**Hello fellow Instructor**!

Below is a charrette about the King Farm that I developed with the intention of teaching about the past history of the farm as a lens into its potential future. Please feel free to use this document in any way that you wish. I hope that it is helpful to you!

**Materials within this document:**

Basic outline of the lesson (page 2)

General King Farm and Woodstock background (page 3)

Charette packet begins with answers (page 4)

Outline of the entire King Farm history (page 20) \*Included in student version as well

Description of all buildings (pg 22)

Work cited and other resources used in the development of the charrette (pg 24)

Suggestions for other activities or expansion of this charrette (pg 26)

Map of King Farm property with stations, vernal pools, trails, etc marked (hard copy version only)

Map of King Farm buildings for use with station 4 (hard copy only)

**Required supplemental materials:**

Wetlands, Woodlands, Wildlands: Natural Communities of Vermont

 You may want the corrected key for this (see sheet in red King Farm folder)

Eastern Trees Peterson Field Guide

King Farm Living Timeline (word document in King Farm file)

Invasive Species Guide (word document in King Farm file)

Map of King Farm (word document in King Farm file)

**Preparation:**

Not much is needed other than obtaining and preparing the supplemental materials. It may be helpful to flag examples of the invasive species (station 5) and find the trees that you want to be identified (station 1) in advance. Depending on the time of year you may want to check and make sure that there is still water in the vernal pool.

**Using this charrette:**

Overall, the packet is self-explanatory and the stations can be done without much instruction. It may be better to have an instructor along to make sure that students are completing all the steps of each station, however it is not necessary. All stations begin at the number marked on the map unless otherwise noted. Students can start at any station and go through in any order, however it may be easier if students complete tree identification (station 1) before going to forestry (station 3). The vernal pool station is seasonal since vernal pools only exist in the spring and early summer, so depending on the time of year it may be more practical to skip this station.

**King Farm Charrette**

*TEACHER VERSION*

**Outline**:

Introduction (~30 min)

-Welcome and introduction to new faces

-Brief description of the King Farm and brief history of Woodstock (see information below)

 Highlight that the Farm is in a transitional phase

-State that we are doing a charrette and share its description (see definition below)

-State that we are hoping to engage and empower youth/ students through this charrette

-Read passage from the Nature of Vermont

-Do “King Farm Living Timeline” activity (see King Farm Living Timeline document)

-Go over the schedule for the day and state that we will be learning about the farm through an investigation of its natural history. Define natural history since many students do not know the definition (see definition below)

Stations 1-5 (30 min each= 2.5 hrs total)

Make sure that students know what their rotation is. Try to have students do the Tree ID (Station 1) before Forest Management (Station 3).

--Break? Bathroom, snack--

Station 6 (~15 min)

Come back together as a group and go through the conservation easement.

Regroup/ Reflect/ Plan for the future (more detailed description below) (~1 hr)

Discuss what you have learned

Reflect upon charrette content and structure

Discuss plans for the future

TOTAL TIME: 4- 4.5 hours

General King Farm Background and Description

*Woodstock*:

“200 hundred years ago Woodstock attracted hardy, self- reliant, industrious farmers, merchants, millers, and preachers.”

Town of Woodstock was granted on July 10, 1761

Vermont joins the union in 1791 after being an independent republic for 14 years

Woodstock is Shire Town to Windsor County (where all government buildings are)

From Wonderful Woodstock Pamphlet

In 1771 there were 10 families and a population of 42.

 From Woodstock “Then and Now”

*King Farm*:

“… one of Vermont’s best examples of a 19th century hill farm, and is on the National Registry of Historic Sites.”

“…stayed in continuous diversified agricultural use from 1793 to the present.”

 From King Farm RFP

“…early self-sustaining hill farm which has, through adaptation to evolving farming practices and the efforts of successive owners in the past two centuries, been able to stay in continuous diversified agricultural use since 1793.”

“retains its integrity of design, setting, location, materials, workmanship, feeling, and association [with agriculture]...”

“Its buildings and landscape clearly portray the evolution of Vermont agriculture over the past two hundred years”

“The main barn, with its internal silo and fashionable gambrel roof (1906), demonstrates the King Farm’s adaptation to prevalent agricultural and architectural trends”

“…reflects the patterns of the turn-of-the century when Vermont-born residents, made more wealthy by work and careers out of state, returned to their family home to create summer estates and vacation retreats on farms…”

 From National Register of Historic Places

*Natural History Definition:*

Observational, systematic, study of natural objects and organisms. Natural history is one of the broadest sciences, as it involves all areas of study from geology to chemistry while linking these observations to human history. Some view natural history to be a method of finding clues in a natural landscape to interpret both the human and non-human history of the area and interactions between these two groups.

*Charrette Definition:*

Defined as an intense period of design activity by most dictionaries, a charrette has several components aimed at defining and resolving an issue. In small groups, a central problem is analyzed to create a proposal with several alternative approaches to a solution.

*--STUDENT VERSION BEGINS HERE--*

“We will be doing a charrette today is about the King Farm, a traditional Vermont farm that is an example of the evolution of Vermont agriculture over the past 200 years. Through an investigation of the farm’s natural history we will recreate the story of the farm’s use and consider plans for its future.”

I came across the passage below in my research about Vermont’s agricultural history and felt that it was appropriate to this lesson as it is focused on the transition of the King Farm.



Excerpt from The Nature of Vermont, by Charles W. Johnson, University Press of New England, 1998

**Station #1:** Natural History and Tree ID

\*\*You will need Eastern Trees books for this section\*\*

*Let’s identify trees!*

We are going to use a dichotomous key to identify the trees in this area of the farm. A **dichotomous key** is a series of questions used to identify an unknown organism. Each question has two mutually exclusive options, such as, “Can the bird fly?” thus dividing all birds into two groups: those that can fly and those than cannot fly. You continue answering these questions until you finally reach the end the end of the series of questions. An example of a dichotomous key that was used to identify a jellyfish is below.



*From* [*http://www.webquest.hawaii.edu/kahihi/sciencedictionary/D/dichotomous.php*](http://www.webquest.hawaii.edu/kahihi/sciencedictionary/D/dichotomous.php)

Now we are going to identify the tree species in this area and determine what this means about the natural history of this area.

1. As a group, open your tree identification books. Look at pages xvi-xvii, 3-4, and 6 to get a sense of the different parts of the tree. Within your group, talk about the following differences:

Pg xvii: compound vs. simple and opposite vs. alternate leaves. At the top it mentions a whorled leaf structure, but none is shown. What do you think a whorl looks like?

* 1. Pg. 3: look at the different parts of a leaf and the location of the stipule and bud on the twig.
	2. Pg. 4, 6: look at different leaf shapes and possible bud locations.
1. Now that we are familiar with the different parts of a tree, find a few unfamiliar trees and begin to look at the bark, branch structure, and leaves. If you have a hard time distinguishing the leaves up in the branches, see if you can find a leaf from this tree on the ground.
2. Once you have a sense of the tree, turn to page 11 and locate the dichotomous key at the bottom of the page. Look at the first question, “Leaves needlelike or scalelike.” If the leaves are needlelike, then turn to the page identified. If they are not, go to the next line. (*Hint*: All leaves that are not needle-like are broad leaves). After this point the option that you choose with either lead you to another prompt or a different section in the book. Feel free to reference any of the previous pages if you need help. When moving to a different section of the book you may need to turn the page to find the next section of the dichotomous key. Once you get to the tree family the book will tell you to go to that platelet, written as “Pl.” All the platelets are in the beginning of the book and numbered. The tree species can be identified using both the color illustrations on the left hand side and descriptions on the left. Once you think you have identified your tree, write the name of the tree below.

Continue going to the rest of the trees, beginning each time on page 11 and starting at the beginning of the key.

Tree 1: Tree 3:

Tree 2: Tree 4:

1. When you have identified all four trees, look at all the trees around you and answer the following questions.

What tree species appear to be particularly dominant, ie what is the most common tree?

*Maple, ash*

Given the proximity to human made structures (farmhouse, road, etc), why do you think that this tree is so dominant?

*Were planted for aesthetic and practical reasons- maple sugaring*

What tree species is not seen very much?

*Elm*

Do you think that there could have been something that caused one of these trees to lose dominance at some point in time?

*Dutch elm disease*

*Discovering Natural History*

As we discussed in the beginning of today, natural history is way of understanding the history of an area by reading clues in its natural landscape, whether they be created by the environment or man made. Now, we are going to walk around the farm and observe some of the man made elements as a means of understanding what has happened on the land over the course of a few hundred years.

Look back past the farmhouse, up the hill into the woods. What do you notice? What do you think was different about this area over 80 years ago?

*Stones were moved from the field so that it could be clear and arranged into a wall as a place to put them as much as provide function. The wall goes along what was once Barnard Road and was used to close pasture for grazing animals.*

*There used to be a road that went through the woods that went all the way to Barnard up to where Route 12 is now. 80 years ago this was the main connecting road from Woodstock to Prosper Road- before Route 12 was built. Also, people used to hang out here and wait for traffic to come by; the road was a social place.*

The difference that you may or may not be able to see is that there was once a public road, despite that it went straight through private property. Why do you think that the farmers wanted to keep it public?

*The state will maintain the road if it is public. Or farmers can pledge to maintain the road and not pay taxes. (Currently Class 3 Town Highway).*

What else would have been different 150 years ago that would create a need for the road to have a flatter grade?

*Carriages needed less steep slopes*

**Station #2:** Vernal Pools

\*\*This station can only be done in the spring and early summer as the vernal pools will likely dry up midway through the summer. There are also three pools on the property, all three of which are labeled in the teacher version of the map. The student version only labels the one that is identified in this lesson. The content of this station is fairly short to allow extra time to get to the station, although it may be a good idea to expand it using one of the suggestions below, depending on the resources that you have available.\*\*

Ready to explore??

*Locate station 2 or the vernal pool on your map, and make your way there along the trail. We will be taking a short hike up to the pool, so get ready for some walking!*

What do you observe about the pool? How does it differ from a pond?

*-Dry for part of the year in late summer/ fall*

*-Does not have fish*

*-Lots of amphibians- frogs, salamanders, etc., since they use these areas to mate since there are no predators*

Where how does a vernal pool in Vermont form? What causes the water to remain pooled and not seep down through the soil?

*-Snow melt? (I don’t actually know)*

*-Have hydric soils- meaning that soil is formed under saturated conditions, flooding, or ponding to create anaerobic (no oxygen) conditions. They also have hardpan soils underneath the hydric topsoil layer, which is impervious to water. Hardpan often prevents roots from growing, which allows the vernal pool area to be more free of vegetation.*

Vernal pools are the breeding grounds of the Jefferson salamander in VT, which has been identified as a state species of concern. Salamanders lay their eggs in the pool where they hatch and remain as juveniles for two to three months before leaving. Adults return to the pool in the spring to mate.

*Potential options to expand this section:*

MAP SOIL STRUCTURE OF VERNAL POOLS?- Dig a soil pit, look at geologic maps/ information about the area? This structure is what allows pools to form.

COLLECT INVERTEBRATES/LOOK AT WATER UNDER A MICROSCOPE? Fairy shrimp are indicators of a vernal pool. Do the microscopic organisms in a vernal pool differ greatly from those found in a pond/ lake (have pond/ lake water available for comparison)?

SALAMANDERS AS INDICATOR SPECIES? All amphibians breathe through their skin, so they will be some of the first to be affected by toxins.

**Station #3**: Forestry and forest management

\*\*You will need Wetlands, Woodlands, Wildlands books, dichotomous key photocopy to go with Wetlands, Woodlands, Wildands, and perhaps a tree ID book. This section is sometimes completed quickly by students so you may want to consider expanding it slightly.\*\*

*We will begin this station at the vernal pool and then move to a different forest type halfway through.*

Much of the focus on the history and current use of the King Farm is on crop agriculture and the raising of livestock, although the historical management of the forest is of great significance as well. There were times in the history of the King Farm where much land was open and deforested to provide space for sheep grazing. The mid-1800s was a peak period of agriculture in Vermont as sheep farming exploded. However, as sheep farming died down in the early 1900s most previously open land in the western and northern sections of the farm are reverted back to forest. The forest gradually became to grow back until the 1940s where the proportion of forest and agricultural land reached its current level.

Now using our new knowledge of trees we are going to identify a natural community! A natural community is an “interacting assemblage of organisms, their physical environment, and the natural processes that affect them.”

Turn to page 79 in Wetland, Woodland, Wildland. We are going to identify this natural community using a method similar to the dichotomous key that we used to identify trees. Take the photocopied sheet in the book and work your way through the chart until you determine what this natural community is. For descriptions of each of the communities, turn to the pages listed under each community.

Once you have found the community, provide two facts that you find to be interesting about this natural community.

1:

2:

*Now we are going to go for a short walk. Go back the way you came, toward the starred #3 on your map. When you reach the forest stand it should be very distinctive.*

In its historical management, the farm has intentionally been planted with a single tree species. What tree species appears to dominate the stand?

*Red pine*

Why do you think that the trees were planted like this?

What kind of impacts do you think that this type of forest management has on the forest (effect of planting a single tree species)?

How does this forest area compare to the natural community that you identified? What is different?

The King forest is currently being managed for forest health, timber production, water and soil quality, native biodiversity, rare, plants, animals, and natural communities, historic and cultural resources, wildlife, recreation, and aesthetics. Which forest management style (of the two that you have just seen) follows these management goals more closely?

The King Farm forest has been professionally managed throughout its history using selective timber harvest and fuel woods cuttings in a similar manner to Marsh-Billings-Rockefeller forest. In 1987 John Wiggins, local forester, developed the forest management plan for the King Farm, Marsh-Billings-Rockefeller, and the Billings Farm. Currently, the forest is under the Vermont State Use Value Appraisal Program and Tree Farm Program. The Use Value Appraisal or “Current Use” program allows landowners to put actively managed forests in a program where landowners harvest wood from their forests based on a plan created by a licensed forester for tax credits.

The King Farm has developed a forest management plan under the Use Value Appraisal Program. The goals and objectives from the plan are below.





Do you think that the farm should be used for timber production? Why or why not?

**Station #4**: Vermont’s Agricultural History

Jump in your time machine, it’s time to go back to 1793!

At this station we’re going to investigate the agricultural buildings as a means of traveling through Vermont’s agricultural history. We will be going in chronological order, beginning with the farmhouse.

*Farmstead/ Subsistence Farming (late 1700s to early 1800s)*

From what you know about farmsteading and subsistence farming where the farmer simply tries to grow enough food to support his family and not enough to sell commercially, what would types of uses would you expect on the farm?

As you can see, the farmhouse is on the National Register of Historic Places, *an* *official list of the Nation's historic places worthy of preservation. It was authorized by the National Historic Preservation Act of 1966 as part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.* According to this plaque, what year was the farmhouse built?

*1793*

A few other buildings were constructed around this time to assist in various farming activities. Turn and look at the **main barn**.

Originally, this building was a half story English barn. An English barn is characteristically 30’ x 40’ single story and no basement. It has two large double wagon doors, a style brought by the colonists from England and used widely throughout the United States from before the 1770 to 1900s. The placement of the doors allowed the building to be divided into two separate areas. What do you think that these two storage areas were for?

*One for grain and hay storage and the other to store livestock.*



English Style Barn

*Retrieved from http://www.uvm.edu/~vhnet/hpres/publ/barnb/bbhbty.html*

Later, in 1906 a new gambrel or gabel roof was built, which is a symmetrical two sided roof the shape of half an octagon. The upper slope is at a shallow angle and the lower roof has a much steeper angle. **The gambrel roof can still be seen.**

Turn to your left and look at **building 4**. It is hard to difficult to tell what this building was used for based on its current contents, but it became essential as the main barn did not provide enough storage for this crop as time went on. What was this crop?

*Grain*

Now walk back behind the farmhouse to **building 7**. Go ahead and take a peak inside. What do you think this structure was used for? (Hint: Miracle-Gro is our modern-day industrial equivalent).

*Store pot ash.*

There were two other buildings that were used during this period, but became parts of other structures as time went on, the **carriage house** and **horse barn**. We will see these buildings later on our tour.

*Sheep Farming (early 1800s to late 1800s)*

James Undall King brings sheep to the land following favorable wool tariffs passed in 1824 and 1828 in Vermont encouraging farmers to raise sheep. This action marks the transition from a focus on subsistence farming “cash crops,” such as oats, corn, wheat, and barley to animal husbandry. James continues to grow a few “cash crops,” including wheat, rye, potatoes, beans, corn, oats, hays for his horses, and has an orchard. The extent of his animal husbandry included four horses, four mules, four oxen, eight cows, four other cattle, a few pigs, and 65 sheep (sheep according to 1850 census).

Two new structures were built in this period of time. **Building 3** is one of these buildings, now it is difficult to tell. However, James buys 80 acres of pasture on Jabez Maxham Hill in Bridgewater, conveniently located five miles from a woolen mill. Given this information, what do you think the purpose of this structure was?

*Housing sheep!*

*Dairy Farming (mid 1800s to 1964)*

The King Farm begins a small dairy operation of eight cows in the mid 1800s, which produces 400 pounds of butter and 800 pounds of cheese. As time goes on the herd is split in half before growing in the early 1900s in response to an advance of refrigeration. Why would refrigeration affect the milk industry in a rural state such as Vermont?

*Allowed milk to be transported out of state in refrigerated railroad cars.*

Two buildings, **building 6** and **building 5** are added to support this transition to dairy. After taking a look at each of these buildings, what do you think that each was used for? Feel free to use the pictures below as a clue.

Related use of building 6:

Building 6 was: \_\_\_\_*Ice house*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Related use of building 5:

Building 5 was: \_\_\_\_*Milk house*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Gentleman’s Farm (early 1900s to 1980s)*

The farm begins to transition into a gentleman’s farm after Hiram Undall King graduates from Dartmouth and moves to Connecticut to found what will be a successful prep school for boys. A gentleman’s farm is a farm that is not used to produce a great amount s of food. In 1887 Hiram purchases his family’s share of the farm from his brother and it becomes a summer retreat for Hiram. The farm makes little money as Hiram’s brother, Moses King, continues to operate the farm. Many structural changes are made beginning in 1906 and two new structures are built. Soon after these renovations Hiram dies suddenly and his wife, Francisca Perkins King, inherits the land and decides to lease the farm to a caretaker, which continues until the land is placed under a conservation easement in the 1980s.

Now, see if you can locate the only four buildings that we have not yet identified. Once you have found them, match each building to its description below.

Originally just a single platform that was used for eating meals and sleeping during warm summer months while the ell was being constructed, built during the era as a gentleman’s farm.Windows were brought up in 1914 by Francisca from another house and to replace the existing screen windows.

*This is building* \_\_\_*11*\_\_\_\_

Summer guest house that was originally a play house for Francisca King Thomas built from discarded wood used in the construction of the ell to the farmhouse. In 1912 it was moved north to the edge of the orchard and expanded to accommodate the resident farmer. It was then again expanded in 1914 with a fireplace, running water, privy, screened in porch (no longer existing), and sleeping quarters for two people.

*This is building* \_\_*10*\_\_\_\_\_

Originally built for farm equipment, but later remodeled so that it could be used for draft horses.

*This is building \_\_9\_\_\_\_\_*

First built to house farm equipment with only a shed roof with board and batten siding. In the 1940s another half was added to be used as a workshop for current resident farmer of Francisca Perkins King. *This is building* \_\_\_*8*\_\_\_\_

*Dairy to Beef Farming (1960s)*

In 1964 dairying on the farm ceases when it becomes nearly impossible for create a profit with the 20 cows that the family has. The farm switches to raising beef cattle in response to the problems in dairy farming. The King Family’s transition mirrors the slow decline of dairying in Vermont, which continues to be an issue today as the number of dairy farms in the state recently went below 1000 farms. What do you think is contributing to the collapse of Vermont’s tradition of dairy farms? Is there anything within the main barn or milking house that illustrates the changes that led to this collapse?

*Concrete floors and manure lines are signs of changes in sanitation standards, which became much stricter and required farmers to perform costly steps, such as pasteurizing their milk.*

*MYSTERY QUESTION*-

YOU have now toured the entirety of the farm, which has previously been described as a typical Vermont farm throughout two centuries. There is one building that is usually part of every Vermont farm that was destroyed in the 1938 hurricane and no longer exists. What is it?

*Sugar shack*

**Station #5**: Invasive Species

\*\*You will need invasive species identification guide\*\*

Now it’s time to be the ultimate competitor! Walk to the area designated on your map as “Invasive!”

The term invasive species has been increasingly been used for what many consider to be weeds without a full understanding of its true meaning. An invasive species is some type of flora or fauna that is nonnative or exotic, meaning that it is living outside of its native distributional range. These species have arrived in their new homes as the result of human activity and can have a range of impacts, from benefiting the human community to completely outcompeting native species. An invasive species characteristically has a negative impact on its new home community, often creating competition in a niche that had previously been non-competitive.

The King Farm is unfortunately the home of a variety of invasive plant species, including honeysuckle, multifora rose, Japanese and common barberry, glossy and common buckthorn, and autumn olive. Some of these species, such as honeysuckle, also have native varieties in Vermont.

With your group try to find each of the species listed below. When you find each one, take notes on the following habitat characteristics to try to figure out how it got to that location and if it is affecting surrounding species.

Also, before you return from making your observations, everyone needs to remove at least one invasive plant. Not everyone has to get a different one, but try to get a variety of species among the group. When pulling out your plant, pull hard from the very bottom so that you get the roots along with all the stems and leaves. Some of these species have the ability to reproduce by sending out spores from their roots, so they still have the ability to return with vengeance even if they can’t been seen from above ground. After you have removed your plant, shake off the dirt and then hang it in a tree so that the roots will dry out and become unable to sprout.

Neighboring plants?

 -Type (trees, shrubs, grass, etc), identify if possible

 -Near other invasive species

 -Dominance. Is this invasive occurring more frequently than surrounding plants?

Habitat type?

 -Open field, forested, etc.

 -Prefers shade or sun

 -Moist or dry soils

Location?

 -Near human created structure or setting

 -In natural setting

 Honeysuckle

 *Neighboring plants?*

*Habitat type?*

*Location?*

*How do you think the plant arrived at this location?*

*How do you think that this plant is affecting surrounding plants?*

Multiflora Rose

*Neighboring plants?*

*Habitat type?*

*Location?*

*How do you think the plant arrived at this location?*

*How do you think that this plant is affecting surrounding plants?*

Japanese/ common barberry

*Neighboring plants?*

*Habitat type?*

*Location?*

*How do you think the plant arrived at this location?*

*How do you think that this plant is affecting surrounding plants?*

Glossy/ common buckthorn

*Neighboring plants?*

*Habitat type?*

*Location?*

*How do you think the plant arrived at this location?*

*How do you think that this plant is affecting surrounding plants?*

Autumn olive

*Neighboring plants?*

*Habitat type?*

*Location?*

*How do you think the plant arrived at this location?*

*How do you think that this plant is affecting surrounding plants?*

**Station #6**: Current land ownership and use status

*Now it’s time to come back together as a group.*

This land is currently owned under a conservation easement by the Vermont Land Trust (VLT), although VLT does not have the capacity to run the farm. To understand why King Farm is now owned by VLT, read a section of the will of Franscisca King Thomas. Once you have finished reading the will, answer the questions below.

ARTICLE THIRD: All of my rights, titles and interests, if any, in or to any real estate situated in

said Woodstock, including both the land and all improvements thereon, I give and devise to the

Ottauquechee Regional [now, Vermont] Land Trust, Inc., a Vermont non-profit corporation

having a principal office in said Woodstock, but in trust, nevertheless, to be retained by said

corporation in perpetuity under the designation “King Farm”, to be used exclusively for the

following purposes, and only in such manner as shall constitute use for charitable purposes under

applicable rules of law relating to charitable trusts, to wit: (a) agricultural and forestry purposes,

including, without limitation, the growing of crops and trees, animal husbandry and other

farming operations customary in Vermont, (b) conservation consistent with preservation of the

property in substantially its present state, and, in particular, the preservation of existing open

fields which shall not be allowed to become reforested, and (c) educational purposes in relation

to such farming and conservation activities, including, without limitation, the study of natural

history, provided, however, that, except for repair, improvement and replacement of existing

buildings and structures or erection of such other buildings and structures as may be determined

by a duly authorized representative of said corporation to be of substantially the same kind as

existing buildings and structures and necessary, appropriate or incidental to the foregoing

purposes, no new buildings or structures shall be erected, placed or allowed to stand on the

property.”

What is Francisca doing in this document?

*Leaving her land to VLT.*

What are the terms to this donation, meaning, how must the Vermont Land Trust use the land for (3 things)?

1. *Must be used for agriculture and forestry*
2. *All property must be conserved in its current state of open fields and forested areas*
3. *Must be used for educational purposes related to conservation, agriculture, or natural history*

How do these proposed uses compare to how the farm was used in the past? Do you agree with the limitations but in by Francisca? If not, why, and what other purposes would you like to use the farm for?

Based on the above guidelines, how would you like the farm to be used?

How do you think that the farm can most effectively be used as public land to benefit the greatest number of people in the Woodstock community? What youth/ community groups should be included in the conversation?

How can the farm be used to support youth? What role within the community can the farm play? How could the school benefit from access to the farm? How can the farm accommodate your interest?

Back Together Again: *Future of King Farm*

The will of Francisca King Thomas says that the King Farm can never be sold to another entity; however the Vermont Land Trust and Marsh-Billings-Rockefeller National Park are interested in a partnership that will convey the farm to the Park Service. This transfer would mean that the Park Service would operate and manage the farm under the guidelines created in Francisca’s will. The Park Service needs Congress to authorize an expanded boundary Marsh-Billings to include the farm, which will hopefully happen in the not too distant future. Once King Farm is part of Marsh-Billings the park will need to decide how to use the land.

The Park Service is not yet sure what they want to do with the land, but it does want to involve the public, and especially local youth, in the creation of a management plan for the farm. Youth are those who will be here to benefit from the farm and also the most frequently use the farm since the will states that the land must be used for educational purposes. The possibilities for the farm are completely open, but the park service would ideally like to meet the following goals:

* Serve as an outdoor classroom for local schools
* Provide a middle ground between Woodstock Union High School and the park
* Engage the broad community

The land is also currently used by a variety of groups and for different uses, which the Park Service would like to continue. These uses include:

* Woodstock Union High School classroom for course run by Kat Coons
* Backcountry campground for SCA groups
* Community garden
* Host of sculpture festival
* Offices for Two-Rivers Ottauquechee Regional Planning Commission, National Park Service Rivers and Trails, and the Conservation Stewardship office of the Vermont Land Trust
* Meeting place for community groups
* Access to hiking and cross country skiing trails for the community, including local track team
* Hunting access
* Haying by local farmers

*What do you see and WANT in the future of the farm???*

You have already shaped the future of Woodstock Union, what’s the future of the King Farm?

*(The following questions are not the student version)*

Through this charrette we were hoping to identify some students interested in assisting in the planning and learning how best to get students interested and involved.

How do they predict that the farm will be used?

How would you like to use the farm?

How can the farm support youth or community interests?

How can youth take ownership of the farm? What resources do they need?

What youth and community groups are valuable to the conservation of the farm? Who would be interested in using the farm?

Are you interested? What interests you about becoming involved?

Do you think that other students would be interested in being involved? Why or why not?

How do you think that other students would want to get involved?

Are there tools or ways that we could get students involved? If this was part of a class would students be invested in it? Would you be willing to spend time outside of school working on planning the management plan? What if you received extra credit or some kind of small compensation (free ice cream)?

Reflections on what we did today:

* What was interesting to you? What would you like to learn more about?
* What aspects of the farm would be engaging to students?
* What was not interesting? Did you think anything we talked about was irrelevant?

Rough Sketch of King Farm Family History

**Oliver Willard** is granted the King Farm in a large parcel of land that also contains most of West Woodstock by Governor Benning Wentworth of New Hampshire.

*May 11, 1773*- Willard sells land to **John Laton.**

**William Smith** and wife Remember Thomas buys land from John Laton.

**SUBSISTENCE FARMING?**

*September 1789 and May 1792*- Smithsells land in two separate deeds to **Jesse Williams** (1754-1842), who **establishes a farmstead**.

1793- Farmhouse is first built along with outbuildings and barn.

**DIVERSIFIED/ CASH CROP FARMING**

*June 1807*- Williams sells farm to **Jabez King** (1763-?)and **Abigail Udall King** for $3,333.33.

Jabez buys and sells two parcels of land, decreasing and then increasing the size of the farm.

Buildings on farm at this point include English barn with eight stations, ash house, horse barn, carriage house, and granary.

**SHEEP- transition late 1820s to 1830s to DAIRY**

*1835*- **James Undall King** (1804-1887), son of Jabez and Abigail, and **Rosanna Davis King** purchases farm in two separate deeds. In the first, James buys the farm for $3,000, and in the second he sells it back to his parents from the same amount, $430 plus interest to both of his sisters for their shares and the promise to perpetually care for his parents.

James is the first to bring **SHEEP** to the land, marking the transition from a focus on subsistence farming “cash crops,” such as oats, corn, wheat, and barley to animal husbandry. Favorable wool tariffs passed in 1824 and 1828 in Vermont encouraged farmers to raise sheep. In addition to sheep James grows wheat, rye, potatoes, beans, corn, oats, hays for his horses, and has an orchard. He also had various animals, including four horses, four mules, four oxen, eight cows, four other cattle, a few pigs, and 65 sheep (sheep according to 1850 census). There is also sugaring on the property, it is unclear if sugaring had previously occurred.

1842- James **buys 80 acre pasture** for sheepon Jabez Maxham Hill in Bridgewater (now Bridgewater Hollow). Bridgewater Woolen Mill is just five miles west of farm. Later sells parcel to neighbor Eliphalet Thomas to pay for his son, Hiram, to go to Dartmouth.

1850- In addition to above stated crops and sheep, dairy operation (of only eight cows) was said to produce 400 pounds of butter and 800 pounds of cheese. Sugaring produced 300 pounds of maple sugar.

1830-1840- Sheep barn added with storage above and space for sheep below. Other existent buildings at this time include farmhouse, carriage barn, horse barn, granary, ash house, main barn, and various sheds

1860-1870- Cow herd size decreased, four cows in 1880. Cheese production in 1870 is 180 pounds and milk 150 pounds. Butter is the same at 400 pounds.

1850-1880- **Main crops** are butter, maple sugar, and wool.

1880- James hires help.

**DAIRY to GENTLEMAN’s FARM**

**Hiram Undall King** (1848-1907) goes to Dartmouth and then leaves Vermont to found a successful prep school for boys, King School, in Stamford, CT. This school still exists. Hiram is very active in the community.

1887- Hiram and Francisca Perkins buy out his siblings and mother’s stake in the farm after his father dies. He pays $5,000 collectively to his brother and sister and $1,000 to his mother. His mother stays on the farm and **Moses King**, his brother operates the farm. Farm becomes summer retreat/ vacation destination for Hiram. Farm makes little money.

1906-1908- Many structural changes that represent the transition to a **GENTLEMAN’S FARM**. Farmhouse renovated, barns consolidated and enlarged. Ice house, the tent, the club, and an internal silo in the original English barn’s hay meadow to feed the dairy herd are built. Existing one and a half story ell is removed and replaced with a two and half story structure which stood taller than the original house, providing space for a tenant farmer/farm manager. Horse barn is also moved next to the enlarged English barn and a large shed-roofed addition is added to the northeast eave side.

Liquid milk begins to become a cash crop with the advance of refrigeration since milk could now be transported out of state in refrigerated railroad cars.

Carriage house is moved behind enlarged barn and later converted into a milk house. Original milk house was in the cellar of the house.

May 13, 1907- Hiram dies suddenly of a heart attack.

**DAIRY/ GENTLEMAN’S FARM**

**Francisca Perkins King** inherits land and decides to no longer employ a paid farmer. She leases the farm to a caretaker. These caretakers were Bert Hood (1907ish-1912), Tom Ledoux (dates?), Tom Barrup (1926-1928), Rodney Hawthrom (1936-1946), and Mr. Jepson (1946-1951), and Evan Colby(1951- 1980s).

1938- **Hurricane destroys sugar house** and sugaring operation ceases.

**BEEF/ GENTLEMAN’S FARM to CONSERVATION EASEMENT**

**1943- Francisca King Thomas** and **Anna King** inherit land following their mother’s death.

1949- Anna retires to the farm after work as a leading social worker on community mental health in Pittsfield, MA in 1949 and lived there until her death in 1966.

1952- Sell sheep pasture in Bridgewater, also known as “The Hut,” the family’s camp. Later owners conveyed part of the land as a protective corridor for the Appalachian National Scenic Trail.

1956 and 1962- King sisters buy back the two parcels of land that had been sold off to pay for their father’s school.

1960- Francisca retires to the farm after working as the Executive Director of the New York Council of Hospitals in New York City.

1964- Dairying ceases when it becomes nearly impossible to create a profit with 20 cows, which is what the farm had. **Farm switches to raising Hereford beef cattle**.

1985- Francisca dies and leaves farm to the Ottauquechee Regional Land Trust, which later became the Vermont Land Trust.

*--STUDENT VERSION ENDS HERE--*

**Specific Building Details:**

**Farmhouse (building 1)-** c. 1793 National historic register has a great in-depth detailed history of the farmhouse.

**Main Barn (building 2)-** c. 1793 Originally a half story English barn. An English barn is characteristically 30’ x 40’ with two large double wagon doors, a style originally brought by the colonists from England and used widely throughout the United States from before the 1770 to 1900s. The placement of the doors allowed the building to be divided into two separate areas, one for grain and hay storage and the other to store livestock. The barn was a single story and had no basement. It is likely that the Williams family used the barn in for the typical uses.

Barn had eight stations

In 1906 a new gambrel or gabel roof was built, which is a symmetrical two sided roof that is the shape of half an octagon. The upper slope is at a shallow angle and the lower roof has a much steeper angle.

Sometime in 1906-1908 another shed roofed one and a half story addition is made. Horse barn is also added to the barn as an ell at this time.

In 1908 a one and a half story 28’ x 64’ clapboarded **stable barn** with a gable roof was added over a poured concrete slab.

A one story, clapboarded, shed roofed addition is also made to the northwest of the stable barn.

**Horse Barn (now part of building 2)**- c. 1793-1908 28’ x 34’ moved to the main barn in 1906 to 1908 as an ell (additional wing) to the main barn.

**Carriage House (building 5)**- c. 1795-1930 Moved in 1908 to its current location. Post and beam, gabel roofed building on stone foundation.

In 1930s converted into a milk house.

**Ash House (building 7)**- c. 1795 4’ x 6’ brick, gable roofed building set on grade to store potash.

**Corn House/ Granary (building 4)**- c. 1800 15’ x 18’ gable-roofed, post and beam structure set on wooden posts and stones used to store corn and other grain. Likely added after the main barn did not provide sufficient storage.

**Sheep Barn (building 3)** - c. 1840 20’ x 30’ one and a half story, gable roofed, post and beam, bank barn sheathed with board and batten siding. Had hay storage above and run in shelter for sheep below.

A 18’ x 30’ addition in 1930s was made to accommodate a Ford Model T.

**Sugar House (no longer existing)**- c. ?- 1938 Routinely used for the sugaring operation up until 1938 when it was destroyed by a hurricane.

**Ice House (building 6)**- c. 1908 12’ x 14’ gabel roofed, clapboarded building on poured concrete, built for storage of ice that was needed to keep milk from the dairy operation, as well as for the main house and manager’s quarters. Stored 400 pound blocks, which were then broken into 25 pound pieces. Ice was from mill pond behind dam on Ottauquechee River in West Woodstock, about one mile away.

**The Tent (building 11)-** c. 1906 12’ x 18’Originally just a single platform that was used for eating meals and sleeping during warm summer months while the ell was being constructed, built during the era as a gentleman’s farm.Windows were brought up in 1914 by Francisca from another house and replaced the existing screen windows.

**The Club House (building 10)**- c. 1906 10’ x 26’ Summer guest house that was originally a play house for Francisca King Thomas built from discarded wood used in the construction of the ell to the farmhouse. House is a single story, gabel roofed structure set on stone piers and blocks and sided with cedar shingles.

In 1912 it was moved north to the edge of the orchard and expanded in when it became the housing for the resident farmer. A 10’ x 20’ addition was added with siding of felt paper and stick battens. The farmer had to leave his quarters in the farmhouse when it was rented out in the summer months.

In 1914 it was again expanded with a fireplace, running water, privy, screened in porch (no longer existing), and sleeping quarters for two people.

**Milk House (building 5)**- c. 1930 19’ x 26’ originally, the farm’s carriage house, but converted in 1930 to account for more space needed for milking?

**Horse Shed (building 9)**- c. 1940 18’ x 19’ originally built for farm equipment, but later remodeled so that it could be used for draft horses. Has gabel roofed frame structure set on a grade with 6’ x 7’ gabel roofed entry wing with horizontal board siding.

Remodeled in 1980s

**Workshop (building 8)**- c. 1940 12’ x 24’ first built to house farm equipment with shed roof with board and batten siding.

Another half was added later in the 1940s to be used as a workshop for current resident farmer of Francisca Perkins King. The workshop was a symbol of industrialization, as it became necessary to have a place to store machinery and do work?

Work Cited

*Starred items can be found within the King Farm electronic database. Those included within this binder are listed on the preceding page.*

\*Alexander, Toby. *Fish and Wildlife Habitat Plan for Vermont Land Trust*. (Woodstock, VT: Natural

Resources Conservation Service, March 9, 2009).

Colburn, Elizabeth A. *Vernal Pools: Natural History and Conservation*. (Blacksburg, Virginia: The

McDonald & Woodward Publishing Company, 2004).

\*Currie, William E. *Integrated Pest Management Plan: Marsh-Billings-Rockefeller National Historical*

*Park*. (Boston, MA: United States Department of the Interior, November 2006).

Dana, Henry Swan. *History of Woodstock, Vermont, 1761-1866*. (Woodstock, VT: The Countrymen

Press, 1980).

\*DeBonis, Steven W. *Use Value Appraisal Management Plan: Forest Management Plan for King Farm*.

(Woodstock, VT: Vermont Land Trust).

Johnson, Charles W. *The Nature of Vermont*. (Hanover: University Press of New England, 1998).

*\*King Farm Boundary Study and Environmental Assessment for Marsh-Billings-Rockefeller National*

*Historical Park.* (Woodstock, VT: Marsh-Billings-Rockefeller National Historical Park, 2010).

*\*Land Use Documentation Report: The King Farm*. (Woodstock, VT: Vermont Land Trust, October 1,

1992).

\*Lee, Dawn. *The King Farm Request for Proposals*. (Woodstock, VT: Vermont Land Trust, 2006).

*\*National Register of Historic Places: The King Farm*. (Washington, D.C.: United States Department of

the Interior).

\*Parker, Jeremiah Beach and Mary Jo Llewellyn. *Conditions Assessment and Treatment*

*Recommendations: The King Farm*. (Shoreham and Montpelier, VT: Vermont Land Trust, January 2006).

Petrides, George A. and Janet Wehr. *Peterson Field Guides: Eastern Trees*. (Boston: Hougton Mifflin

Company, 1998).

Somers, Paul, Rachel Kramer, Karen Lombard, and Bill Brumback. *A Guide to Invasive Plants in*

*Massachusetts*. (Clifton, Massachusetts: Massachusetts Division of Forestry and Wildlife, 2008).

Thompson, Elizabeth H. *Woodland, Wetland, Wildland: A Guide to the Natural Communities of*

*Vermont*. (Hanover: University Press of New England, 2000).

Other Suggested Activities or Expansions of Charrette

* Architecture and working with the farm’s landscape?
	+ Looking at additions to farmhouse, main barn, sheep barn, etc over time
	+ Using the physical topography of a hillside farm
		- Capturing water, using hill as a windbreak, etc
	+ Movement of the well as a reflection of health beliefs of the time- influenza epidemic
	+ Current issues of water use, erosion
	+ Altering the landscape to match the farm’s needs- creating flat areas
* Animal tracking
* Geologic history of area/ Vermont
* Watershed that farm is in; investigation of the water cycle
* Archeology?
* Ecology- succession on the farm (open fields will go to forest)
* Agriculture
	+ Contrast historic and current uses of King Farm/ typical Vermont farm to modern industrial farming- comparison of environmental impacts
	+ How the nation’s agricultural history impacted Vermont’s dairy industry
	+ Different approaches to agriculture- diversified, organic, permaculture, ideas of ecological design –John Todd and New Alchemy
* Soil
* Historic documentation- maps showing where Barnard Road used to go through property, census materials with information about farm, old photographs
* Keep journal of farm experience
* Use farm as a destination for art projects