



Town of Beaux Arts

Village Forest Strategic Plan

December 2019



## **Strategic Plan Introduction**

In spring and summer of 2019, American Forest Management (AFM) conducted a forest canopy mapping and health assessment of the entire Village, producing several maps and a report with data and management recommendations. The report is large and provides much information regarding the native forest canopy and understory. While the entire report is available to the Village, this document offers the findings and recommendations in a form that will better assist Beaux Arts in 1) educating the residents of the Village about current forest conditions; 2) identifying the priority tasks to take; and 3) implementing the best strategies to achieve the goal of the project:

To grow and maintain a resilient, structurally complex, and biodiverse native forest as the Village founders envisioned for now and the future of Beaux Arts Village.

### **Assessment Summary**

The results of the AFM study indicate that of the 52.2 acres of the Beaux Arts Village, **41 percent** (21.3 acres) have tree canopy cover.

The majority of the forested areas is in a good health condition. Only a couple stands contain some trees that demonstrate low vigor with slightly thin canopies, but this is likely a result of development and infrastructure impacts. No significant areas of disease or tree decline were observed. Invasive species such as English holly, English ivy, English laurel, and Himalayan blackberry were observed growing in the understory of some areas.

The urban forest is primarily comprised of Douglas fir, Western red cedar, and Western hemlock with a minor component of bigleaf maple. Pacific madrone and Oregon ash are also noted on the WABA property. The oldest trees found here are considered true old growth at more than 500 years of age, however most trees found in the village are approximately 100 years old. No forest health threats such as root disease pockets were observed.

AFM delineated the overall canopy coverage into 33 management units based on ground conditions, tree species composition, age, level of invasive plant species and other factors. The data collected for each unit have been included in both the narrative and table of their assessment report (AFM Report Appendix B)

### **Data Summary**

For the purposes of providing relevant information in a useful format for the Village, a new category and re-defined mapping units were created for this strategic plan. The town is divided geographically into seven Village Management Units (VMUs), and AFM's management units are referred to as Stand Units (1-28, A, C-E, F, G, H). Certain data from AFM's assessment are shown in the Forest Stand and Management Units Table (Appendix A).

A key is provided on the table to help with the abbreviations of the canopy tree species. The highlighted cells indicate potential areas for improvement: the orange indicates gaps in the canopy (dark orange is higher incident) and the green highlights areas with either no native understory or regeneration (regen) trees observed. Other abbreviations:

LI = low invasives; MI = medium invasives; HI = high invasives; IHL = ivy, holly, laurel

DBH = diameter range of canopy trees (inches); [B] = 11-20"; [C] = 21-30"; [D] = 31" and above

### **Recommended Strategies and Priorities**

Based on the assessment findings and discussions with Village stakeholders, several conservation strategies have been identified for Beaux Arts Village. Many are to be considered as part of a Village-wide program that is grounded in best practices that support the goal to perpetuate the native Village Forest. Some are specific to areas with issues that lessen the integrity of the forest, such as invasive species and pristine landscape practices (raking, sheared hedges).

### Conservation Strategies

- **CS1:** Reduce/eliminate invasive non-native plants in and around the forest stands as they threaten the health and diversity of the forest.
  - 1.1 Issues mainly with laurel and ivy in/from landscape first work in common areas/ROW
  - **1.2** Consider native hedgerows/screens for laurel hedges
  - **1.3** Village sponsor residents with significant invasive issues showcase 'makeover'
- CS2: Restore the forest floor conditions to reduce the threat of pests, disease, and drought.
  - 2.1 Mulch bare ground to reduce invasive plant species and retain soil moisture
  - 2.2 Encourage leaving leaf litter (no raking) for nutrient cycling for soil improvement
  - 2.3 Where appropriate, install or retain large woody debris forest structure and habitat
  - **2.4** Plant and replace non-native (invasive) ground covers with native groundcover.
- CS3: Plant appropriate plants that beneficially contribute to the forest's diversity and structure.
  - **3.1** Approve a Village plant list (shade) native trees, shrubs, groundcover and alternatives
  - 3.2 Provide appropriate plant list for understory and regen in each VMU/Stand Unit
  - 3.3 Purchase native plants for common areas (& resident giveaways) KCD native plant sale
  - 3.4 Consider having a growing nursery at water tower
- **CS4:** Identify and designate landmark trees and significant groves with protection and proper management;
  - **4.1** Encourage best management practices (BMPs) of mature conifers.
  - **4.2** 'Old Doug' and other large firs, cedar groves, Pacific madrones, premier stands Recognize trees/stands that provide character to parts of the Village (officially name).
  - **4.3** Village offer to subsidize for the proper care of significant mature trees (storm damage, consultation about possible disturbance near trees, regular health assessments)
- CS5: Consider covenants, policies, and community outreach around growing and preserving the Village Forest –
  - **5.1** Approved Village species list AND prohibited plants
  - **5.2** Forest hedgerow initiative
  - **5.3** Landmark tree/grove protection (limited)
  - **5.4** Management plan for stands in ROW common areas

- **5.5** Education for homeowners and prospective home buyers (realtors) re: Living in the Village Forest
- **5.6** Assistance on how residents can manage their part of the forest show map, strategies, best practices (mature conifers); seasonal Village forest walks
- **5.7** Support native landscaping with free trees/plants
- **5.8** Enforce tree protection during construction; education on re-landscaping, irrigation

In Appendix B, specific strategies are recommended for each Stand Unit. They are provided as first and second priority based on the issues and opportunities present. Additionally, regeneration (regen) species of trees are provided for each unit.

Please note, an interactive map of the Village with the recommended strategies for each Stand Unit is provided. For ease of use, house numbers, streets, and Village Management Units (VMU's) are shown on the map. The strategies are shown when a specific stand is selected. Appendix C includes the maps of each individual VMU with and without aerial imagery.

### **Regeneration Trees**

Since the Village has a good composition of trees typical in a Pacific Northwest lowland Douglas-fir forest, the selection of trees to plant for the next generation is straightforward. No health or pathogen threats were observed making it possible to continue planting existing species while assuring some diversity to avoid any future demise due to climate or pest impacts. Regarding the various native tree species while planting for regeneration:

- Plant Douglas fir (Pseudotsuga menziesii) in gaps or along edges as they need sun to prosper.
- Grand fir (*Abies grandis*) and Western red cedar (*Thuja plicata*) grow well in the shade and can be planted in the understory.
- Western hemlock (*Tsuga heterophylla*) and Oregon ash (*Fraxinus latifolia*) are not performing well in our region (climate impact?) and should not be planted.
- Pacific madrone (*Arbutus menziesii*) is a cherished broadleaf evergreen native that must be protected and allowed to grow in the Village forest wherever it propagates.
- Allow bigleaf maple (*Acer macrophyllum*) to reseed on its own in the understory. While it is common for bigleaf maple to re-sprout at the stump, it is important to discourage that growth. near homes or roads, as the stump and roots may decay and make the tree unstable.
- For small spaces, particularly along the roads, consider incense cedar (*Calocedrus decurrens*) as a nice uniform and slow-growing conifer.

### **Understory Planting**

For the most part, the Village Forest is dominated by a coniferous canopy, which results in limited growing conditions. King County offers a useful online native plant guide at: <a href="https://green2.kingcounty.gov/gonative/index.aspx">https://green2.kingcounty.gov/gonative/index.aspx</a> - there is a list of native plants and native landscaping plans based on their growing conditions. It is wise to consider native plants that can thrive in drought conditions, as that seems to be the trend for the region.

## Native Hedgerow Initiative

The Village landscape has a lot of non-native laurel hedges maintained through the decades. Unfortunately, the laurel, along with holly and ivy have established in the native understory and make up the majority of the invasives in the Town.

In an effort to eradicate the laurel and convert some more formal landscapes, consider an 'initiative' to replace hedges with native hedgerows. This concept is introduced in a blog article from the Washington Native Plant Society - <a href="https://www.wnps.org/blog/how-about-a-hedgerow">https://www.wnps.org/blog/how-about-a-hedgerow</a> and has great merit. For Beaux Arts Village, recommended evergreen species include:

- California wax myrtle (Myrica californica)
- Silk tassel (Garrya elliptica)
- Tall Oregon grape (Mahonia aquifolium)

There are several other trees, shrubs, and groundcover suggested that would work well planted together to create a diverse and attractive hedgerow requiring little to no maintenance.

## Village Management Unit (VMU) Priorities

While there are recommended strategies for every Stand Unit, none require immediate action. In order to help the Town develop a work plan, the following are the areas recommended be the first units to consider taking action:

- VMU 1 Northeast: Stands 16, 14, 12
- VMU 2 Southeast: Stand 28
- VMU 3 Mid-South: Stands 20, 9, 28
- VMU 4 Mid-North: Stands 3, 11, 6
- VMU 5 Northwest: Stands 26, 1, 27
- VMU 6 Southwest: Stands H, 22, 21
- VMU 7 WABA: Stands G, F, A

As these are suggestions based on the combination of issues, the Town should proceed with the actions most likely to be accepted by the Villagers and are feasible to achieve, such as mulching.

KCD has prepared some informational pamphlets on common urban forest topics. Appendix D includes a few that apply to Beaux Arts Village – Mulching, Invasive Plants, and Conifer Tree Care.

Others are available upon request.

# Appendix A Forest Stand and Management Units

KCD MU	AKA	Stand' Unit	Canopy	DBH	Health Issues	Native shrubs	Regen species	Shared
Northeast	VMU 1	7, 12-16, 29						
	west	7	DF, WRC [C]	25 avg	None	Salal	Bigleaf maple, Douglas-fir	VMU 4
	mid-south	12	DF, BLM [C]	18-41	HI, sparse crowns	Indian plum	Ash, bigleaf maple	
	mid-north	13	DF, WRC [C]	20-31	MI, laurel ivy	Indian plum, fern	Bigleaf maple, Western red cedar	
	north	14	WRC [B]	12-16	LI laurel, raking	None observed	Western red cedar	
	north east	15	DF, BLM [C]	21-35	LI laurel	Salal , mahonia	Bigleaf maple, Western red cedar	
	south east	16	DF, WRC [C]	24-32	HI English IHL	None observed	Bigleaf maple, ash, Western red cedar	
	south west	18	DF, WRC, WH [B]	11-40	None	Currant, grasses, snowberry	Planted vine maple	VMU 3
Southeast	VMU 2	17, 28			<u> </u>		<u> </u>	
Southeast	71110 2	17,20	DF, WRC, BLM		LI laurel - native			
	main	17	[C]	17-42	shrbs	None observed	Vestern red ceda	VMU 3
	south edge	28	DF, WRC [C]	26-32	trees	Vine maple	None observed	
						•		
Mid-South	VMU 3	8, 9, 17-21, 28						
	mid-north	8	DF, WRC [B]	14-26	MI laurel, ivy	Mahonia	Western red cedar	VMU 4
	north west	9	BLM [C]	20-24	LI - raking	Rhodie	None observed	
	south east	17	DF, WRC, BLM [C]	17-42	LI laurel - native shrbs	None observed	Western red cedar	VMU 2
	north east	18	DF, WRC, WH [B]	11-40	None	Currant, grasses, snowberry	Planted vine maple	VMU 1
	main	19	DF, BLM [C]	20-54	LI laurel holly	Indian plum, mahonia	Ash	
	1112111					Indian plum,	None	
	mid-south	20	DF, WRC [B]	18-32	HI English IHL	mahonia, salal	observed	
	west	21	DF, BLM, WRC [B]	18-45	HI English IHL	Snowberry	hemlock, ash, Western red	
	south east	28	WRC, DF [C]	26-32	LI - backyard trees	Vine maple	None observed	

# Appendix A Forest Stand and Management Units

KCD MU	AKA	FM 'Stand' Un	Canopy	DBH	Health Issues	Native shrubs	Regen species	Shared
Mid-North		3-8, 10, 11					<u> </u>	
					Laurel hedges;		None	
	north west	3	DF, WRC [D]	28-34	compacted soils	None observed	observed	
							Minor,	
	mid west	4	DF, WRC [C]	26 avg	MI laurel	Rhodie, new ferns	landscape	
	mid north	5	DF [C]	21-43	LI laurel, raking	Salal	Minor	
	mid east	6	WRC [C]	32 avg	MI English IHL	Mock orange	Ash?	
							Bigleaf maple,	
	east	7	DF, WRC [C]	25 avg	None	Salal	Douglas-fir	VMU 1
							D fir, Western	
	mid south	8	DF, WRC [B]	14-26	MI laurel, ivy	D-grape, vmaple,ferr	•	VMU 3
	south west	10	WRC [C]	22-34	MI laurel	Salal, O-grape	mtn Ash	
							None	
	south west	11	DF [C]	18-24	HI laurel holly	Mahonia	observed	

Northwest	VMU 5	1, 2, 23, 25- 27, A, C, D, E						
							None	
	north west	1	WRC, DF [D]	31avg	LI laurel	None observed	observed	
							None	
	north east	2	DF, BLM [C]	18-35	LI laurel	Snowberry	observed	
			DF, WRC, BLM			Mahonia, sword	Western red	
	south edge	23	[C]		MI English IHL	fern, Indian plum	cedar, maple	
			WRC, DF, BLM				Western red	
	south east	25	[B]	20-35	LI laurel, ivy	Salal	cedar	
							None	
	middle	26	DF, WRC [C]	20-65+	LI vinca, sjw	None observed	observed	
	south west	27	WRC, BLM [B]	20-32	holly	None observed	Ash	

Southwest	VMU 6	21-24, H						
	east	21	DF, BLM, WRC	18-45	HI English IHL	Snowberry	Western	VMU 3
	middle	22	DF, WRC [C]	22-32	LI sparse crns	Salal	Bigleaf maple	
	north west	23	DF, WRC, BLM	21-38	MI English IHL	Mahonia, sword	Western red	VMU 5
	mid west	24	WRC, DF, WH	25-60	LI laurel holly	Salal	Maple,	
	south west	Н	DF, WRC [D]	30-46	None	Snowberry	none observed	WABA

# Appendix A Forest Stand and Management Units

KCD MU	AKA	FM 'Stand' Un	Canopy	DBH	Health Issues	Native shrubs	Regen species	Shared
WABA	VMU 7	, C, D, E, F, G, I	+					
							Western red	
			DF, PM, WRC				cedar, grand	
	north	Α	[C]	28-42	MI BB, H, L	Salal, hazelnut	Fir	VMU 5
							Grand fir,	
			DF, PM, BLM			Snowberry, Indian	Western red	
	middle	C, D, E	[C]	20-65	LI laurel	plum, vine maple	cedar, ash	VMU 5
			WRC, DF, OA				Ash, Western	
	mid south	F	[B]	10-42	MI BB, ivy	Hazelnut	red cedar	
						Sword fern, Indian		
	mid south	G	DF, WRC [D]	22-44	MI English IHL	plum	Minor	
							None	
	south	Н	DF, WRC [D]	30-46	None	Snowberry	observed	VMU 6

Stand Unit	Priority 1	Priority 2	Regeneration Trees
Stand Onit	·	-	_
1	Plant sparse areas with understory and regen plants (SE 27th); remove/cut ivy off trees	Remove large laurels along road, replace with native hedgerow; Discourage future limbing-up of conifers	Douglas fir; Western red cedar
2	Mulch model planting @ 104th and 27th	Plant more regen and understory natives; keep laurel in check	Western red cedar; Grand fir
3	Mulch compacted, bare soils; large woody debris; Plant more regen and understory natives	Consider native hedgerow for laurel hedges	Douglas fir; Western red cedar
4	Plant more understory and regen natives, esp along 105th	Replace moderate level of laurel with native (hedgerow)	Western red cedar; grand fir
5	Discourage raking and removal of organic material; mulch	Plant more regen and understory natives in open areas; keep invasives in check	Douglas fir; grand fir; Western red cedar
6	Reduce moderate level of invasives - ivy, laurel, holly; replace with natives	Maintain cedar 'grove' with young cedars and native understory	Western red cedar; grand fir
7	Plant more understory and regen natives in open areas	Keep invasives in check/at bay; replace vinca with native groundcover	Grand fir; Western red cedar
8	Discourage raking, removal of organic material; add mulch; plant native shrubs, groundcover	Remove laurel and ivy in understory to allow for young native trees to grow (regen)	Douglas fir; Western red cedar
9	Discourage raking, removal of organic material; add mulch; plant native shrubs, groundcover	Plant young conifers for the next generation of canopy (mature maples)	Douglas fir; Western red cedar; grand fir
10	Remove ivy and laurel, replace with native	Plant young cedars for regen	Western red cedar; grand fir
11	Remove ivy, holly and replace with native shrubs, groundcover	Remove laurel hedges and replace with native hedgerow; plant regen trees	Douglas fir; Western red cedar; grand fir
12	Continue removing ivy, laurel, blackberry and plant native understory	Monitor sparse crowns; plant conifers for regen	Douglas fir; Western red cedar; grand fir
13	Remove ivy and laurel to encourage regeneration of young conifers	Plant understory native shrubs and groundcover; monitor narrow row of D. fir high crowns	Western red cedar; grand fir

		T	
14	Discourage raking, removal of organic material; add mulch; plant native shrubs, groundcover	Remove laurel and replace with native plants (hedgerows)	Western red cedar; grand fir
15	Remove laurel and replace with native (hedgerow)	Plant more shade tolerant native plants and encourage young trees to grow	Western red cedar; grand fir
16	Remove ivy - laurel and holly where possible and replace with native hedgerow	Plant more native understory plants where possible	Douglas fir, Western red cedar, grand fir
17	Remove laurel and replace with native shrubs (hedgerow)	Plant more native understory plants where possible	Grand fir; Western red cedar
18	Plant more native understory plants where possible	Plant more regen trees	Douglas fir, Western red cedar, grand fir
19	Discourage raking, removal of organic material; add mulch; plant native shrubs, groundcover	Remove laurel, holly and replace with native shrubs (hedgerow); plant conifer regen	Douglas fir, grand fir
20	Remove ivy - laurel and holly where possible and replace with native hedgerow	Plant regen conifers and increase native understory where possible	Douglas fir, Western red cedar, grand fir
21	Remove ivy - laurel and holly where possible and replace with native hedgerow	Plant regen conifers and increase native understory where possible	Douglas fir, Western red cedar, grand fir
22	Monitor thin crowns and invasives in older landscapes	Plant regen conifers and increase native understory where possible	Douglas fir, Western red cedar, grand fir
23	Remove laurel, holly, ivy in understory to allow for young native trees to grow (regen)	Continue mulching, large woody debris for soil and plant health	Douglas fir, Western red cedar, grand fir
24	Remove laurel, holly in understory to allow for young native trees to grow (regen)	Plant regen conifers and increase native understory where possible	Douglas fir, Western red cedar, grand fir
25	Remove ivy, laurel where possible and replace with native plants	Plant regen conifers and increase native understory where possible	Western red cedar; grand fir
26	Remove vinca and st. johns wort from under 'Old Doug' and plant native groundcover	Plant regen conifers and increase native understory where possible	Western red cedar; grand fir
27	Remove large laurel, holly; replace with native (hedgerow)	Plant regen conifers and increase native understory where possible	Western red cedar; grand fir
28	Remove laurel, holly, blackberry near corner 30th/106th	Plant regen conifers and increase shade tolerant native understory where possible	Western red cedar; grand fir

# Village of Beaux Arts APPENDIX B December 2019 PRIORITY TASKS BY STAND

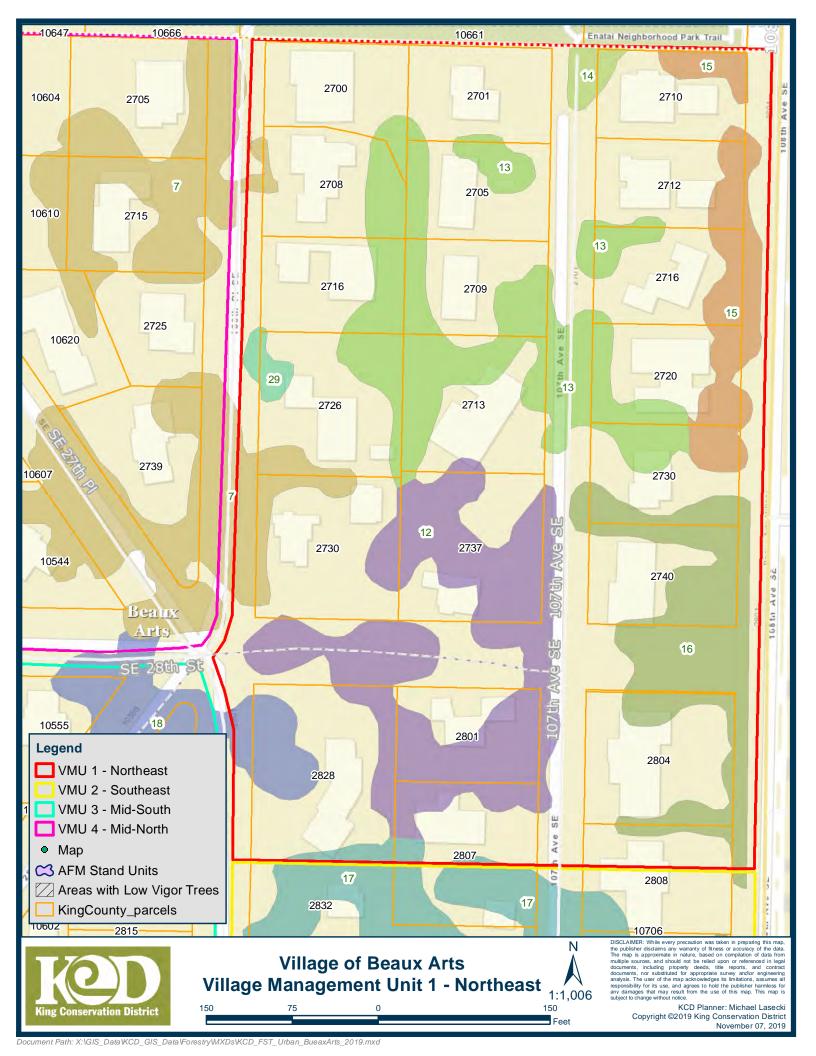
29	Individual trees with large canopy; no data		
А	Continue removing ivy, laurel, holly, blackberry to allow young regen trees to grow	Plant regen conifers and increase native understory where possible; leave large woody material in place for habitat	Western red cedar; grand fir
C,D,E	Remove laurel growing on slope; encourage young madrone and other natural regeneration	Plant regen conifers and increase native understory where possible; leave large woody material in place for habitat	Western red cedar; grand fir
F	Remove ivy and blackberry to allow young trees to grow	Plant regen conifers and increase native understory where possible; leave large woody material in place for habitat	Western red cedar; grand fir
G	Continue removing ivy, laurel, holly, blackberry on east side to allow young regen trees to grow	Plant regen conifers and increase native understory where possible; leave large woody material in place for habitat	Western red cedar; grand fir
Н	Plant regen conifers and hardwoods to eventually close canopy gap	Plant native understory appropriate to site conditions where possible	Western red cedar; grand fir; Oregon ash

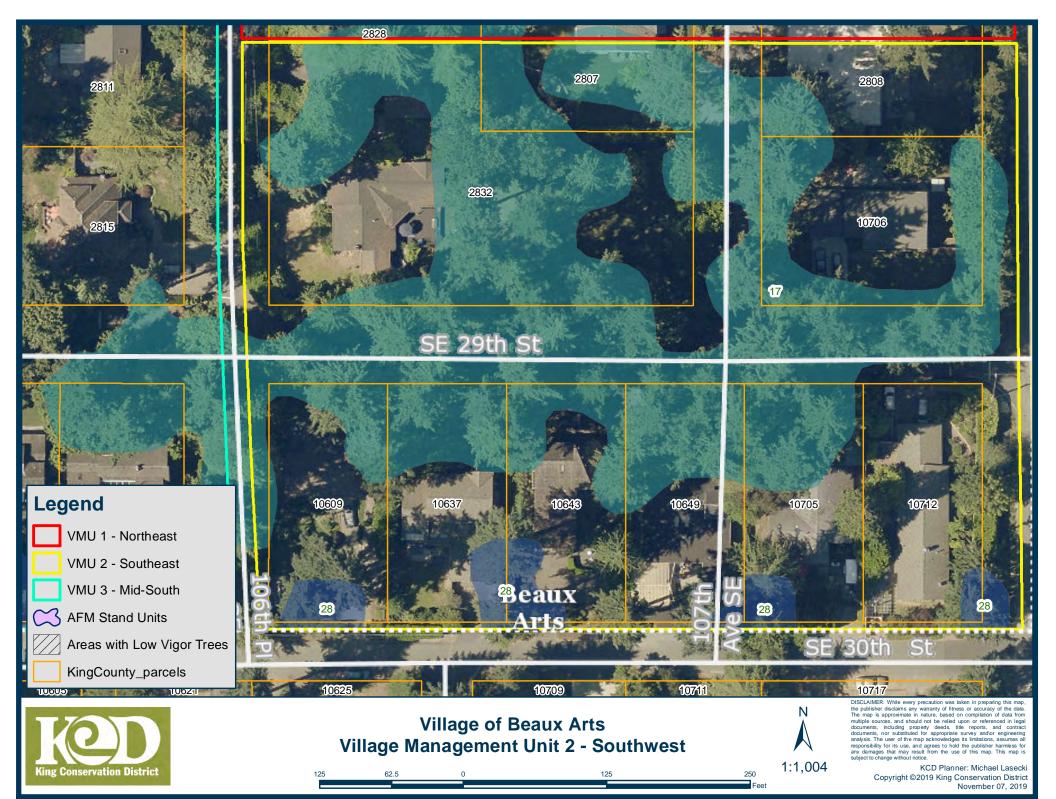
- -VMU 1 Northeast 2017 Aerial Image Map
- -VMU 1 Northeast Map
- -VMU 2 Southwest 2017 Aerial Image Map
- -VMU 2 Southwest Map
- -VMU 3 Mid-South 2017 Aerial Image Map
- -VMU 3 Mid-South Map
- -VMU 4 Mid-North 2017 Aerial Image Map
- -VMU 4 Mid-North Map
- -VMU 5 Northwest 2017 Aerial Image Map
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- -VMU 6 Southwest 2017 Aerial Image Map
- -VMU 6 Southwest Map
- -VMU 7 WABA 2017 Aerial Image Map
- -VMU 7 WABA Map



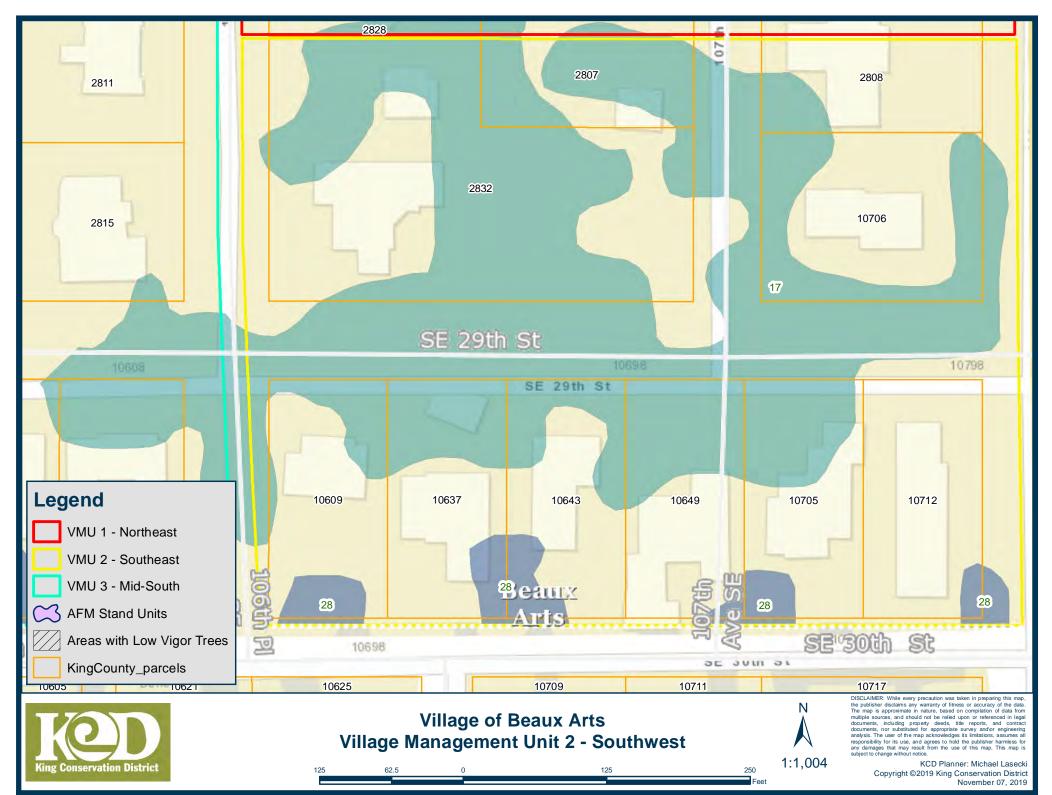
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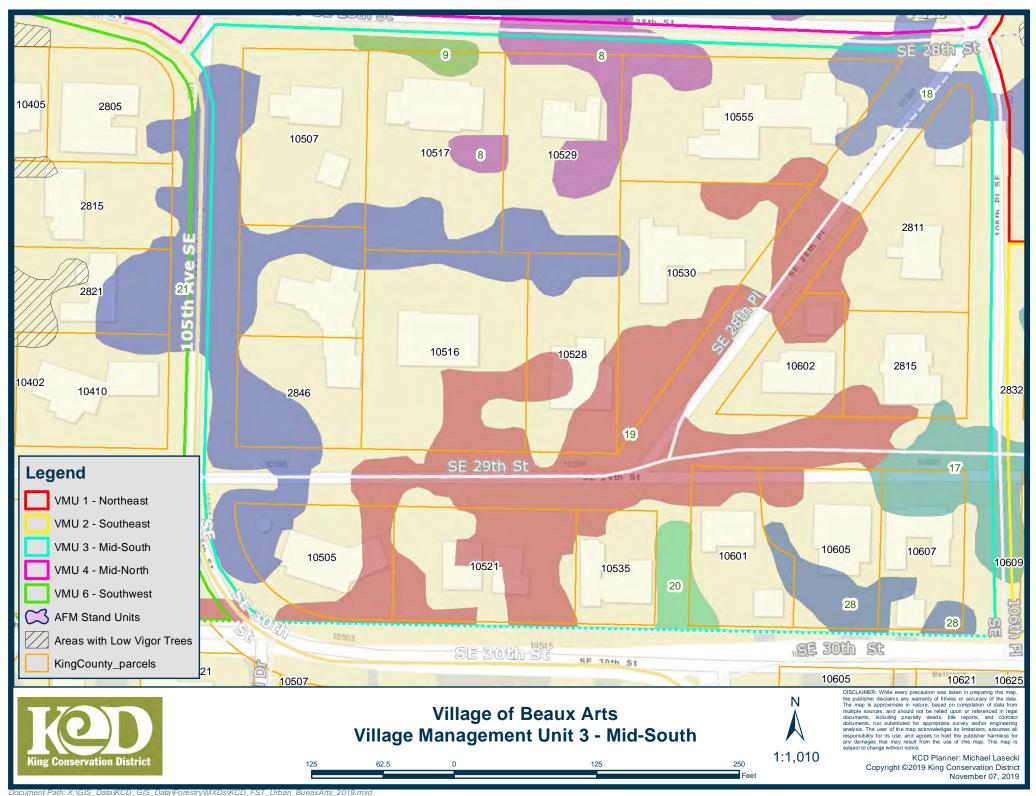


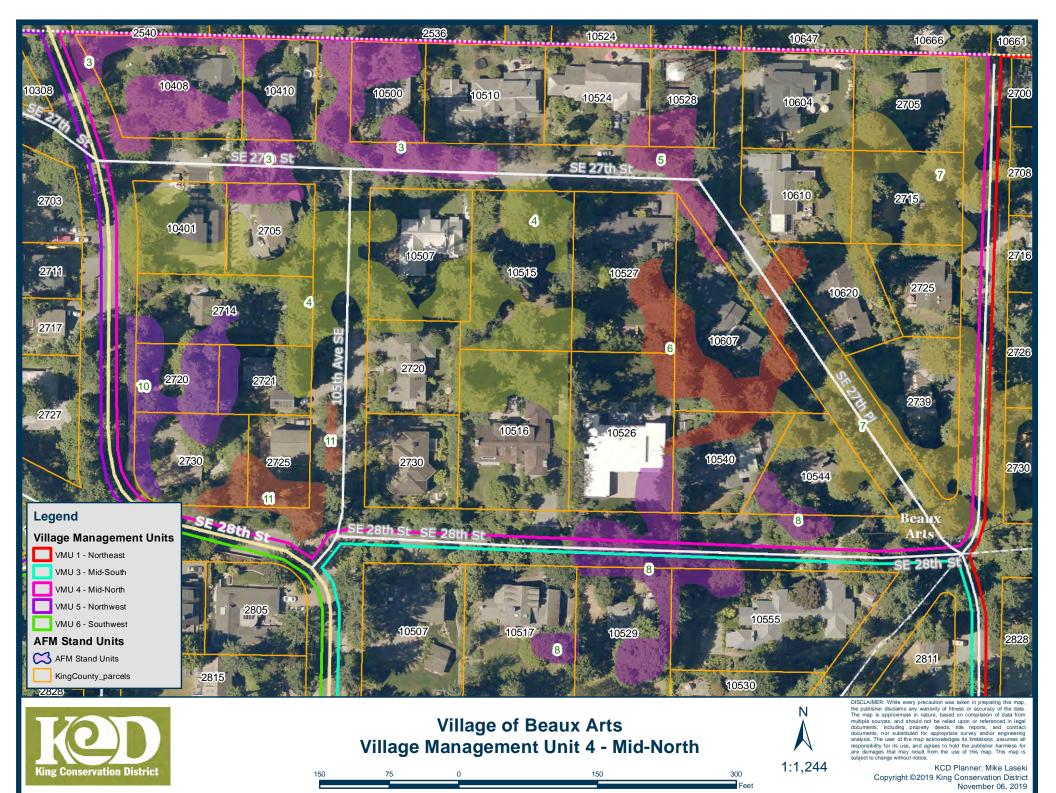
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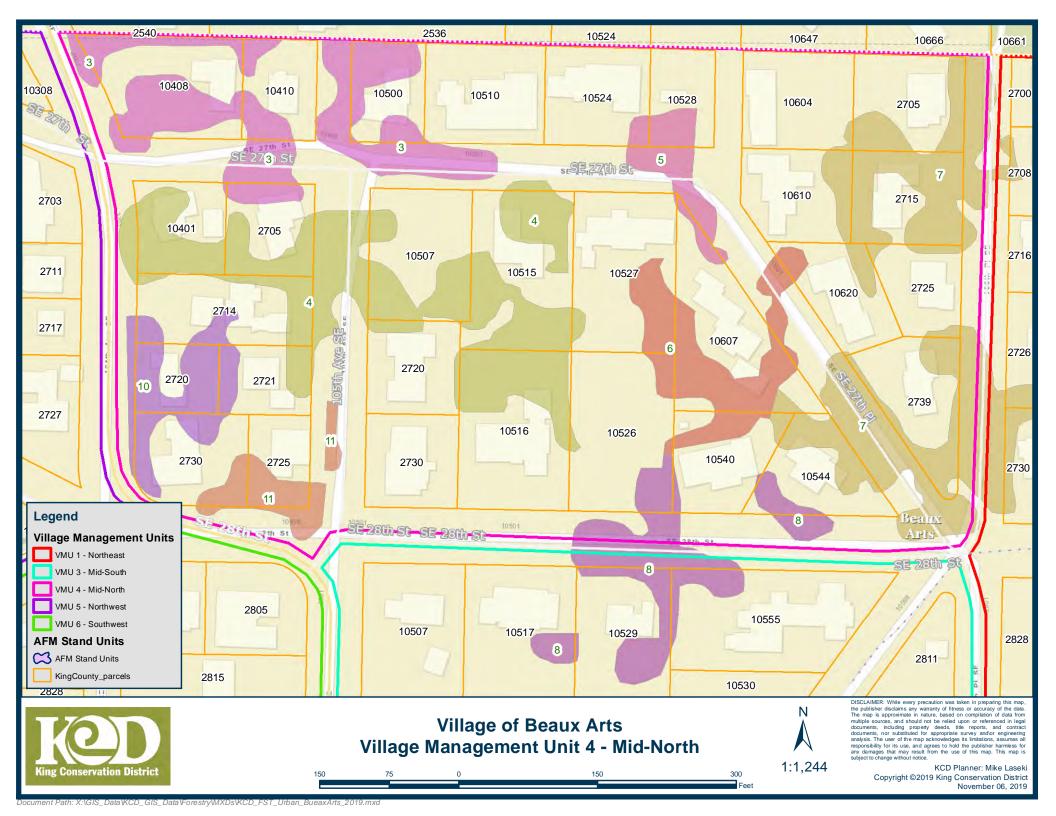


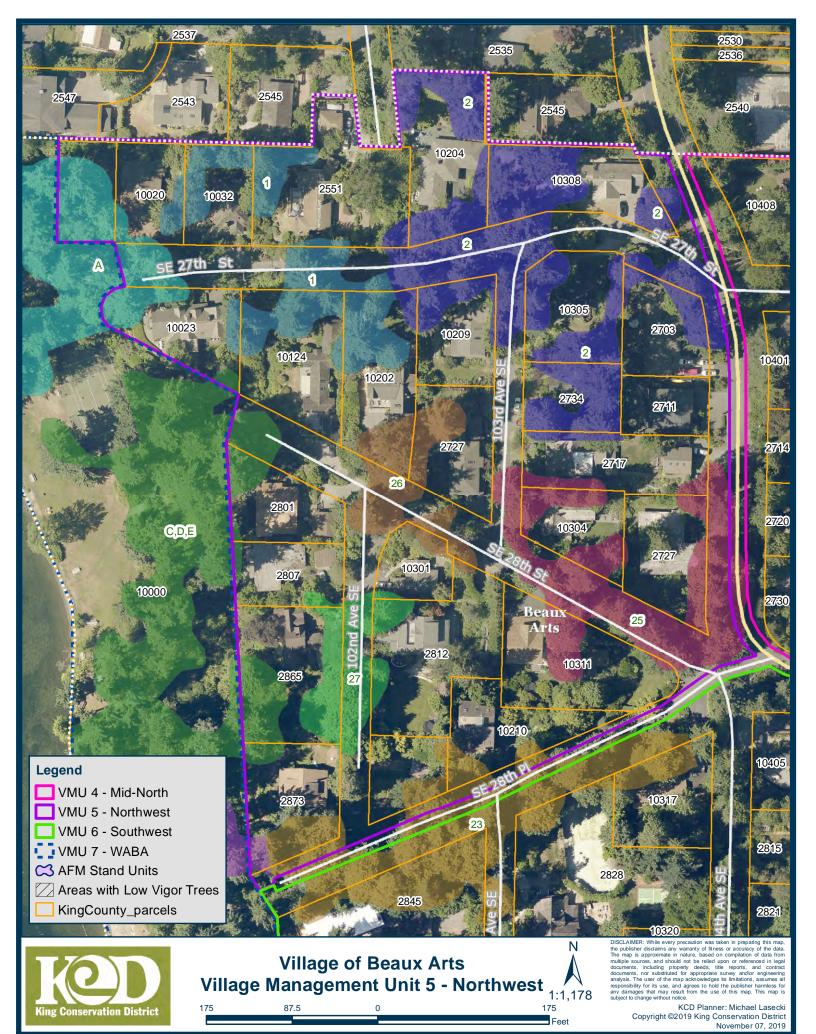
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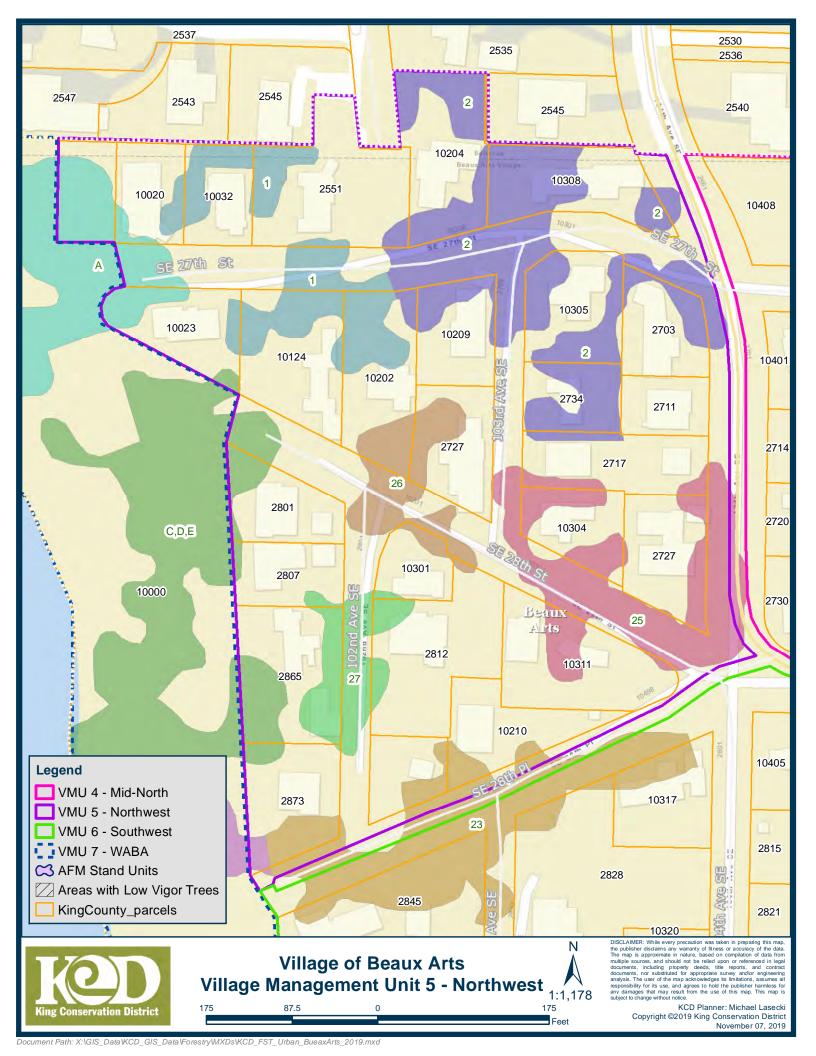


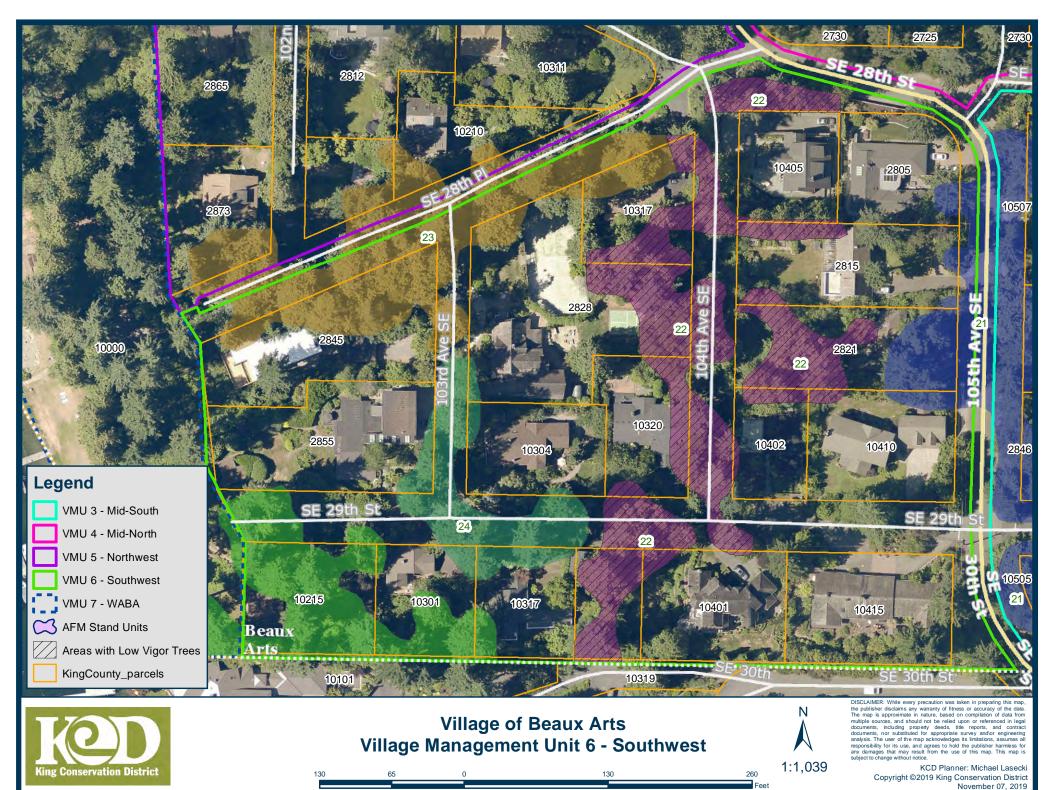


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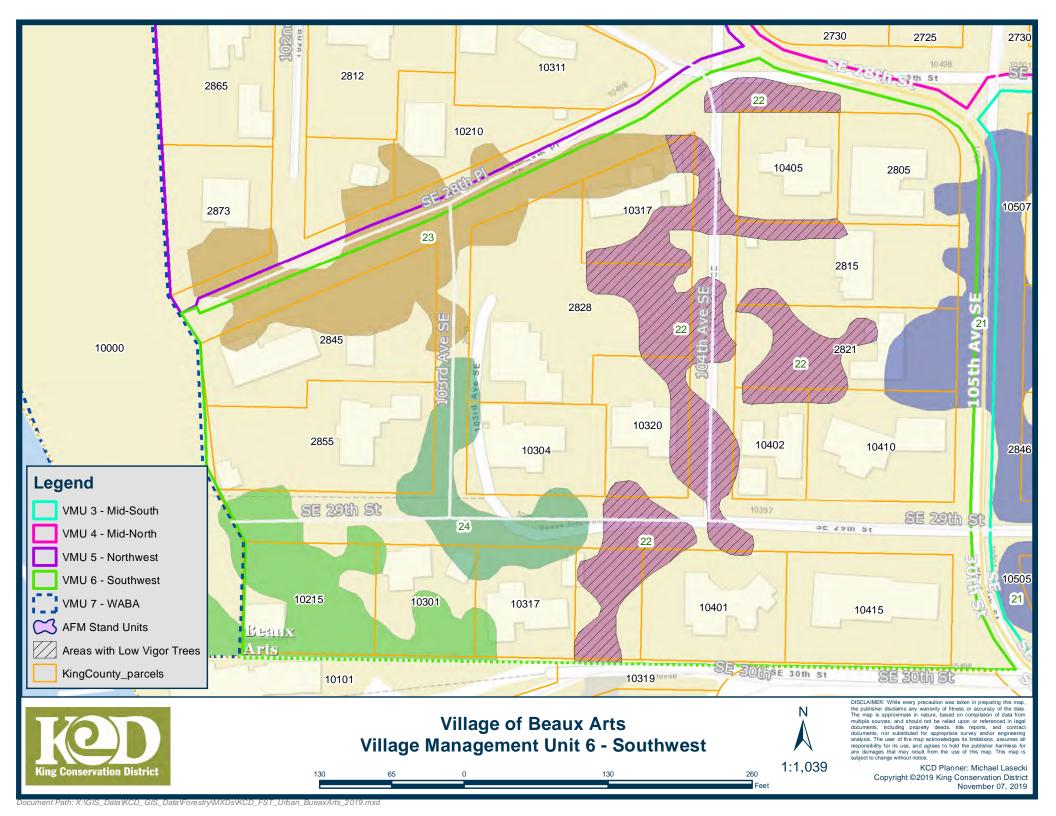


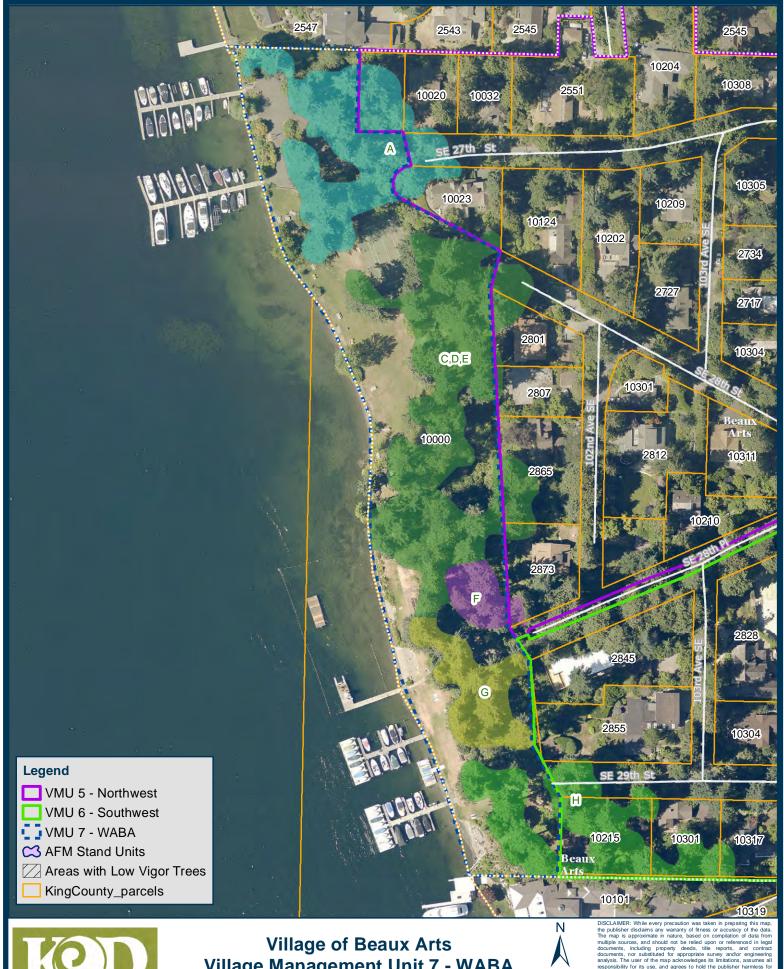














Village Management Unit 7 - WABA





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