

The Ivy Complex

- SF is a good case study for the ivy complex because it exists in so many different plant communities, habitats, and built environments.

Invasions are especially problematic in the following plant communities:

- Willow riparian
 - Coast live oak woodland
 - Coastal scrub
 - Grasslands
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- About half the income of Habitat Potential comes from removing ivy from over 20 different sites across the city



Intro

- Complicated taxonomy
- The “Hedera” ivy complex includes: Algerian Ivy, *Hedera canariensis*, *H. helix*, *H. hibernica*. They hybridize, they integrate, mixed up genetics, creating “hybrid vigor” and extremely robust gene pool
- Expensive to deal with, but more expensive not to

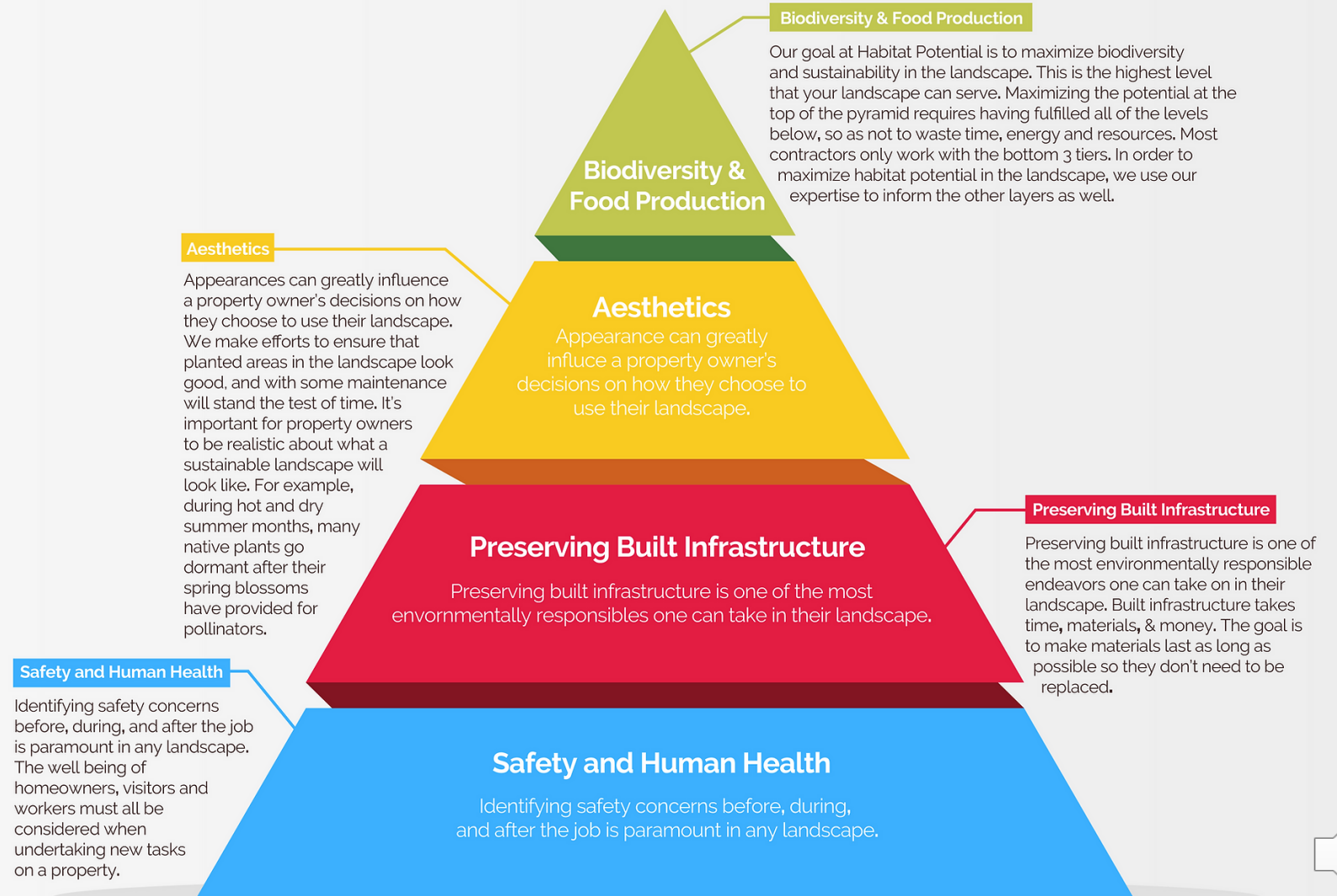


UNDERSTANDING THE ENVIRONMENT

Tenants for Sustainability in Human Dominated Landscapes

This pyramid informs the process in whatever we do at Habitat Potential. While we always want to focus on biodiversity, we must address each level of the pyramid individually.

- Tenets of sustainability, a guiding light for Habitat Potential
- Ivy is relevant at every level of the pyramid



The significance of frugivorous birds cannot be understated

- Birds carry seeds far and wide, jumping containment lines
- Birds are highly migratory and spread the fruit far and near

Significant dispersers of ivy include:

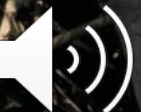
- American Robin
- Hermit Thrush
- Cedar Waxwing
- Western Kingbird
- Northern Flicker
- Band-tailed Pigeon



- This photo screams “Cut me down now”
- Vines cut in this flowering stage fail to produce fruit, thereby greatly reducing their reproduction
- Note: Flowering and fruiting primarily happens off the ground in trees so as to be more appealing to birds



- Shown here is a toyon being smothered by invasive ivy.
- Ivy removal preserves native tree while helping it fill in and produce native fruit.



Ivy in Native Plant Communities

- Early detection, rapid response
- Regular surveys during early stages of habitat restoration to remove new seedlings, especially near other fruit plants
- Robust native plant communities can hold their own once established, but will still need occasional follow-up



“Infrastructure
Preservation
Management”
- Habitat Potential
coined the term

Ensuing waste:

- Labor and demolition of fence
- Transport of fence and more waste in landfill
- Planning and permitting for new fence
- Materials, labor, and expenses of a new fence
- Resource extraction to make new materials



Is the city responsible for an overgrown tree filled with rats in Ocean Beach?

—
Rodents are making themselves at home in an overgrown tree in OB.



- Both rats and ivy are old-world species that have a long-standing and co-evolved relationship from “the old country”

Ivy is a haven for rats:

- Access to trees and buildings
- Refuge from predators
- Nesting site
- Food source
- Rats spread ivy



What To Do Here?

Advanced invasion defined by:

- Thick and sprawling homogenous monocultures.
- “Stitched in” deadwood and branches often the biggest obstacle to removal
- Few remaining other plants







- Blackberry and deadwood
- Himalayan blackberry and deadwood are significant obstacles that are very often associated with advanced invasions of ivy.
- Also poison oak!
- Strands mixed into ivy can look very similar

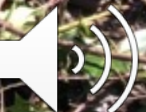


Techniques

- Crews with debris hooks working in unison as most important removal method, BUT must be done in synchronized conjunction with careful cutting of vines
- A cultivator is not a hook!
- Exact item: Razorback 4-tine debris hook



- After shots: with about 99% of the above ground biomass removed
- "Harvesting spaghetti" is the next step on this site.
- Crews work by hand to remove the remaining material over time, sometimes with 3-pronged hand picks
- Note the debris hooks and the pile of stacked wood at the edge of the site.



- **This photo illustrates the single most efficient removal method we have found.**

- Reciprocating hedger can be used in conjunction with a team on debris hooks to make quick work of even the densest stands of ivy

- A grass knife or folding handsaw is the next best thing to a hedger.



A few things in summary

- Focus efforts around native fruiting plants to encourage native fruit sources for birds
- Know your site! (access, hidden deadwood, Himalayan blackberry, poison oak, wasps, etc.)
- Get equipped (debris hook, chainsaw, long-handled reciprocating hedger, grass knife, folding handsaw)
- Plan to handle most of the roots on a separate day than the above ground biomass as the plant gets weaker
- Expect the need for regular follow up of both root resprouts and new seedlings

