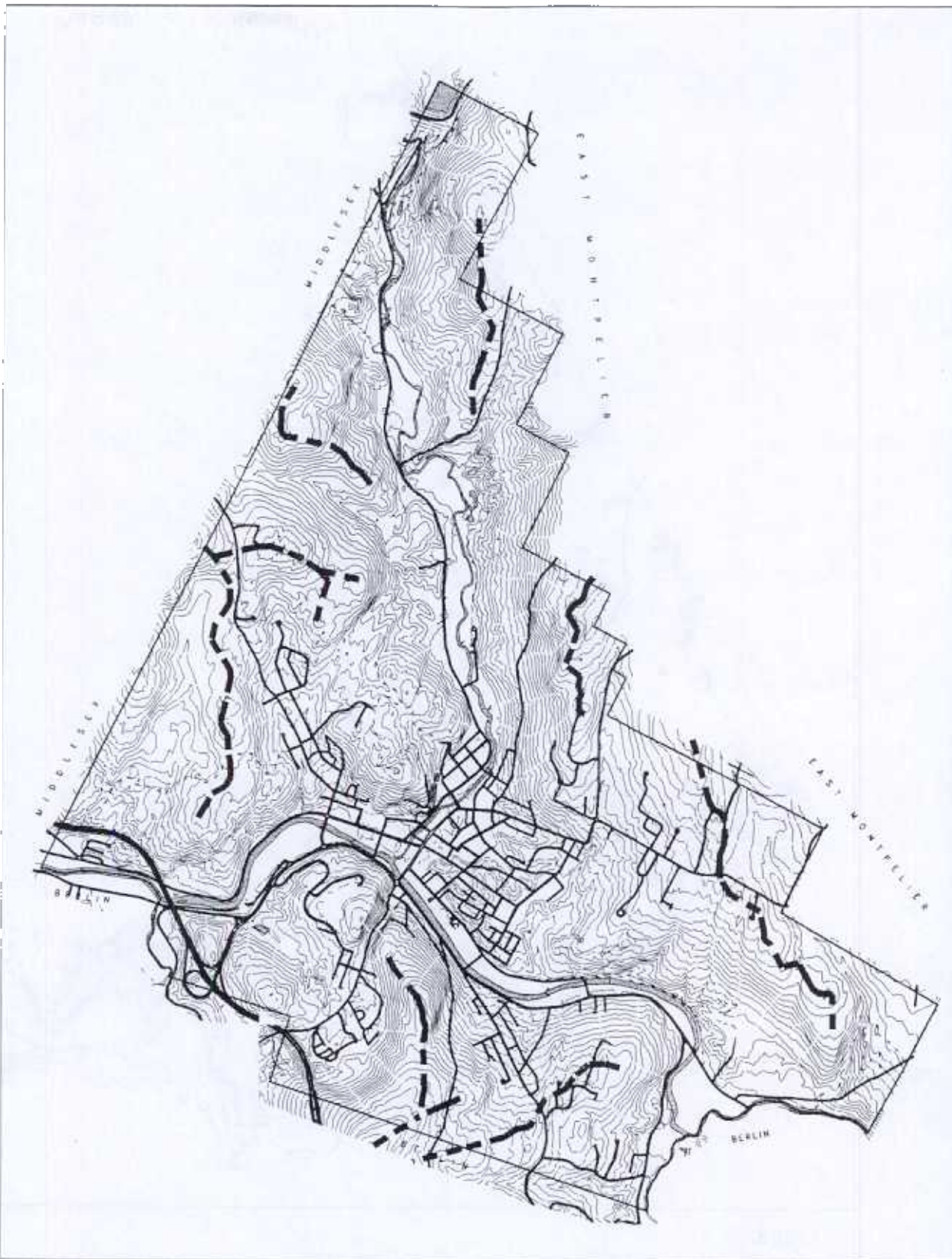
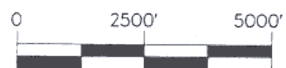


Figure 4  
**TOPOGRAPHY**  
 Master Plan  
 Montpelier, Vermont

-  Major Ridgeline \*
-  Roads
-  25-foot Contour
-  Water

Prepared By:  
 City of Montpelier GIS  
 Department of Planning and Development



July 1996  
 SEM



\* Approximate Location



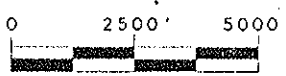
Figure: 5  
**SLOPE**  
 Master Plan  
 Montpelier, Vermont

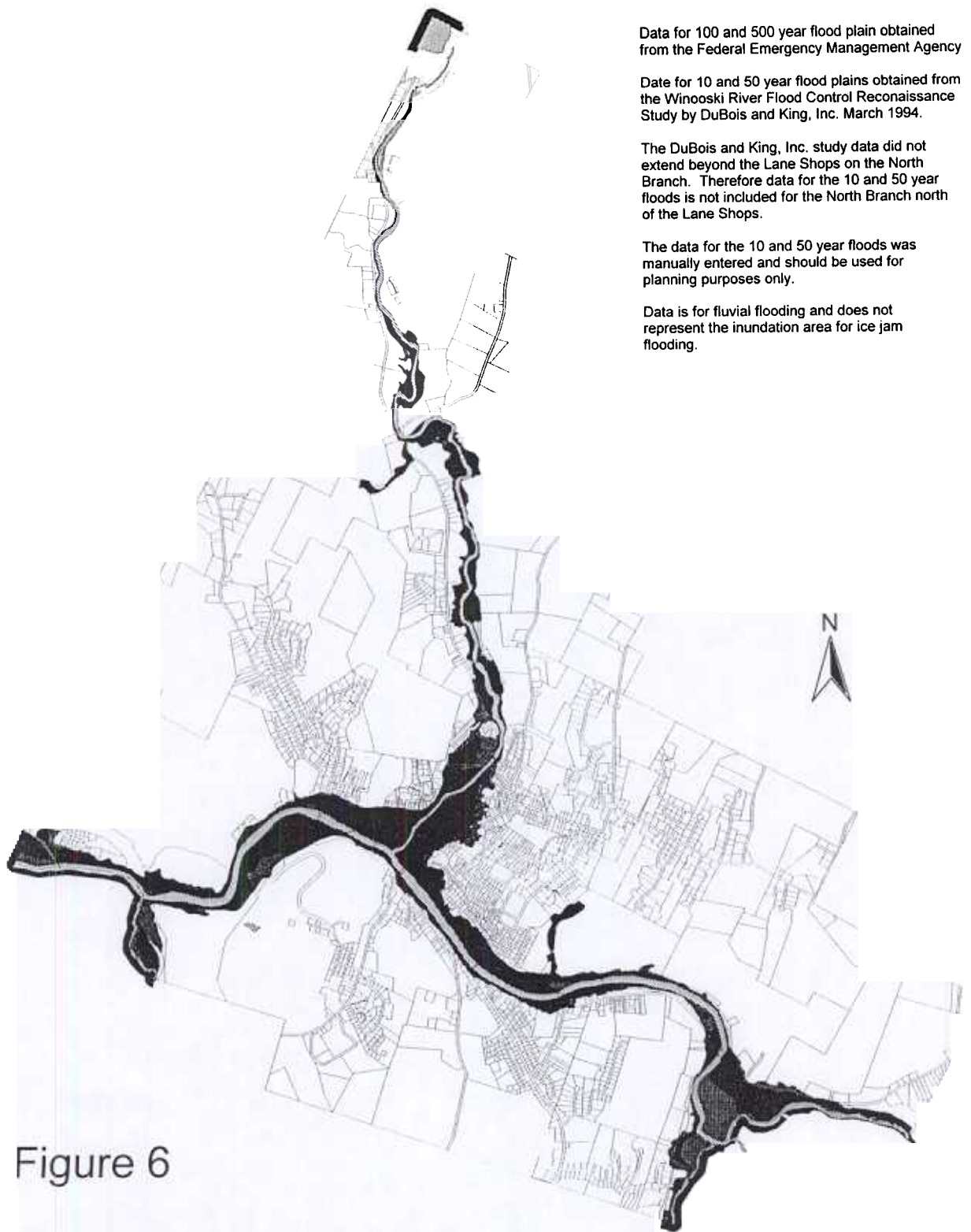
 Parks  
 Slopes greater than 25% +

+ Source: USGS 7.5 minute DEM data

Prepared By:  
 City of Montpelier GIS  
 Information Systems Department

June 2000  
 SEW





Data for 100 and 500 year flood plain obtained from the Federal Emergency Management Agency

Date for 10 and 50 year flood plains obtained from the Winooski River Flood Control Reconnaissance Study by DuBois and King, Inc. March 1994.

The DuBois and King, Inc. study data did not extend beyond the Lane Shops on the North Branch. Therefore data for the 10 and 50 year floods is not included for the North Branch north of the Lane Shops.

The data for the 10 and 50 year floods was manually entered and should be used for planning purposes only.

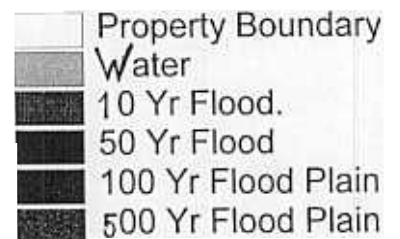
Data is for fluvial flooding and does not represent the inundation area for ice jam flooding.

Figure 6

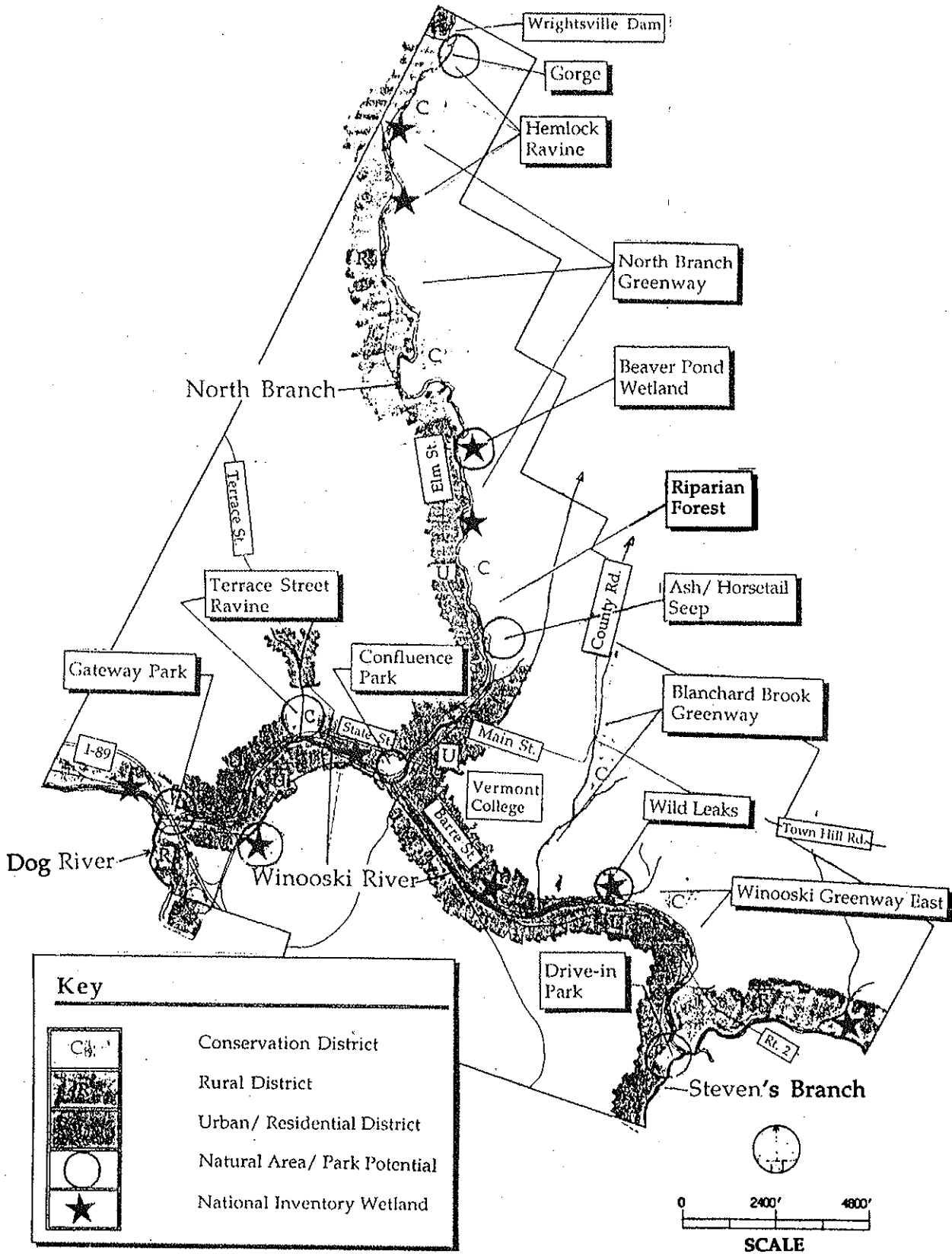
## Extent of Inundation For 10, 50, 100, and 500 Year Floods

Map prepared by the City of Montpelier  
Department of Planning and Development

April 1998



**Figure 7. Montpelier Rivers Overlay**



1. North Branch Greenway (North branch Recreation Trail linking Lane Shops with Wrightsville Reservoir):

- Link to east Montpelier trail system,
- Outdoor classroom across from the Recreation Field.
- Old growth forest areas.
- Intact riparian forests and beaver meadows.

2. Downtown Riverbanks:

- Park at the confluence of the North Branch and Winooski.
- Performance gazebo
- Steps and ramp to the river's edge.
- Skateboard park.
- River edge walk. Pedestrian bridge.
- Floating boat launch.
- Fish ladder.
- Main Street bridge Welcome Park.
- River habitat enhancement.

3. Blanchard Brook Greenway:

- Footpath linking New England Culinary Institute with Barre Street, the Montpelier Bike Path and the Winooski River.
- Spur trail to the Slate Quarry.
- Quiet, high gradient stream - a one minute walk from Vermont College.

4. Terrace Street Ravine:

- High gradient stream- a five minute walk from Montpelier High School and the Capitol Building.
- Foot path access through the arch at the end of Baldwin Street.
- Mature hemlock/pine ravine.
- Remains of a historic road, mill and bridge.

5. Winooski Greenway East:

- Natural/recreation trail linking Barre Street with Route 2.

6. Drive-in Park at the Confluence of the Steven's Branch and the Winooski River:

- Picnic tables and a small loop trail to the confluence.
- River viewing.

### 3.2 Natural Features and the Environment Goals and Recommendations

1. **Preserve, enhance and maintain the natural features and the integration of built and natural settings which makes Montpelier unique. These include: the city's riverfront locale; the city's backdrop of wooded hillside and primarily unbroken ridgeline; and Hubbard Park, North Branch Park, the Capitol lawn and other open space.**

**Recommendations:**

- a. By the year 2002, the Conservation Commission will prepare, resource permitting, an inventory of key natural features, open areas, forests, views and vistas in Montpelier and develop recommendations for preserving these features.

- b. Utilize the environmental principles established in Act 250 in planning the development and the use of natural resources.
  - c. Develop a management plan for City-owned parks, recreation areas, and open areas including the stump dump.
  - d. Encourage the placement of utilities underground.
2. **Control future development on ridgelines and hillsides as well as other key natural features such as designated wildlife habitats and rare plant and animal communities, wetlands, meadowlands, woodlands, agricultural lands, and unique views and vistas.**

**Recommendations:**

- a. Develop and adopt a ridgeline protection ordinance that includes the following provisions:
  - i. Requirements for detailed site plans for development in areas in excess of 25 percent slope to minimize the potential for erosion and visual intrusion.
  - ii. Requirements for clustering of development by the placement of buildings, roads, utilities and other amenities in less sensitive areas, and by the reservation of open areas or forested land for passive uses.
  - iii. Siting should avoid areas subject to strong crosswinds, without natural protection and with limited solar exposure, in order to maximize efficient use and recovery of energy.
  - iv. Any development which potentially breaks the skyline when viewed from a public highway should be carefully reviewed using specific site plan and/or design review criteria.
  - v. Potentially objectionable objects, such as signs, light fixtures, dumpsters, antennas, telecommunications antenna should be sited to avoid visual intrusion and be screened whenever practical.
- b. Explore enabling the Planning Commission to exercise local control of the Act 250 permitting process on issues which are local in nature and do not impact neighboring municipalities.

Revise Montpelier's Subdivision Regulations to include provisions which allow the Planning Commission to consider site conditions, settlement patterns, natural features, the placement of driveways, the location of building sites, and other aspects of a proposed standard subdivision that may impact sensitive natural areas, water quality, and important views and vistas.

3. **Improve the quality of and access to Montpelier's rivers and riverfronts for the use and enjoyment of all citizens.**

**Recommendations:**

- a. Activities and forms of development should be compatible with recreational use of the rivers and riverfronts and not endanger river or riparian quality.
- b. The Conservation Commission should collaborate with the State and other organizations to establish an annual river clean-up day, similar to the annual Green-up Day.
- c. The Conservation Commission should take the lead in a developing a plan to improve visual access and the appearance of Montpelier's riverfronts.

- d. The Planning Commission should develop specific development review standards, such as design guidelines, site plan review standards, and conditional use criteria, for development along Stone Cutters Way and all river corridors that consider appropriate locations for new structures, orientation toward the river, physical or visual access to the river, appearance and scale of new structures and site elements, and harmonious landscaping.
  - e. Pocket parks should be created along the North Branch, a Gateway Park on Route 2 across from the Green Mount Cemetery, Stone Cutters Way, and other locations along the city's Rivers.
  - f. Design and map a landscaped riverfront walkway and park in the city's urban core in cooperation with affected private landowners and the State; determine capital needs and costs; and identify implementation tools for the creation of these improvements.
  - g. Design and implement the North Branch Riverwalk.
4. **Maintain the high level of environmental quality in the city.**

**Recommendations:**

- a. Maintain or improve air quality by striving to achieve a transportation and parking system which minimizes auto emissions due to idling and congested traffic.
- b. Encourage measures to reduce potential for air pollution such as but not limited to continuing to enforce the City's ban on backyard burning.
- c. Increase public awareness of the aesthetic, environmental, economic and community benefits of trees in public places.
- d. The Montpelier Tree Board should continue to inventory all trees in the city's public places; inventory specimen trees and develop maintenance agreements with the owners; advise the Planning Commission and the City Council concerning the city's tree resources; assist the Planning Commission in developing landscaping standards for site plan review; provide maintenance and preservation specifications, and provide plantings and removal specifications.
- e. Ensure that Berlin Pond continues to provide safe drinking water, Municipal Forest and recreational opportunities for the citizens of Montpelier.
- f. Restrict activities which would reduce the classification of the Winooski and North Branch Rivers lower than the present Class B.
- g. Work with the Town of Berlin, associated property owners, and other agencies to explore opportunities to enable the public to access Benjamin Falls.
- h. Future changes to Montpelier's policies and regulations, as well as future equipment purchases by the City, should strive to protect Montpelier residents from adverse impacts on their quality of life due to unreasonable noise.