

Carpinteria Bluffs

Site Report

October 20, 2021

In the following pages IPC explores opportunities to define and enhance visitor experience through botanical associations and interactions for the Carpinteria Bluffs project landscape and agriculture. Our initial focus falls into the following areas:

- Ecology / biodiversity
- Horticulture
- Ethnobotany
- Soil and Water
- Food
- Community interface
- Health & wellness

Ecology / Biodiversity

- Ecology encompasses a cornerstone of the project vision with the ultimate goal of creating a thriving, diverse interplay between native habitats and restoring agricultural systems.
- Biodiversity is a crucial component of establishing and maintaining a healthy ecology.
- IPC proposes to create a healthy, functioning, ecological system integrating people and modern lifestyles with food production, and native floristic biomes



Conservation hospitality

- Although excellent regional examples do exist, highly diverse native plant collections are uncommon throughout California and typically limited to private collections and designated botanic gardens.
- By dedicating significant space to developing a diversified collection of native plant species adapted to the coastal area, the project can demonstrate the rationale for integrating genetic preservation, conservation, restoration, and food production into a hospitality model.
- Developing a biodiverse plant collection will help achieve the project's overall vision while providing a source for plant material and a continuous resource for education and outreach in the local community.
- Developing and understanding the complete role of a species and plant associations that create a broader habitat. The species that are planted can benefit humans with their primary products, but wildlife as well as native birds (over 200 visit the Carpenteria Salt Marsh) whether through food, cover, and nesting material.

Horticulture

- As a landscape-driven project emphasizing native ecology and agriculture, horticultural practices provide an interactive interface between plants, plant associations, ecologies, and people.
- Horticulture throughout the project will occur on all levels from technical propagation in a greenhouse facility to seed collection and larger-scale restoration and re-naturalization of native/open space.
- Guests will have the opportunity to observe, engage and learn about the role of horticulture in responsible land stewardship and agriculture with a vast collection of useful plants during seasons throughout the year.
 - Seed collection
 - Seed propagation



- Cuttings/cloning
- Grafting
- Plant breeding / selection / pollination
- Planting
- Harvesting
- Processing
- Managing
- Soil science

Ethnobotany

- The overall landscape emphasis on native flora and useful plants will highlight regional cultural and ecological history through plant ethnobotany.
- The history of human relationships with plants can be integrated into culinary and wellness experiences as well as horticulture, restoration/conservation, and educational initiatives.
- The process of foraging creates a deeper relationship to a plant species. Identifying a species then benefiting from it in its natural natural habitat and form links seasonality, microclimates, geology and a myriad of other associations.
- In addition to native flora, every food crop grown on the project will have its own unique ethnobotanical history from similar climates and latitudes throughout the world.
- Providing historical context behind edible, medicinal and useful plants offer more meaning and substance to the visitor experience.
- Ethnobotany can be explored and integrated into guest programming and amenities across a wide range of interests and activities including
 - food



- medicinal plants
 - pre-colonial land-use
 - environmental stewardship
 - resource management
 - agriculture
- Areas of the property at the interface between native buffers and more intensive agriculture provide an opportune location for interactive and interpretive ethnobotanical gardens where a wide range of traditionally useful plants are cultivated and utilized.

Soil and Water

- How soil and water are managed and improved on the property will directly affect the quality and viability of all aspects of the landscape. Surface management techniques will eliminate erosion and rainfall-runoff, increase infiltration and plant health while reducing infrastructure and management costs.
- All educational opportunities and programs related to ecology, plants and agriculture will begin and end with soil and water.
- Transforming the property from what it is today into a healthy, diverse ecosystem will all come back to soil health, improvement, and management.
- Waste biomass is potential soil, thus an important facet of the project's overall low-impact, ecologically responsible goals will tie management of waste biomass with composting, soil improvement and agricultural inputs/outputs.

Food



- Upon successful execution of a comprehensive and unique agricultural program, food will be one of the main drivers attracting people to the property and enticing them to return.
- Providing high-quality unique foods in the environment where it was grown offers numerous opportunities for enhancing the visitor experience.
 - Farmers market
 - Cooking classes
 - Planting
 - Maintenance
 - Harvesting/Foraging
 - Food processing
 - Food preparation
 - Nutrition

Health & Wellness

- With an overall landscape emphasis on ethnobotany (edible, medicinal, and useful plants) there are many opportunities to explore and integrate health and wellness the project landscape.
 - Edible, medicinal, and useful plants
 - Aromatic native plants for use in spa facilities
 - Food crops and human nutrition
 - Nutrient dense foods derived from healthy soils
 - Soil / gut microbiome parallels
 - Psychological benefits of being outside
 - Engaging with nature
 - Working with plants
 - Striving for symbiotic relationships with non-human organisms



Landscape Concepts

Landscape concepts for programming and amenities that develop an agricultural focus in line with project guests, lifestyle, and culinary experience.

- Botanical integration - living in a botanic garden.
- Emphasis on biodiversity
- Expanding people's understanding and appreciation of plants
- How plants work and how people work with plants
- Identify key native and endemic species to define a very specific unique sense of place.

Conservation

- Not only will the project strive to represent and embrace California native flora, but it will also be a highly diverse botanic collection and living seed bank, supported by the hospitality business / agritourism model.
- Create a botanical conservation legacy both in native California flora and locally suitable perennial food crops.

Restoration

- Develop an initiative to increase diversity throughout the neighboring bluffs preserve using propagation capacity and a diverse collection of native plant genetics.
- Take advantage of the potential of a mutually beneficial relationship with the adjacent preserve.
- As the project supports and evolves the preserve, the preserve will enhance the value and long-term impact of the project.



Food & beverage

- Constantly rotating seasonal production of a wide range of edible plants.
- Visitor engagement with agricultural and culinary practices.
- Sophisticated, adaptable culinary team, able to integrate menus with changes throughout the growing / production season and integrate conventional and unconventional foodcrops into a unique culinary experience
- Demonstration gardens associated with F&B, spa/wellness programming as well as educational, interactive opportunities for guests / residents. Edible, medicinal, aromatic, and otherwise useful plants.
- Experimentation with unconventional food crops for the area/climate based on forecasted long-term weather pattern changes for the region.
-

Experimentation

- Unconventional food crops for the area/climate based on forecasted long-term weather pattern changes for the region.
- Emphasis on composting and reintegration of 100% of waste biomass, turned back into soil, then back into plants, and produce.

Design Process Next Steps

- What agricultural / landscape / restoration programs and preliminary research can be initiated now to maximize future benefit to the project and adjacent preserve?
- How can we best utilize the time in this interim permitting period, before construction, to get a head start on agricultural pursuits, plant collection, propagation, and native restoration initiatives?
- Initiate research into local plant resources, develop and refine species lists, begin sourcing plant material.



- Identify the core focus and realistic objectives of the agricultural program.
- Does the agriculture program focus on annual crops, intensive market garden farming? Or does agriculture focus on tree and perennial crops? Or are we looking for an integrated combination of the two?
- Examine design, implementation, and long-term labor implications to develop a realistic agricultural model and program that will:
 - function and provide year-round production for the project
 - be economically viable
 - provide an interactive point of interest attracting guests
 - establish a viable, long-term model that the surrounding community will be excited about and accepting of.

Diverse Food Crop Collection

- Develop a highly diverse collection of food crops suitable for the region.
- Traditionally farmed perennial crops and fruit/nut trees.
- Unconventional species
- Experiment with crops that may not be commonly grown in the region but show potential.
- Consolidation of all viable edible plant species adaptable to site/region into one highly diverse agroforest botanic garden.
- This is where residents, visitors, and staff can experience all things edible, medicinal, and useful that can be grown in the region, all integrated into a complex, stratified forest ecosystem.
- Native food crops
- Plan for dedicated space to highlight and demonstrate native useful plant species, edible - medicinal - aromatic - fibers – dyes



Nursery

- Explore possible options to establish a site nursery and agriculture R&D area to take the place of the current farmed land and golf course.
- On a local level, how can the project transition into nursery production during this interim period? As a private non-commercial nursery?
- Nursery production can occur both in-ground and in containers, ideally both.
- Look at options for temporary and long-term nurseries.
- If a temporary nursery is not possible, focus land use for the interim permitting period on agricultural trials and soil improvement.
- Research and exploration of all local native plant nurseries, farms, and collectors
- Begin sourcing plants and propagation material.
- Explore the possibility of developing relationships early on with local nurseries to contract grow select quantities and species of plants.

Agricultural R&D

- Find a young open-minded local farmer + a few staff or established small group to begin initiating soil management/cultivation practices in-line with project goals.
- Begin cultivation trials and experimentation with annual and perennial food crops.
- Find local resources for compost inputs
- Coffee grounds / brewery waste grain / green waste / woodchips
- Initiate onsite composting with any locally available inputs
- Cover cropping trials. Initiate trials over all current agricultural areas
- Maintain land under continuous production while improving soil quality
- Broaden understanding of current site conditions and constraints.
- Soil testing, analysis and correction



- Begin integrating organic amendments if / where necessary based on soil test results.
- Cover cropping regimen based on current soil quality and desired eventual outcomes.
- Begin discussions with F&B team/chef to refine focus and objectives for the agricultural program design and operation

Conservation Restoration Enhancement

- Native conservation, restoration, and enhancement
- Initiate afforestation of buffer area separating project site and preserve with highway 101.
- Outline phasing of removal of eucalyptus buffers and integration of diverse native tree/shrub buffers between the project site and adjacent road, and both adjacent parcels (the bluffs and the discontinued chevron facility)
- How early can we begin planting and managing the 200' and 50' setbacks with native vegetation?
- Which local/government body oversees the coastal interface buffer area, and how can we work with them to develop the native restoration plan and implementation for that area?
- Develop solutions for project and trail rail interface.
- Native planting buffers that screen the train/tracks and mitigate noise while maintaining views of the ocean. Explore possible integrated earthwork solutions with planting.
- The earlier planting can begin on the property border and train planting buffers, the better.
- How soon could planting begin?



- Help further catalyze and support the ongoing preservation and enhancement of the adjacent bluffs preserve through planting programs, trail improvement, increased biodiversity, interpretive signage.
- Entertain the idea and longitudinal goal of turning the bluffs into a legitimate botanic garden featuring California coastal flora.
- What entity would it be necessary to engage with to enable native planting in the bluff's preserve?

Species selection

Carpinteria's sub-tropical / Mediterranean climate is in many ways an ideal environment to grow plants. A wide variety of plant species can be grown in this region, as observed in many notable botanical and private estate collections in the area.

Among food crops, Carpinteria is Mediterranean enough to grow olives, figs, and pomegranates while sub-tropical enough for avocados, cherimoyas, and passion fruit, among many others.

A primary step in developing and refining a species list will be identifying the plant groups and food production we want to focus on for the project based on soil, location, climactic conditions, project programming and culinary objectives.

IPC would divide the species list and general landscape / exterior zoning for the Carpinteria site into three groups.

1. Native California flora with an emphasis on local/regional species adapted to coastal environs
2. Perennial and tree-based food crops. A diverse variety of fruit, nut, and otherwise edible species produced by trees and perennial plants.



3. Annual crops. Seasonally planted and harvested vegetable/produce species produced in a more intensive, market garden context.

Native Species

This preliminary list is by no means exhaustive but rather indicative of some of the major groups of plants native to the region and adaptable to the site, covering a wide range of growth habits, aesthetic appeal, and ecological function.

Tree

Quercus spp.

Asculus californica

Arctostaphylos spp.

Platanus racemosa

Acer negundo

Acer macrophyllum

Alnus rhombifolia

Juglans californica

Salix spp.

Shrub / perennial

Arctostaphylos spp.

Ceanothus spp.

Cercis occidentalis

Cephalanthus occidentalis

Corylus corunata

Rhamnus californicus

Rhamnus purshiana



Cercocarpus betuloides

Cornus sericea

Hereromeles arbutifolia

Prunus ilicifolia

Salix spp.

Sambucus spp.

Garrya spp.

Baccharis spp.

Eriogonum spp.

Rhus ovata

Rhus integrifolia

Ribes spp.

Rosa californica

Salvia spp.

Artemisia californica

Grasses/ sedges / groundcover

Bromus carinatus

Distichlis spicata

Carex spp. (numerous)

Juncus spp. (numerous)

Elymus condensatus

Muhlebergia rigens

Stipa spp.

Stipa pulchra

Danthonia californica

Festuca idahoensis



Festuca rubra
Frangula californica
Hordeum brachyantherum
Poa secunda

Perennial crops

Sub-tropical

Cherimoya
Sapotes
Feijoa
Strawberry guava
Pineapple guava
Psidium guajava
Longan
Lychee
Avocado
Mango

Pomme fruit

Apple
Pear
Asian pear
Quince
Hawthorn
Shipova
Medlar

Misc Mediterranean

Fig



Olive

Citrus spp.

Pomegranate

Persimmon

Mulberry

Ziziphus jujube

Eriobotrya japonica

Stone fruit

Apricot

Peach

Plum

Nectarine

Cherry

Interspecific hybrids

Pluerry

Pluot

Aprium

Nectaplum

Plumcot

Nuts

Araucaria

Macadamia

Pistachio

Walnut

Almond

Vines/climbers



Passion fruit

Humulus lupulus

Vitis spp.

Akebia quinata

Kiwi misc species

