

GIS for Disaster Recovery

Rebuilding and Revisioning
After the 2017 California Wildfires

City of Santa Rosa
Disaster Relief



ESRI UC 2019

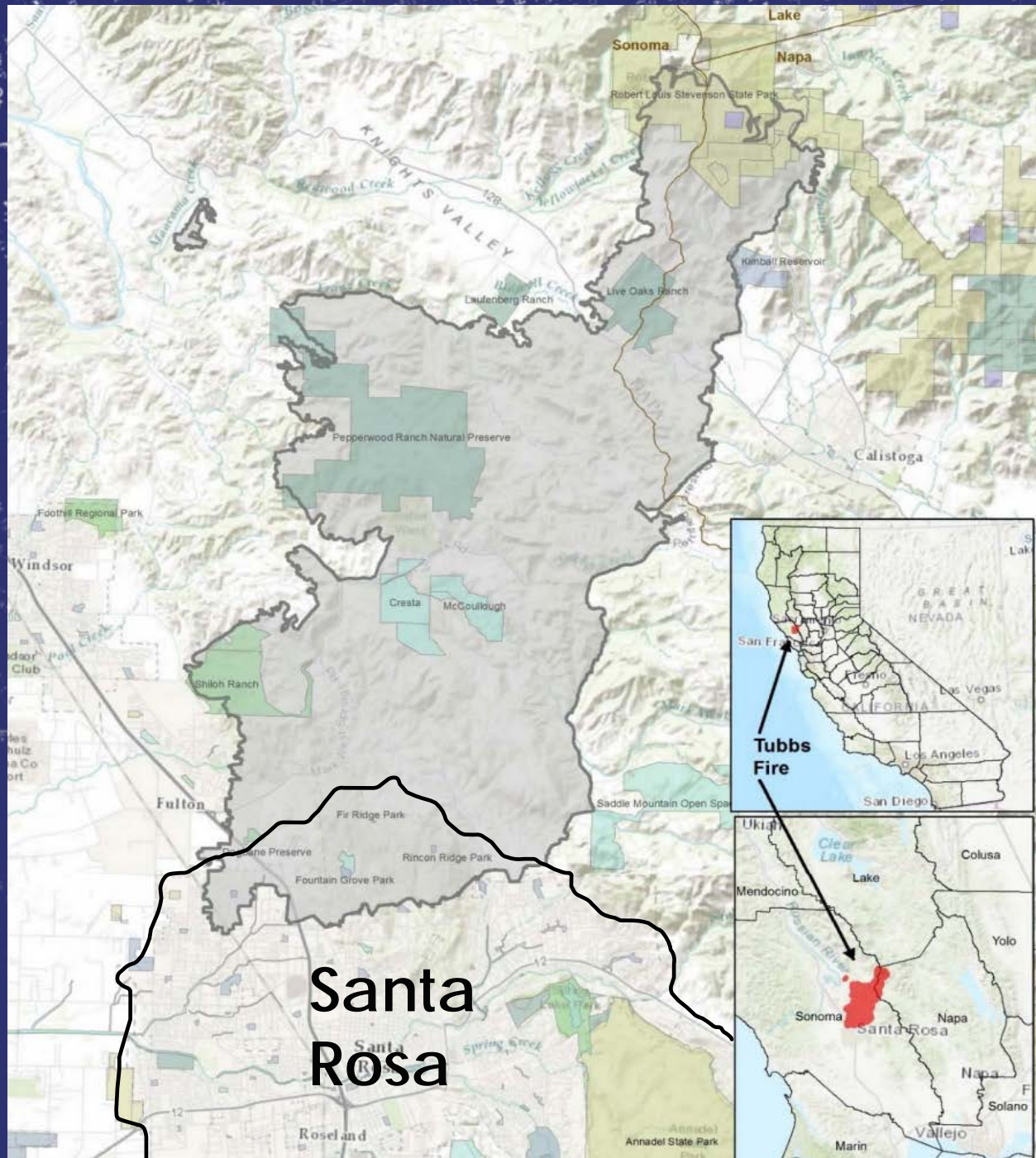
GABE OSBURN, DEPUTY DIRECTOR OF DEVELOPMENT SERVICES, CITY OF SANTA ROSA

JOSHUA DAMRON, QUALITY CONTROL ASSOCIATE, CITY OF SANTA ROSA

Tubbs Fire

October 8, 2017

- ▶ Napa & Sonoma Counties
- ▶ 36,807 acres
- ▶ Contained on October 31, 2017



Summary of Destruction

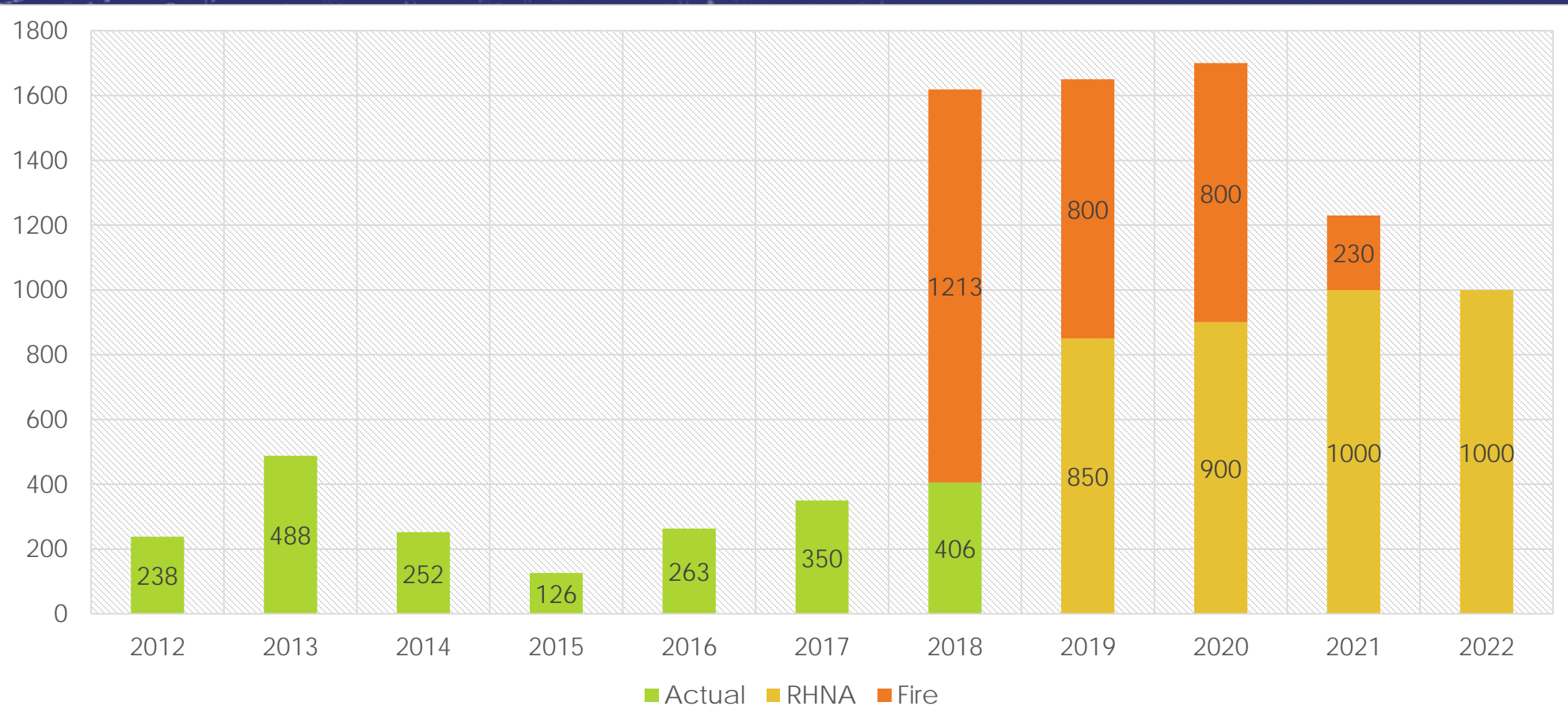
3043 Residential Units 5% of City's Housing Stock

- ▶ Single Family Homes
- ▶ Multi-Family Units
- ▶ Mobile Homes
- ▶ Accessory Dwelling Units

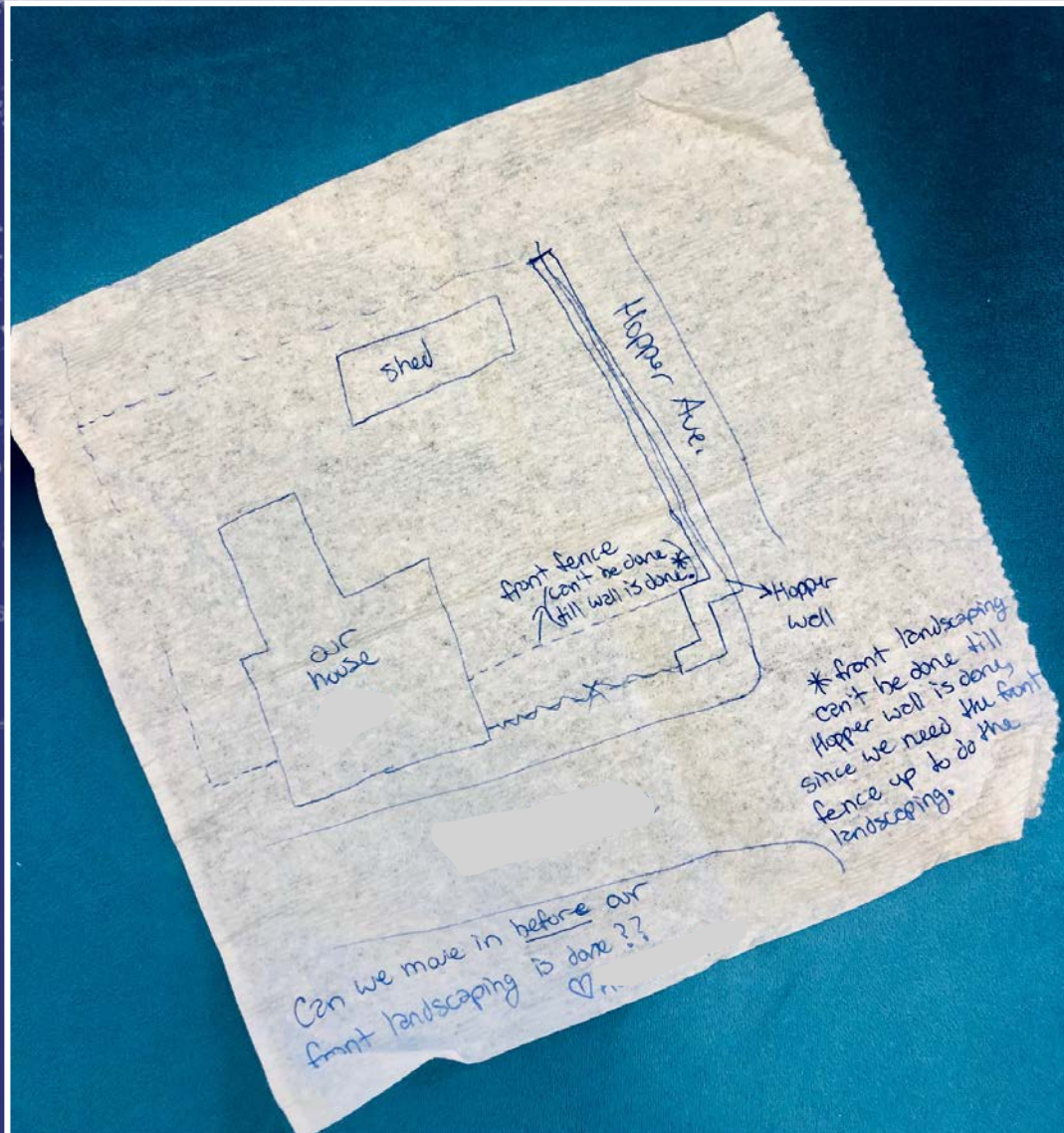
36 Commercial Buildings

- ▶ Hotels
- ▶ Retail
- ▶ Office
- ▶ Restaurants
- ▶ Historic Structures
- ▶ Recreation Facilities

Housing Needs







Human in a Sociotechnical System

A Community With Questions

- ▶ Where can I get maps and plans for my neighborhood?
- ▶ What contractors are working near by?
- ▶ What work is the City doing near me?
- ▶ What are my building setbacks & design considerations?
- ▶ Does my HOA have to review my new design?
- ▶ What's the status of my permit?
- ▶ How do I know if there's an easement on my property?
- ▶ Is the City replacing my water service?

Access to Data

srcity.org/rebuild

**Resilient City
Parcel Report
Search**



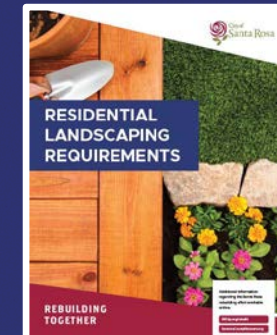
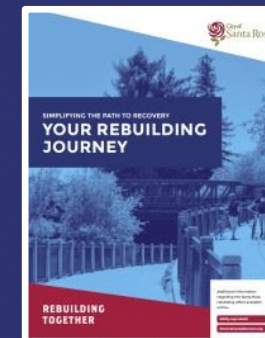
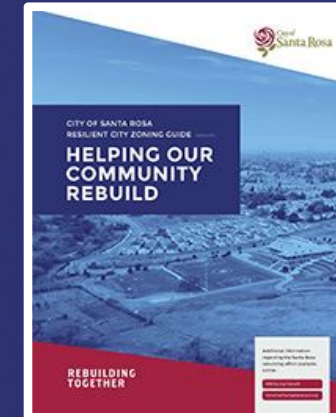
**Rebuild Data
Tracker**



**Resilient City
Recovery
Maps**



**FEMA Public
Assistance Project
Dashboard**



Guiding Citizens

Parcel Search Tool

General

Planning

Permits

Utilities

Documents

Utilities

Pressure Zones

Zone Name: ?

Fountaingrove Pressure Zone

Zone ID: ?

R3

Water Advisory Area: ?

Yes

Waterline Replacement

Service to be Replaced: ?

Yes

Service Replace Completed: ?

Yes

Water Meter Info: ?

New Polyvinyl Copper water service sized to accommodate up to a 1" water meter.

Capital Improvement Project: ?

[2222](#)

Service Status

Water

Meter Size

Most Recent Billing

Water - Residential - 5/8"

Oct 2017

Sewer

Service Type

Most Recent Billing

Sewer

Oct 2017

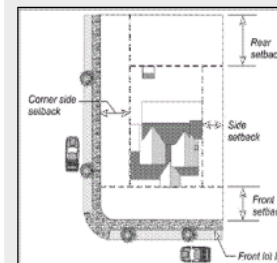
Planning

Zoning - Setbacks

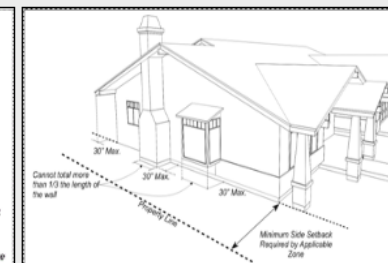
| | |
|------------------------------------------------|----------------------|
| Zoning District: ? | PD 93-004A-RC |
| Base Zoning: ? | R-1-6-RC |
| General Plan Land Use: ? | Very Low Residential |
| Subdivision Name: ? | Parker Hill Court |
| Recorded Map Lot #: ? | No Data |
| Lot Type Designation: ? | Not Applicable |
| Front Yard: ? | 15 ft. |
| Interior Side Yard 1st Floor: ? | 5 ft. |
| Interior Side Yard 2nd Floor: ? | 10 ft. |
| Corner Side Yard: ? | 15 ft. |
| Rear: ? | 15 ft. |
| Garage/Carport from Front or Corner Side: ? | 19 ft. |
| Lot Coverage (% of Lot buildings can cover): ? | 40% |
| Maximum Building Height: ? | 35 ft. |

Setback notes: (1) All information is for Primary Structures only. (2) Where setbacks are adjacent to sidewalk, setbacks are measured from back of sidewalk.

Title 20 Zoning Standards



Location and Measurement of Setbacks



Examples of Allowed Projections into Side Setbacks

Blending spatial & non-spatial data sources into a streamlined customer self-help tool



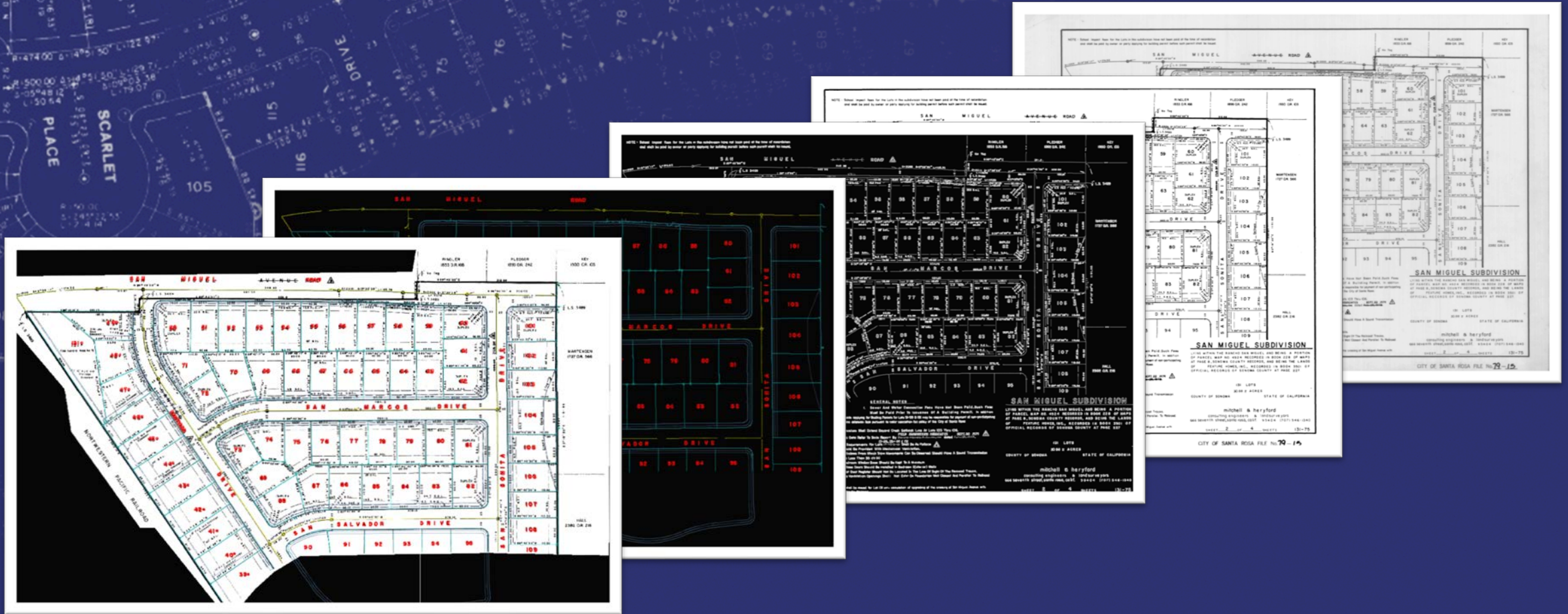
Resilient City Recovery Maps

Interactive Maps Overview to Aid in the City's Recovery from the October 2017 Wildfires.

Aerial Imagery Collection




Digitization of Plan Sheets



Project Planning

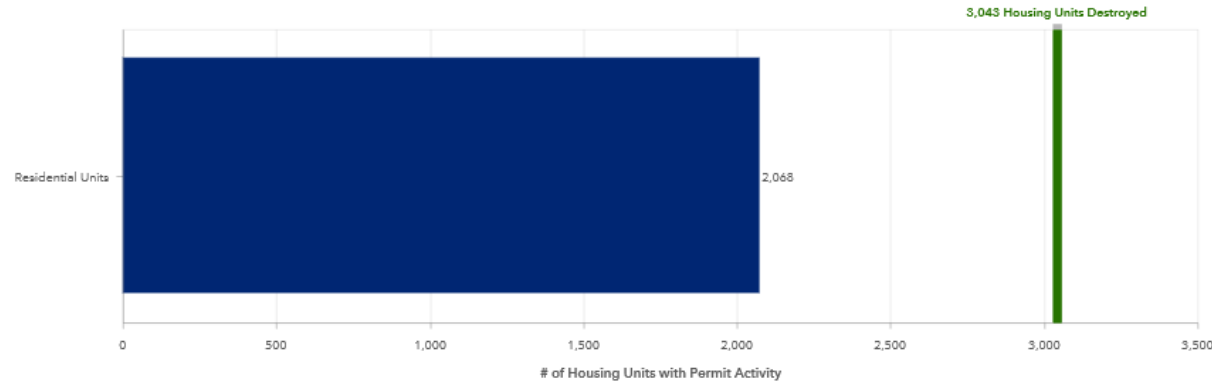


Recovery Dashboard

 Resilient City Recovery Reporting Dashboard Data Tracking for the City of Santa Rosa's residential recovery progress after the October 2017 California Wildfires

Housing Unit Totals

Chart compares the number of Residential Housing Units destroyed in the wildfires with the number of Housing Units actively in the rebuild process.



Housing Unit - Permit Progress **Unit - Rebuild Totals** Units - Area Totals Units - Single Family Units - ADU Units - Multi-Family Units - Coffey Park Units - Fountaingrove

Total Permitted
Units

2,068

Total Active Parcels
Residential Parcels in the permit

1,813

Accessory
Dwellings

65 units

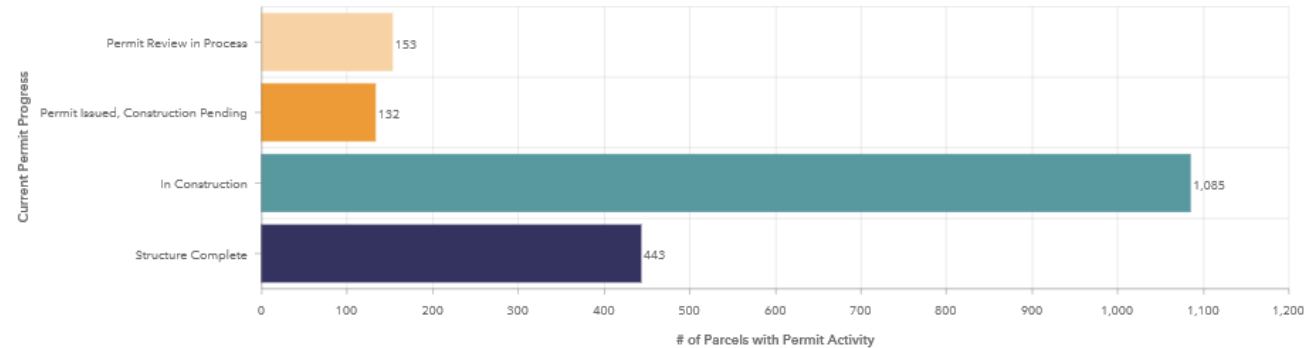
Temporary Housing
Count of Temporary Housing

68 units

Counts Background Information

Progress by Parcels Rebuilding

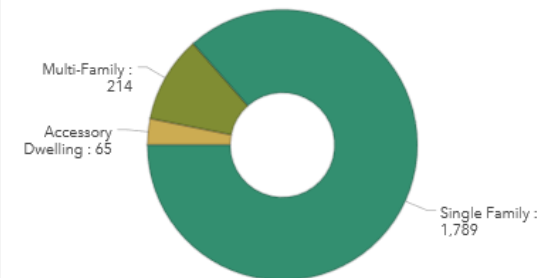
Chart depicts the number of Residential Properties (parcels) in each respective stage of the active permit process.



Parcel - Permit Progress **Parcel - Rebuild Totals** Parcels - Area Totals

Residential Housing Units by Type

Chart indicates housing unit permit activity by type of Unit



Units by Type Building Plan Changes



Lessons Learned

- ▶ Community engagement – listen and respond
- ▶ The importance of GIS coupled with robust & concise datasets
- ▶ The importance of digitized records and mapping to support hazard mitigation planning
- ▶ Be proactive

Special Thanks

C2 Group



C2 GROUP

<https://www.c2group.us/>

Questions?

[SRcity.org/Rebuild](https://srcity.org/Rebuild)

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