San Diego Housing Commission Properties:

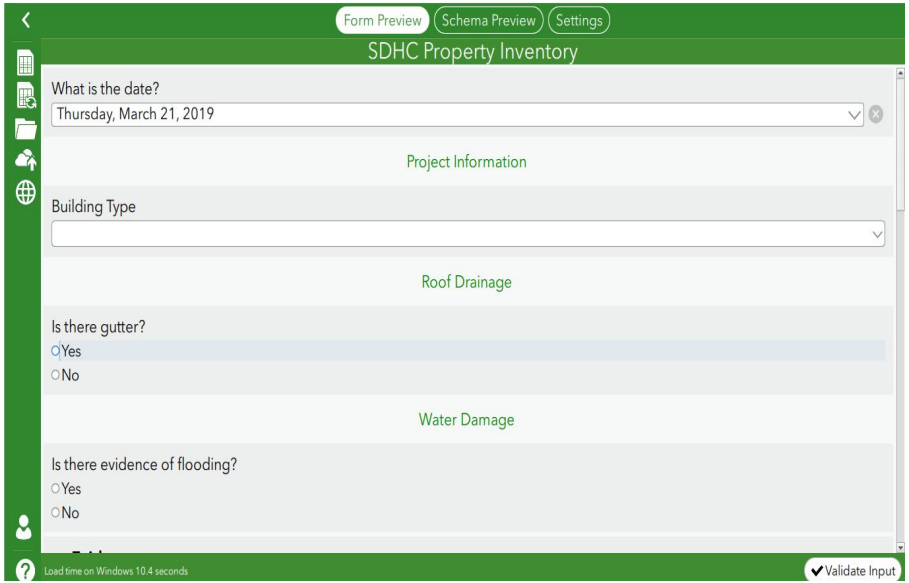
Survey, GIS Analysis, Visual Analysis

March 21, 2019

JB Hinds
Angela Hsieh
Kelly Banh
Diana Alcocer
Ilya Zaslavsky

Property Inventory- Survey123

Surveyed SDHC properties



Using Survey123 to collect data

Survey123 Questions

Roof Drainage

Is there gutter?
Where does the outlet lead to?
Is redirection possible?
What obstacles?
What other obstacle?
What is the type of drainage?

Water Damage

Is there evidence of flooding?
What type of evidence is there of flooding?
What other evidence?
Are there storm drain inlets on property?
Is there evidence of erosion?
Where is the erosion?
How severe is the level of erosion?
What is the level of grading/slope on property?

Landscape

Street terrace
Common landscape area behind sidewalk
Common area within multi-building properties
Fencelines/property edges
Building foundation plantings
Residential lawn
Active garden area
Paved area other than driveway/walkway
Unmanaged vegetation
Stormwater/bioretention area
Other

Landscape Survey

Type of trees
Describe the condition of the landscape
Is it irrigated?
Is there possible laundry water for irrigation?
Are there obstacles in the way?
What obstacle(s)?
What is the level of apparent use for the landscape?
What type of activity?
Formal or informal?
Formal or informal seating?
What other activity?

Laundry Water Analysis

-41 properties with available laundry water

-main obstacles found are pathways and driveways, garage doors (walls), and limited foundation plantings

Address	Landscape	Obstacle	Landscape	Obstacle
1041_TWINING_AVENUE	lawn or dirt area	Driveway		
1128_RANSOM_STREET	lawn or dirt area	Driveway		
1170_ILEXEY_AVENUE	lawn or dirt area	Pathway and driveway		
1232_PETERLYNN_DRIVE	lawn or dirt area	Pathway and driveway		
1250_TWINING_AVENUE	lawn or dirt area	Pathway and driveway		
1351HOLLISTER_STREET	common areas within multi-building	no obstacles	fencelines/ property edges	no obstacles
178CALLE_PRIMERA	common areas within multi-building	no obstacles	fencelines/ property edges	Pathway
2005ALAQUINAS_DRIVE	common areas within multi-building	Pathways	building foundation plantings	Pathways
2045GRAND_AVENUE	Street Terrace	Pathway	common landscape area behind sidewalk	Pathway
2381GROVE_AVENUE	common areas within multi-building	no obstacles	fencelines/ property edges	no obstacles
2615GENESEE_AVENUE	common landscape area behind sidewalk	Garage walls	common areas within multi-building	Pathways & walls
281SYCAMORE_ROAD	common areas within multi-building	no obstacles	fencelines/ property edges	Driveway
3051_54TH_STREET	fencelines/ property edges	Pathway		
402SYCAMORE_ROAD	common areas within multi-building	Pathways		
4043WILSON_AVENUE	fencelines/ property edges	Pathway		
4054CHEROKEE_AVENUE	fencelines/ property edges	Pathway		

Laundry Water Analysis

-Number of landscape types found on site vary by property

EX: 2045 Grand Ave has highest number of landscape types (5)

Landscapes found:Street terrace, common landscape behind sidewalk, common areas within multi-building,fencelines/property edges,and building foundation plantings

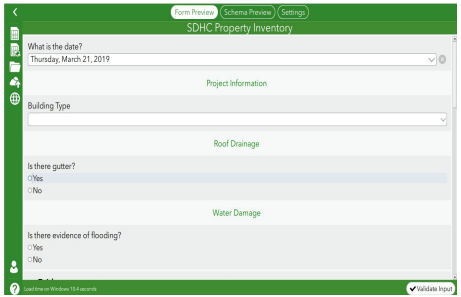
https://docs.google.com/spreadsheets/d/14E9oqAZFx4GwHV0OuI3e5e9-8POSusILntP2P0j7H9s/edit?usp=sharing

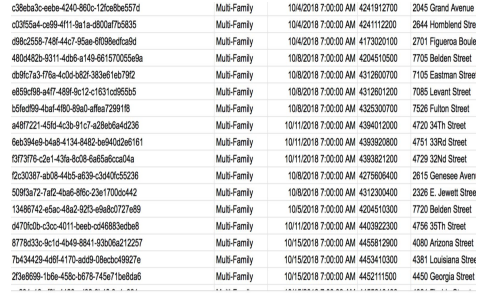
-19 properties found with only 1 type of landscaping

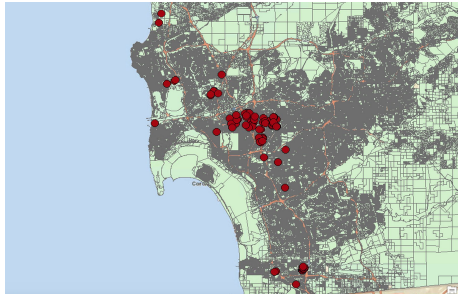
-most common is lawn or dirt area ,fencelines/property edges, or common areas within multi-building

EX:Twining Avenue has 1 type of landscaping on property (lawn or dirt area)

ArcGIS Desktop - From Survey123 to ArcGIS



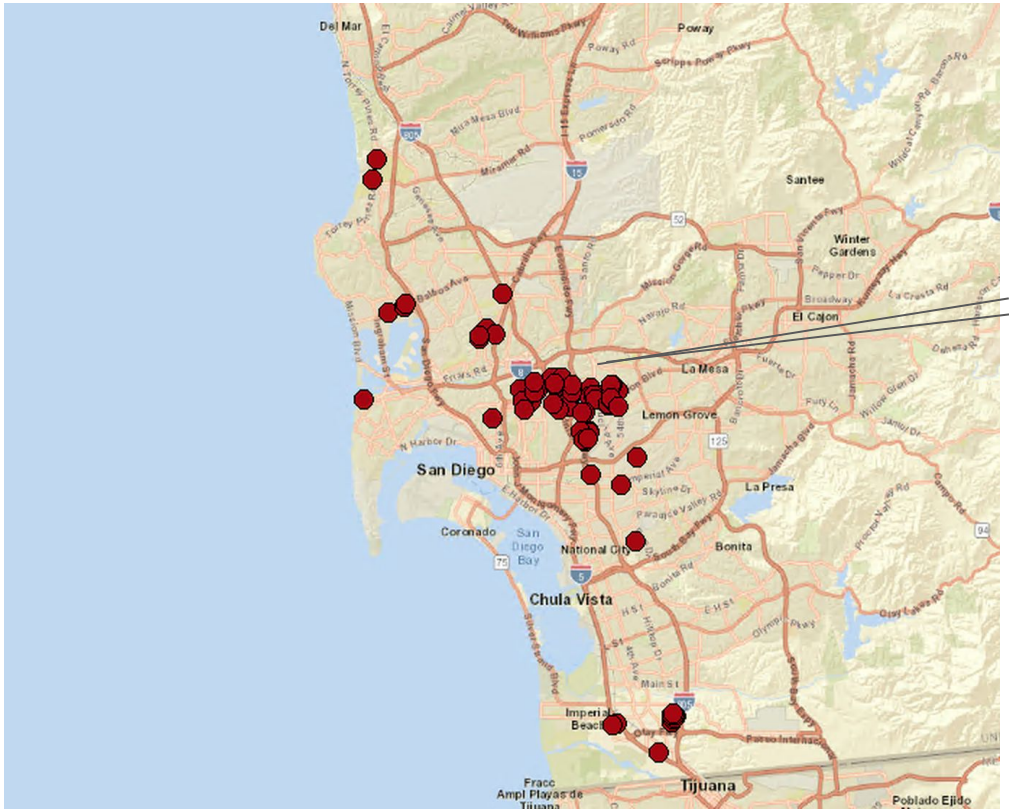


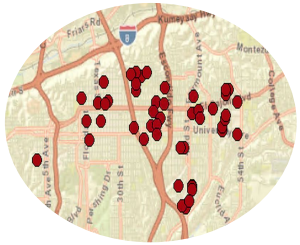


From Survey123, Property Inventory taken to **ArcGIS Desktop**

Data are organized into a point layer (based on address) and a polygon layer (by parcels)

ArcGIS Desktop-





- There is a **concentration** of properties along this area in San Diego, below 5 Freeway.

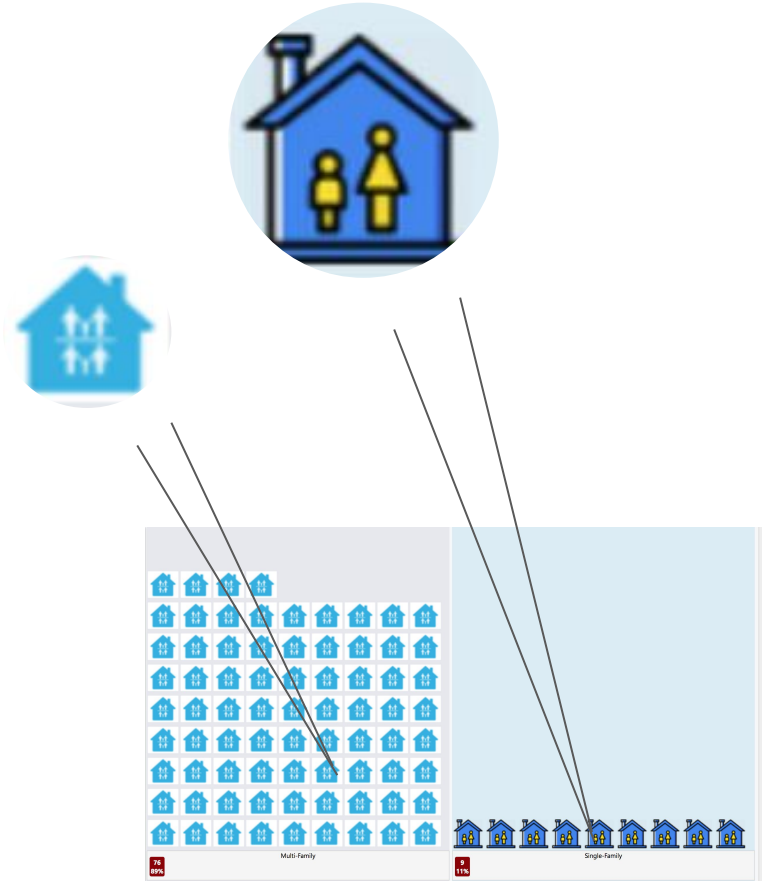
- 84 of SDHC properties in Disadvantaged Community areas (DAC).

GIS Analysis: Potential Next Steps

1. Create an online map + mechanism for SDHC to update property information
2. Overlay with accessibility and proximity layers, drainage patterns, land use, etc., based on SDHC priorities

SuAVE (Survey Analysis via Visual Exploration)

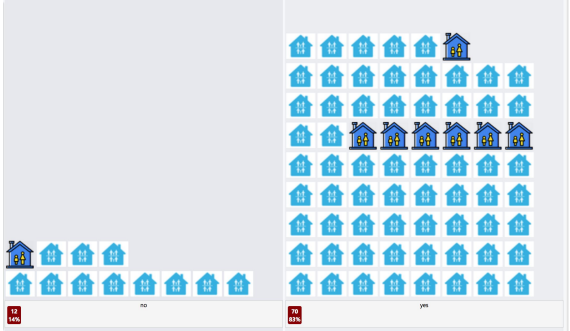
- SuAVE used for **visual exploratory analysis** of property inventory.
- Capabilities allow for a closer look at each property, and the **patterns** between properties.
- Access at: http://suave-dev.sdsc.edu/main/file=dpalcoce_SDHC_Property_Inventory_B.csv&views=1110101&view=bucket
- More info about SuAVE at http://suave.sdsc.edu



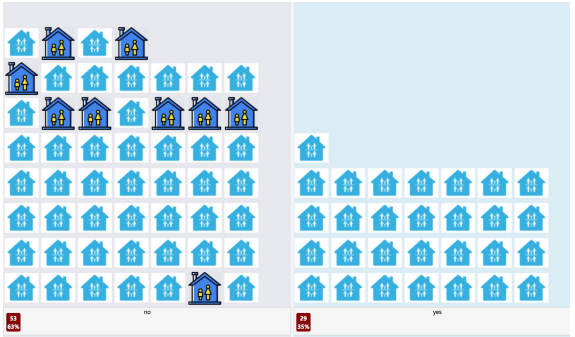
SuAVE- Data Patterns

89% are Multi-Family Properties

70 of the properties show evidence of flooding (83%)



35% of all properties have storm drain inlets, no Single-Family



98% have gutters, including all Single-Family Properties

31 Multi-Family Properties have shaded trees

Outlet redirection is possible in **49** Multi-Family properties, with obstacles to do so in **34** of those properties

SuAVE: Potential Next Steps

1. Add photos of SDHC properties
2. Include more property characteristics from GIS and surveys
3. Organize a sequence of SuAVE views into an online narrative
4. Set it up so that data can be shared and edited by SDHC