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Cover photo credit: Rachel Lindsay
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Bernardston Town Hall

Credit: Rachel Lindsay
1 Introduction

A. The Town Master Plan

Drafting a town master plan brings the members of a community together to create a collective vision for their town. It is an opportunity for citizens with different interests to come together, for departments to share information, and for residents and municipal officials to discuss topics that are not often addressed in the daily function of a small town. Planning twenty years into the future should also involve examining how the socioeconomic and environmental characteristics of the whole region might change, and how those changes might influence the types of decisions a small town can anticipate facing in the future.

This master plan is the product of a sixty-four-week process. In the first phase, a Master Plan Steering Committee of nine knowledgeable individuals was formed to share their views of the current issues the town is facing with a Conway School team of three graduate students. These committee members represent different sectors in town—farmers, landowners, town departments, private businesses, and town planners. Additionally, many town departments and organizations have met to express their vision for the future of Bernardston. The views expressed in these meetings were used together with past town reports and published data to compile the first five sections in this report and draft initial recommendations. The Master Plan Steering Committee continued to gather information and feedback from the general public from April 2015 to January 2016, when a second group of Conway students joined the process and finished the master plan with four more sections and additional recommendations.

This introduction describes the Commonwealth of Massachusetts’ requirements for a town master plan, the planning process and public participation. A brief history of Bernardston and a review of the 1975 Master Plan provide the foundation for understanding the changes that have taken place over the last forty years. This section also includes a summary of the projections for how the climate may change in the future and the implications these possible changes have for the future of Bernardston.

Phase I: January 2015 - April 2015
The first Conway School graduate team helped residents articulate a vision for Bernardston and determine their primary goals. The team then completed the introduction, goals and vision, watershed protection, natural and cultural resources, and land use elements of the master plan with accompanying recommendations.

Phase II: May 2015 - December 2015
Interim period in which the Master Plan Steering Committee held a survey and gathered feedback from the community.

Phase III: January 2016 - April 2016
The second group of Conway School graduate students completed the housing, transportation, services and facilities, and economic development elements. They provided additional recommendations, and integrated these with the initial team’s recommendations.
Town of Bernardston, Massachusetts

Bernardston is located in the northwestern section of western Massachusetts and is one of twenty-six towns in Franklin County. Its twenty-three square miles include two mountain ridges along the eastern and western sides of the Falls River, a tributary to the Connecticut River. The Bernardston exit off Interstate 91, which follows the Falls River valley north, is the last exit in Massachusetts before Vermont. Leyden to the west, Gill to the south, and Northfield to the east are rural towns of similar size and character, while Greenfield to the south is the county seat and largest municipality in Franklin County. The largest commercial centers near Bernardston are Greenfield, nine miles to the south; Northampton, twenty-three miles to the south; Amherst, twenty-seven miles to the southeast; and Brattleboro, Vermont, fourteen miles to the north.

Bernardston’s history, identity, and demographics have been shaped by ecological, social, economic and political processes. Some of the issues that Bernardston faces currently can be understood in the context of its political town, county, and state boundaries; however, Bernardston’s natural boundaries, such as the Connecticut and Deerfield River watersheds, also influence the choices facing the town.

The watershed protection, natural and cultural resources, and land use elements of this document will provide a deeper understanding of some of the underlying geographic and environmental characteristics of Bernardston. The housing, transportation, services, and economic development elements build on these and further investigate Bernardston’s man-made infrastructure, human systems, and socioeconomic characteristics.

Bernardston is located in northwestern Massachusetts and shares a border with Vermont.
Bernardston, Massachusetts

2016 Master Plan
Town of Bernardston

County: Franklin
Area: 23.4 square miles
Population (Census 2010): 2,129
Government: Open Town Meeting
B. Statement of Purpose

The Commonwealth of Massachusetts outlines the required contents of a town master plan in the Massachusetts General Laws Chapter 41, Section 81D. Master plans should present information, through text, maps, or other illustrations, that provides a basis for decision making regarding the long-term physical development of the municipality. The required elements are town goals, land use, natural and cultural resources, housing, transportation, services and facilities, economic development, and implementation strategies. An Open Space and Recreation Plan, which is a stand-alone document, may be considered an element of a town’s master plan. Bernardston’s current Open Space and Recreation Plan was written and approved in 2009.

The plan elements laid out by the state are not mutually exclusive. The subject matters overlap and all of the elements interact and together influence the quality of life for residents of Bernardston. Natural resource issues are connected to economic development. Forests provide ecosystem services, such as soil retention, stormwater infiltration, and carbon sequestration and also offer spaces for hunting, supplementing the diets and income of residents. Understanding the changing environmental climate and its potential impact on the natural and cultural resources of a municipality is fundamental to planning for its long-term physical development.

The Town of Bernardston’s decision to work with the Conway School, which teaches sustainable landscape planning and design, reflects Bernardston’s commitment to environmental sustainability. For example, this master plan includes a watershed protection element, which is not currently required but may be a requirement in the future pending the outcome of a Massachusetts Sustainable Development Act bill. The plan also considers the implications of a changing climate and a future where fossil fuels are increasingly limited.

Public Involvement

Participants in the community meeting on February 3, 2015 discuss their contributions to the Community Vision Map.

Credit: Rachel Lindsay
Planning Process and Public Participation

Beginning in January 2015, the Master Plan Steering Committee met biweekly with a team of Conway School graduate students to plan the process of updating the town’s master plan. The students met with town departments and stakeholder organizations, and facilitated two public meetings, on February 3 and February 24, 2015. Information about the meetings was posted in the Bernardston Town Hall, published on flyers around town, and announced in the Greenfield Recorder.

Twenty-seven residents attended the first public meeting, which was filmed by Bernardston-Northfield Community Television. Upon arrival, residents were asked to contribute to a “Places of the Heart” map by placing a sticker on their favorite place in town. To understand who came to the meeting, the Conway students gathered representative information about the participants. The team facilitated a discussion about Bernardston’s unique qualities and greatest assets, and about participants’ perceptions of what has changed and what is needed in town. The participants were asked to contribute to a collective vision of the future of the town by indicating on maps where they would like to see future housing, agriculture, business, and industry; where they see the most significant threats to water sources or land; what buildings or areas they feel are historically significant; and what areas of town they would like to remain the same in twenty years. A map showing the consolidated responses from this exercise is included in the Goals and Vision section of this report. The meeting concluded with a group discussion about their responses.

Twenty-one residents and two representatives from Mount Grace and Franklin Land Trusts attended the second public meeting. The Conway student team presented an overview of the information gathered, analyses of existing conditions, and preliminary recommendations for the natural and cultural resources, watershed protection, and land use sections of the master plan. The team presented a map that summarized the results of the visioning exercise from the first meeting. After the presentation, the public participated in a discussion about priority areas for preservation, future development, and the potential for constructing a sewer system. Participants brainstormed ideas for how to continue public engagement in the master plan process during the eight-month interim period between the completion of the first half in April 2015 and the resumption of the drafting process in January 2016.

During the interim period, a public survey was conducted based upon questions determined by the Master Plan Steering Committee. In January 2016, a new team of two Conway School graduate students began the second half of the master plan. They were informed by the Master Plan Steering Committee (MPSC) about what had been learned in the interim stage and continued to meet with the MPSC biweekly. The team facilitated two public meetings, on January 19 and February 16, 2016.

Twelve residents attended the third public meeting, which involved a discussion of Bernardston’s primary strengths and constraints that can help or hinder the town in achieving the three goals that were articulated in 2015. Breakout groups of four to five people were formed where individuals first recorded their own thoughts and then discussed them as a group. All the groups then came together and presented the primary strengths and constraints that each group had agreed upon. Strengths that were identified included the level of engagement and commitment of many residents, Bernardston’s accessibility from Interstate 91, its natural beauty and rural character, and the various events that the town hosts. Some of the constraints included a lack of a municipal sewer, lack of public transport, lack of money and jobs, lack of a cohesive vision for the future, and an aging population.

Twenty-four residents attended the fourth community meeting, on February 16, 2016. This meeting was held to clarify Bernardston’s goal of creating a vibrant center village, which will be discussed in the following chapter. Residents were asked to give feedback regarding the aspects of a central village they desired to see in Bernardston, based upon examples of village centers from surrounding towns. Some elements that were deemed important by many people were walkability, a medium density of development, a central gathering space, community events, and street trees, among others.
C. History of Bernardston

Like many towns in Western Massachusetts, Bernardston was colonized by settlers moving north along the Connecticut River as populations grew during the seventeenth century. When settlers arrived to the Bernardston area, there were already several Native American tribes that had been inhabiting the area prior to their arrival. These tribes, part of the larger Algonquin nation, included the Mohawk, the Pocomtuc, and the Pennacook (Clément, 1996).

Over time the Native Americans became increasingly dependent on the imported commodities available from the settlers, and began to lose their bargaining opportunities as the fur trade diminished (History.com, 2009). Tensions continued to rise and by 1676, settlers in the Bernardston area and several tribes fought in a battle known as the “Falls Fight,” which took place at what is now Turners Falls in Montague (Kellogg, 1902). An assembly of residents and volunteers from towns along the Connecticut River rode north from Hatfield towards Turners Falls and Greenfield to attack the Native Americans camped along the Falls River. The settlers won the battle, but a majority of the survivors died on the journey home due to attacks from retaliating tribes (Kellogg, 1902). In November 1734, Samuel Hunt of Billerica filed a petition to the House of Representatives for a tract of land to start a township for the descendants of those lost in the Falls Fight (Kellogg, 1902). The Falls Fight Township was granted in 1736, and included land that is now Bernardston, as well as Leyden and part of Colrain (Kellogg, 1902).

Bernardston’s original settlement was located approximately two miles northeast of the current Center Village, along Huckle Hill Road. Some of the first structures constructed in Bernardston were four forts: Samuel Connable’s fort in North Bernardston, Ebenezer Sheldon’s fort in the east part of town, Deacon Sheldon’s fort located near the original settlement on Huckle Hill, and the Burke Fort just north of today’s Center Village (Kellogg, 1902). Today these forts are no longer standing but signs have been posted that mark their original locations. Bernardston’s Congregational Unitarian Church, built in 1739, is one of the few existing buildings in Bernardston that was originally built on the first settlement. It was first moved half a mile south on Huckle Hill Road in 1772, and then a second time to its current location in 1825 (Trustees, 1962). Bernardston was known as “Fall Town” or “Falls Fight Town” until 1762, when the town was incorporated as the Town of Bernardston, named after Governor Francis Bernard (Kellogg, 1902).

Many industries in Bernardston met the daily needs of the residents and produced goods for regional markets. In the mid-nineteenth century, these industries included tanneries and shoe-shops, blacksmiths, cutlery factories, mills, distilleries, rope-making, cigars, and saddle- and harness-making (Kellogg, 1902). As in other New England towns, Bernardston’s water powered sawmills and gristmills were built along the larger water bodies in town.

The growing population and its need for goods and services drove the town’s economy, which then created the need for sufficient infrastructure. In the early days of Bernardston, roads were mere horse paths through the woods and as the town and industries grew, more roads were constructed. What is now state Route 5 was once an old stagecoach route. In 1852, a factory manufacturing hoes was established along the Falls
River and by 1900 it was the only factory in Bernardston while other industries had come and gone. After the death of the owner, the factory was quickly purchased by a company in Greenfield, transferring most operations out of Bernardston (Trustees, 1962). Between 1958 and 1960, Bernardston saw a shift in industry when Interstate 91 was built, paving over many acres of prime farmland. The land of some property owners was split by I-91, leaving them unable to directly access their land on the opposite side of the highway. Some farmers sold the remainder of their land to developers or let the land return to forest (Trustees, 1962).

By the time of the 1975 master plan, Bernardston’s business sector was still operating at a small commercial scale. Businesses in town were mainly retail, personal businesses, gasoline service stations, and automobile sales, repair, or storage. Compared to Greenfield, Bernardston’s commercial development was small and took the form of “village development,” concentrating business around transportation crossroads, which were vital to Bernardston’s rural character and prosperity (Brown, Donald and Donald, 1975).
D. The First Master Plan, 1975

When the Brown, Donald, and Donald planning firm began to assemble the Town of Bernardston Master Plan in 1974, much of the technology for collecting data available today did not exist. The firm conducted a field survey by driving down every road in town, noting each lot and its use, and estimating by sight the amount of farmland. It used a topographic map published by the US Geological Survey to determine development suitability based on slopes, and included housing and population growth projections up through the year 2000.

Interstate 91 had been completed a decade before that first master plan was written, and the new highway created a clear divide between east and west. From its frequent appearances in the 1975 plan, and the number of recommendations that reference the location of the entrance ramps close to the center of the village, it is clear that the creation of this major highway through Bernardston was a landmark in the town’s developmental history and was seen as an economic asset for the town.

The 1974 field survey identified 515 acres in residential use, 94 acres in commercial use, 12 acres in mixed commercial and residential, 5 acres in industrial use, 52 acres of town- or state-owned public or semi-public uses (it counted churches as semi-public), and 97 acres of land classified as town-owned public recreation. Town streets covered 343 acres and Interstate 91 covered 312 acres of former farmland. It calculated 2,520 acres of land in agricultural use, including both animal pasture and cropland. The remaining 11,100 acres were categorized as undeveloped and “mostly wooded,” aside from the 32 acres covered by water bodies.

Brown, Donald, and Donald considered the dominance of agricultural and open land a strength of Bernardston, stating that the town is “far luckier than many other towns because its growth has been slow and evolutionary…. ‘Strip commercial’ development has not yet occurred” (7). It praised Bernardston for many of its characteristics, such as the well-maintained and easily identifiable historic village center and the scenic rural roads that give the town a “gentle and peaceful appearance” (10).

Taking into account the topography, suitability of soils for septic systems, and the zoning regulations in place at the time, a build-out analysis concluded that Bernardston had a holding capacity of 3,114 dwelling units or 9,964 people. The exercise was based entirely on residential capacity and did not explore additional areas associated with growth such as the expansion of public facilities and the commercial sector. The upper
limits of Bernardston’s growth calculated in the build-out exercise were much higher than the projected population growth, which was expected to be 2,857 residents by the year 2000. As of the 2010 Census Bernardston has 2,129 residents.

Although the projections laid out in 1975 have proven to be higher than actual growth, many of the goals and recommendations remain consistent with the community’s vision today: to continue to be a place where residents live and work within or outside the town, rather than a commercial or industrial center that outside residents commute to; to preserve the natural beauty and open land of Bernardston; to expand the tax base through development that preserves the quality of rural life; and to expand municipal services to meet growth.

Following Brown, Donald, and Donald’s advice, a Residential/Agricultural zoning classification was established and a Parks and Recreation Department was formed. Other recommendations from the plan approved by the planning board at the time and since adopted include restricting commercial development west of the I-91 highway corridor to individual shops and stores characteristic of a village center, encouraging intensive commercial development east of I-91, and constructing a public sports field. In 2016, a management plan was completed for the town-owned Charity Lot.

Recommendations from the 1975 Master Plan that were approved but did not come to fruition include the town acquiring Couch Brook Gorge and the First Meeting House property on Huckle Hill.
E. Planning for Climate Change

The steep terrain and fertile floodplain soils of Bernardston are remnants of an age when glaciers covered the northeastern United States. Over many millennia, changes in temperature, weather, and water level have impacted the landscape and continue to affect the environment. The by-products of industrial development have changed the composition and amounts of various greenhouse gases in the earth’s atmosphere and oceans and impacted the natural world in ways that scientists are documenting and attempting to understand.

As our climate continues to change, planners and climate scientists are working together to understand the effects of human development on climate, and to anticipate and adapt to future changes. For Bernardston, this may mean preparing for a higher probability of intense storms and flooding, and taking measures to mitigate the detrimental effects that these events could have on the town.

Researchers at the University of New Hampshire’s Climate Change Research Center have analyzed a wide range of data, including year-round precipitation accumulation, bloom dates, river dynamics, and average annual temperature, to determine current climate trends. They have found significant evidence that the climate in New England is warming, with average winter temperatures between 1970 and 2000 increasing by as much as 4 degrees Fahrenheit (Clean Air-Cool Planet, 2005). Total annual precipitation during that time period increased 3.3 inches, as did the frequency of precipitation events.

The Massachusetts Executive Office of Energy and Environmental Affairs predicts that extreme precipitation events will increase 8 percent by mid century and 13 percent by 2100. Higher air temperatures would increase the temperature of the water, which would negatively affect certain species and water-dependent industries (EEA, 2011).

A steady increase in rainfall, earlier melting dates for ice on rivers, and more frequent flooding may have drastic consequences for small New England towns like Bernardston, traditionally built near rivers and water bodies. Improving and expanding public infrastructure requires considerable financing and coordination, and not taking climate trends into consideration could result in devastating loss of both investments and lives.

Certain ecosystems, such as the spruce-fir forests and swamps found in the northern elevations of Bernardston and other areas of Western Massachusetts
are particularly susceptible to temperature increases (Biomap2, 2010). Prioritizing the protection and sustainable management of intact tracts of forest may increase the possibility of survival of Bernardston’s unique ecological communities because such management can help to strengthen the adaptive capacity of trees by maintaining biodiversity and reducing vulnerability (Food and Agriculture Organization, 2010).

Forests, wetlands, rivers, and streams in Bernardston are critical habitats with an array of ecological functions that may be affected by climate change. Upland forests support a variety of habitats and biological diversity, purify air and water, moderate subsurface and overland water flow, and sequester carbon (EEA, 2011). Preserving these resources will be critical for adapting to and mitigating the potential impacts on natural systems and human communities from unpredictable shifts in climate (EEA, 2011).

Some strategies for adapting to climate change can also be mitigation strategies if they reduce the greenhouse gas emissions that exacerbate climate change. The Massachusetts Office of Energy and Environmental Affairs recommends several strategies for adaptation and mitigation that are appropriate for Bernardston, such as developing local and renewable sources of energy, reducing dependency on fossil fuels, and preserving, protecting, and restoring the hydrology of watersheds (EEA, 2011). Regular assessments of the risks to areas of higher population, such as Center Village, and of Bernardston’s critical infrastructure can help the town identify areas of concern in order to plan and prioritize actions to take as the climate changes. Strengthening regional connections through shared services, like transportation, can help Bernardston reduce dependency on fossil fuels and mitigate against further exacerbation of climate change.

Throughout this document, the changes in the environment due to climate change have been taken into consideration, and the recommendations include actions that could potentially improve Bernardston’s ability to adapt to and, where possible, to mitigate against climate change.

Beneficial Forests

The forested hills that form the scenic landscape of Bernardston, shown in this view from West Road, are both threatened by the effects of climate change and help to mitigate against climate change by sequestering carbon.
Farmland is part of the community vision for the future of Bernardston