Introduction:
Botanic Gardens are a type of museum that curates collections of plants for conservation, education, research, and display. Living collections are the acquisitions obtained through cultivation, conservation, and curation of a garden's mission and vision. In this way, gardens share a story of their specific source information, planting and horticultural maintenance requirements. Most gardens manage their living collections through guidelines set in a Collections Management Policy (CMP). This document details proper procedures for collecting, accessioning, de-accessioning, disposal, collection types, reference policies, access and ethical considerations, in relation to the overall mission and vision of the garden. For this reason, it is important that the gardens have a CMP outlining a collection mission, to ensure staff and volunteers manage them in a manner consistent with their mission and vision. Hershey Gardens does not have the resources to draft a CMP suitable to its needs in size and scope. With that in mind, this research pertains to the formal collections and answers the question: how do botanic gardens in the United States manage their living collections? Furthermore, the goal of this project is to develop a set of criteria that Kruckeberg can implement as a CMP to maintain and safeguard inventory, to guide new staff and volunteers, and to uphold the terms of sustainability both in practice and policy.

Methodology:
The nature of this research allowed for an in situ and/or ex situ project. First, an in-depth literature review and investigation of relevant botanic gardens and management practices will be conducted to better understand past and present. Gardens will be chosen on the basis of having a Collections Management Policy. But, gardens will be considered on the basis of being appropriate in size and scope to an in situ, non-profit public garden, such as Hershey Gardens, as well as those with similar missions in the study. Moreover, gardens across the United States will be interviewed. Larger gardens with more formal collections, those comparable to Kruckeberg, will be included to study their comprehensive collections plans. Secondly, following interviews, informal and formal interviews will be held to discuss or answer questions. Each garden will be carried out on the nature and function of their management practices. Interviews will aim to gain extensive data on how gardens manage, access, deaccession, maintain, and record collections in order to understand different organizational and management practices across the country. Finally, an application of the data collected will be analyzed in conjunction with the Kruckeberg staff and board members in order to develop a tangible and unique set of recommendations that benefit Kruckeberg.

Conclusions:
Gardens need to maintain and preserve collections through curation, accounting, mapping, and maintaining collections in a manner that pertains to their mission and vision. In this way, each garden should have a shared unified goal among its staff and volunteers. Four out of five gardens have a Collections Management Policy, however, including the Smithsonian, four out of six institutions had a CMP. The Smithsonian is in the process of drafting a CMP while Phipps is considering implementing a policy in the near future. Each garden with a CMP developed a collections policy that epitomizes their mission as well. In this way, the five gardens and six institutions interviewed do not just acquire collections for the purpose of acquiring, but rather to further their mission’s mission. Common collection purposes included education and horticultural development, similar to Kruckeberg. Of all the institutions interviewed four out of six use Microsoft applications for their inventory of collections. Bellevue Botanical Garden and the Elisabeth C. Miller Garden both utilize Microsoft Access, while Hershey Gardens and the G. W. Bailey Iris and Butterfly Pavilion utilized Microsoft Excel. These databases are probably the most commonly utilized because they are cheaper and available in some form of user. The Morris Arboretum, which is affiliated with the University of Pennsylvania has more funding for curation and as a result uses BG-BASE, a more expensive software. All gardens utilized paper or handwritten maps, with the exception of Bellevue Botanical Garden also using GIS/ARCMap which was introduced to its Microsoft Access database in conjunction with paper maps. Being as perennials are difficult to manage, all five garden accession perennials in mass, as opposed to individually. However, some perennials depending on the type of perennial might accession each specimen on its own. For instance, Filaf individually accreted canna, and accessioned perennials in mass. All gardens followed similar accounting and de-accessioning criteria, in terms of determining location, source, maintenance, or reason for deaccessioning. However, there were a few exceptions, such as the Morris Arboretum which also includes pictures in the accounting process. Based off of these findings, it would be ideal for Kruckeberg to acquire collections either through Microsoft Access or Excel. Perennials should be accessioned mainly in mass on top of the information which tracked in Kruckeberg’s mapping criteria should look into tracking the habitat and environment of plants, horticultural maintenance or changes, as well as growth or duration. A few things that should remain during interviews were the methods of Bellevue Botanical Garden in documenting all processes in a replicable way. This would be useful in case of loss of database or inventory, a natural disaster, or for new staff and volunteers. Hershey Gardens maintained a Natural Disaster Procedure within their Collections Management Policy which may be useful for potential interactions, in situ, and/or ex situ.