



Homeowners' Associations and Landscape Form

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Residential Landscapes and Biodiversity

Residential landscapes are a unique expression of the ecological influences of the homeowner and represent individual decisions, institutional constraints, land legacies, and human influences on the natural landscape. As described by Grimm and Redman (2004) these individual decisions can have a bottom-up effect that can change the biodiversity of a larger system as seen in the CAP LTER.

Homeowners' Associations (HOAs)

But decisions are often facilitated by social organizations that are relatively understudied, but growing in popularity, called Homeowners' Associations (HOAs). HOAs are a mechanism to maintain high property values by enforcing regulations that all members of the community must follow (Martin 2003). These communities are governed by documents called Covenants, Codes, and Restrictions (CC&Rs), which "dictate landscape plant materials and control homeowner landscape activities under the rubric of preserving residential community property values" (Martin 2003).

Ecosystem services

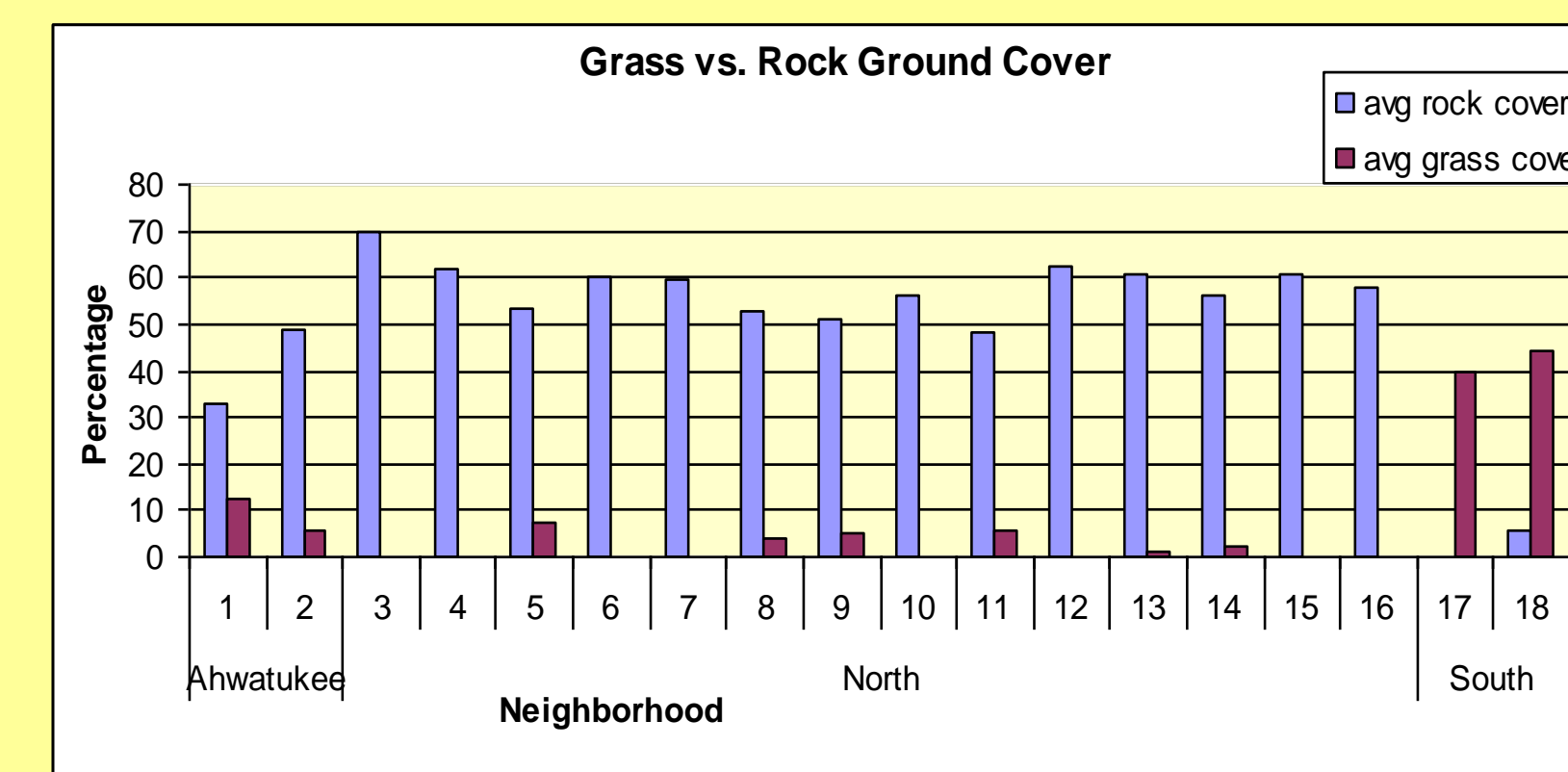
Ecosystem services are the benefits that an ecosystem provides to humanity, there are four types of ecosystem services; provisioning, regulating, cultural, and supporting services (Daily 2009). Residential landscapes would typically fall into the cultural services as they provide residents with access to nature. If presence of an HOA and the regulatory CC&Rs impact access to these services by limiting yard forms there may be an impact on the homeowner culturally or on the environment as a whole.

What is the extent to which regulation of landscape form and maintenance practices by HOAs manifest in residential landscapes in the Phoenix metropolitan area? What are the implications for ecosystem service provisioning?

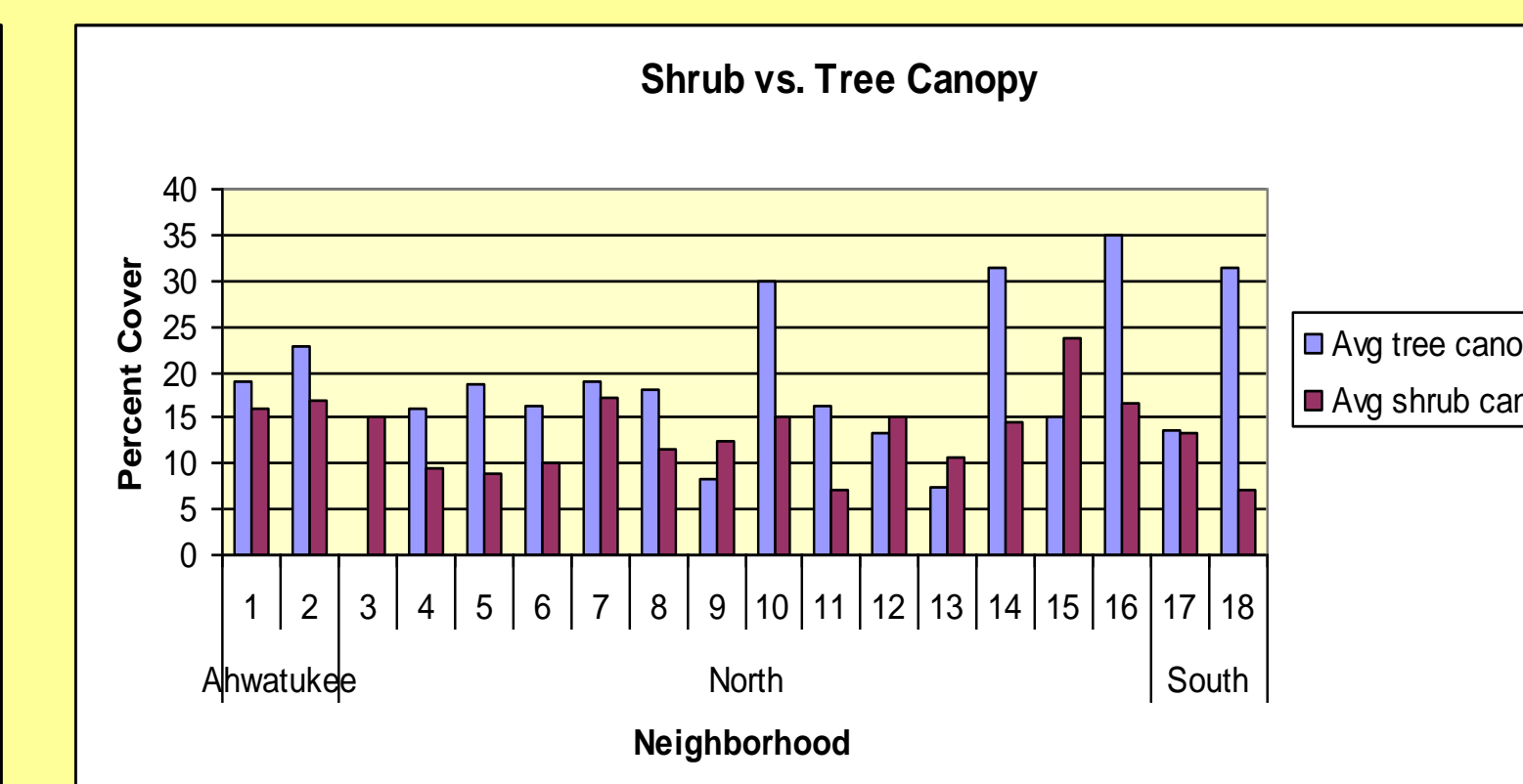


Phoenix gated community.

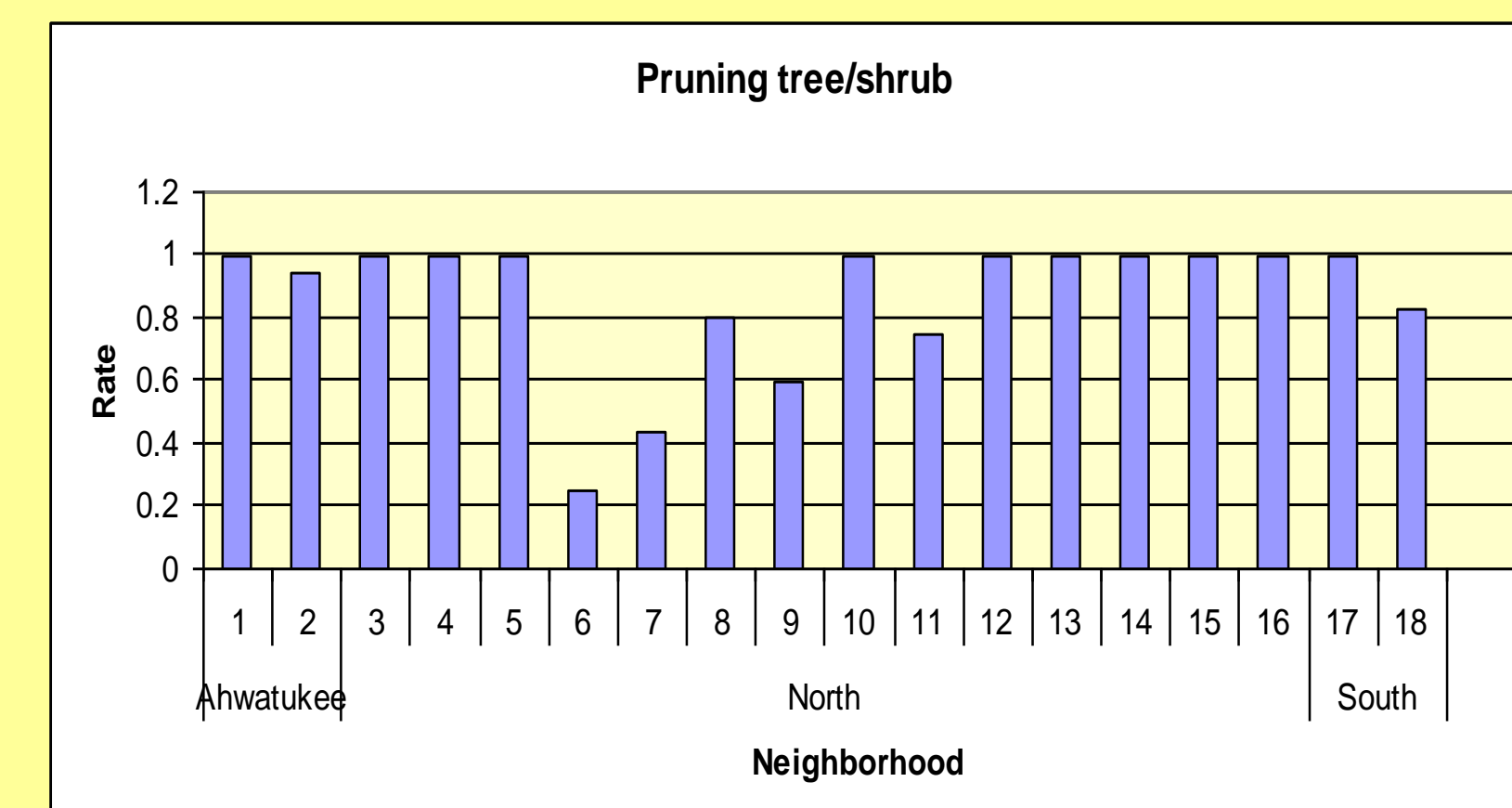
Findings



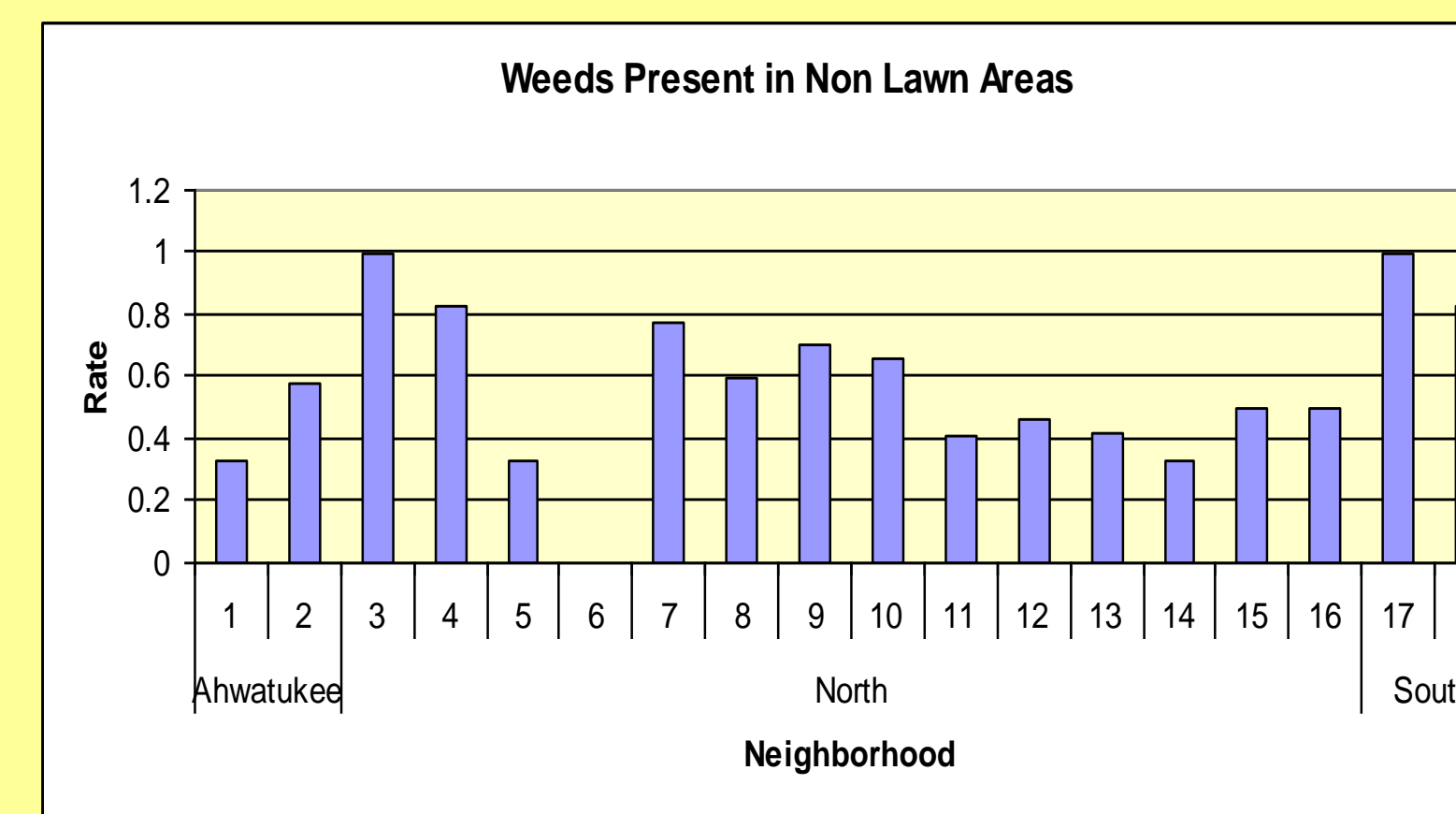
Shows average ground cover for each HOA community by rock vs. grass cover.



Shows average canopy cover for each HOA community by tree vs. shrub cover.



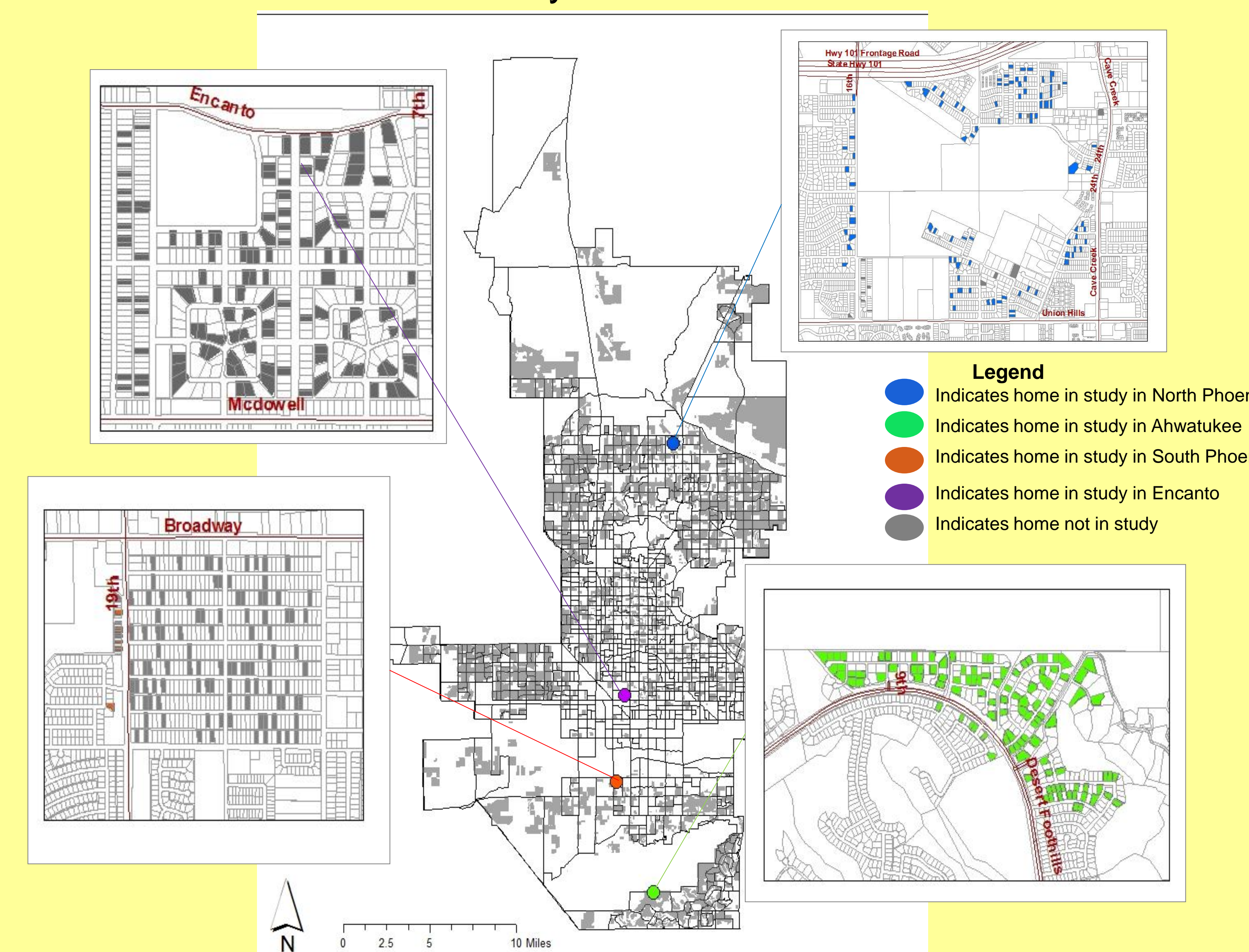
Average percentage of evidence of pruning/trimming for each HOA community.



Average percentage of presence of weed in non-lawn areas of the yards.

- The coding data show that HOAs in South Phoenix have fewer regulations than in Ahwatukee and North Phoenix, also these communities are older.
- The ecological data show that the HOAs in South Phoenix were more likely to have tree canopy cover than shrub cover as well as having predominantly grass ground cover over rock.
- All HOAs had large evidence of pruning/trimming as well as presence of weeds regardless of neighborhood.

Study Area



Depicts Phoenix metropolitan area, highlighted were the neighborhoods included in this study.

Discussion

In performing research on these case studies as well as speaking with stakeholders, much was learned about environmental issues and HOAs.

- To determine the level of maintenance practices neighborhood was a poor indicator of the level of maintenance practices of CC&Rs. The best predictor for landscape type included the year the development was constructed as well as the Management Company that wrote the CC&Rs.
- Access to ecosystem services may be influenced by presence of an HOA. Many of the larger communities would provide access to desert mountain parks, manufactured lakes, or mesic parks.
- Regulations limiting landscape decision making by homeowners have an ecological impact upon the entire community. Future study would be able to show how these social institutions impact the environment.

Stakeholder Involvement

- Meeting with stakeholder living in an HOA community described battle with the HOA on the issue of overseeding.
- Much of the enforcement is based upon yearly published landscaping guidelines. They are not available to the public.
- If these guidelines are to be changed there are significant barriers including majority vote and political agendas.



Ocotillo Community in Chandler, AZ, location of stakeholder involvement.

Methods

To investigate how the regulations of HOAs influence the landscape form a variety of techniques were used.

- Utilization of data from a previously conducted ecological study in the summer 2007 and consisted of neighborhoods in Ahwatukee, Encanto, South, and North Phoenix (Larson, et al. 2009). A document analysis was conducted and the landscaping regulations in CC&Rs were coded to determine the number and extent of the landscaping guidelines.

Neighborhood	# of HOA's	Average # of homes	Year range	Average # of regulations
Ahwatukee	1	90	1987	29
Encanto	0			
North	14	7.2	1982-2001	29.1
South	2	3.5	1963-1972	17

- After coding the CC&Rs the maintenance practices were evaluated to give an indication of whether or not the CC&Rs have an impact on the ecology of the neighborhood.

Water Inputs	Yard Structure/Maintenance	HOA Structure	Annoyance Factors
Irrigation	Encroachments	Committee Approval Required	Pets Restricted
Sprinkler System	Grass	Separate Landscaping Guidelines	Livestock Prohibited
Drainage	Tree Canopy	Voting Rights	Noise/Odor control
Changes to Topography	Shrub Canopy		Trash Removal
	Prohibited Species		Lights
	Required Species		Vehicles on Property
	Trimming and Pruning		Construction
	Plant Disease and Pest Control		Antennas/Signs/Clotheslines
	Maximum Plant Height		Temporary Structures
	Weed Removal		

- An interview was conducted with a stakeholder to gain real-world application for this research.

References

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