RECOVERY LESSONS: 2017 TUBBS FIRE & 2018 CAMP FIRE

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Woodland North Highlands Healdsburg Calistoga Sacramento CITY OF SANTA ROSA Florin oSt Helena O Dixon Santa Rosa Sebastopol O Vacaville Rohnert Elk Gr Napa Park o Sonoma 5 Fairfield Petaluma O Incorporated in 1867 Population of 178,127 Novato Vallejo Pittsburg Antioch Located 50 miles north of San Francisco, CA Point Reyes National Seashore San Rafael Sto Berkeley Association Concord Brentwood 42 square miles of land Oakland San Francisco Tracy Dublin San Bruno Hayward Livermore 580 \$78,672) San Mateo Fremont 20 mi Redwood Palo Alto City San Jose Sunnyvale San Jose ©2011 Google - Map data ©2011 Google - Map data ©2011 Google - Map data ©2011 Google

2017 TUBBS FIRE

Started at 9:45 p.m. on October 8, 2017 near Highway 128 and Bennett Lane in Calistoga, CA (SRA)

Daytime temperatures in the mid 80's

Moderate east winds

Nighttime temperatures did not predictably recover

- Sustained winds increased to 45 mph
- Gusts estimated at 75 to 90 mph on windward slopes

Fire travelled 12 nautical miles to the Santa Rosa City limits in 3+ hours $\,$

Fire did not spread linearly, rather it spread in multiple directions simultaneously impacting several City neighborhoods

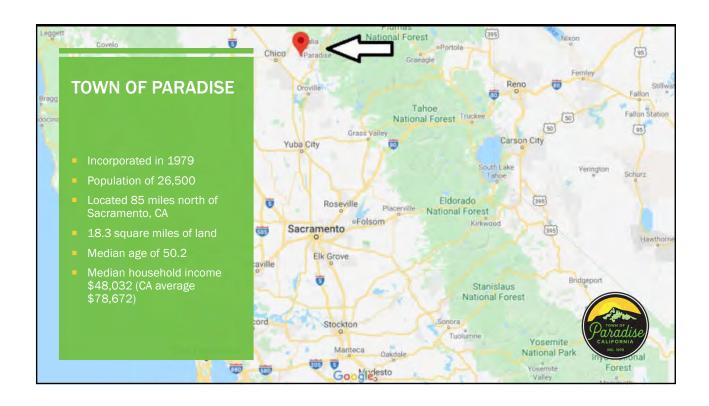


2017 TUBBS FIRE

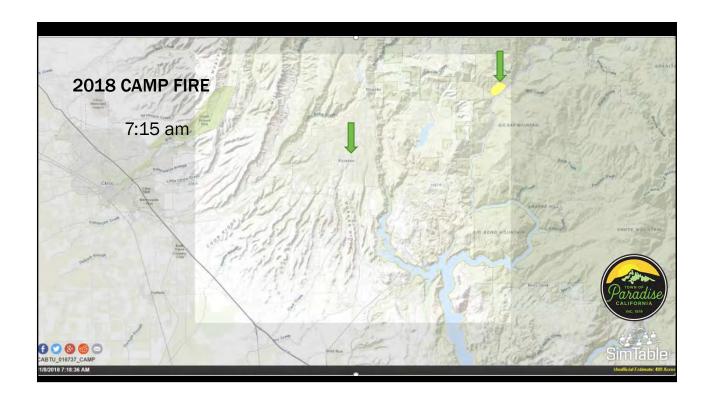
- 36,087 Acres Burned
- Within the City Limits:
 - Fatalities 9
 - Buildings Destroyed 3,098
 - Single Family Homes 2,668
 - Multifamily Homes 209
 - Mobile Homes 190
 - Commercial Buildings 31
 - 5% of housing stock lost
 - 25% of hotel inventory lost



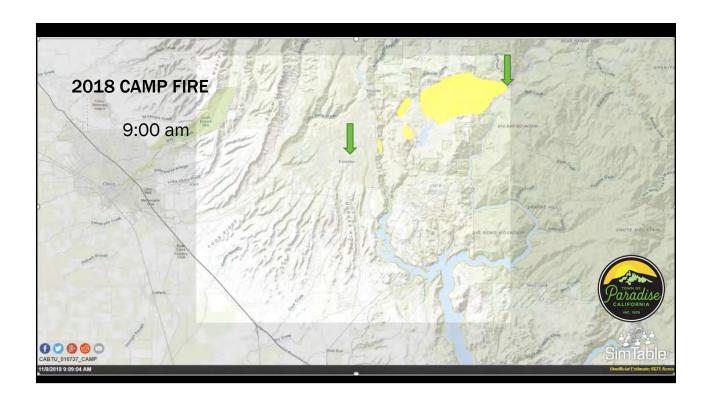




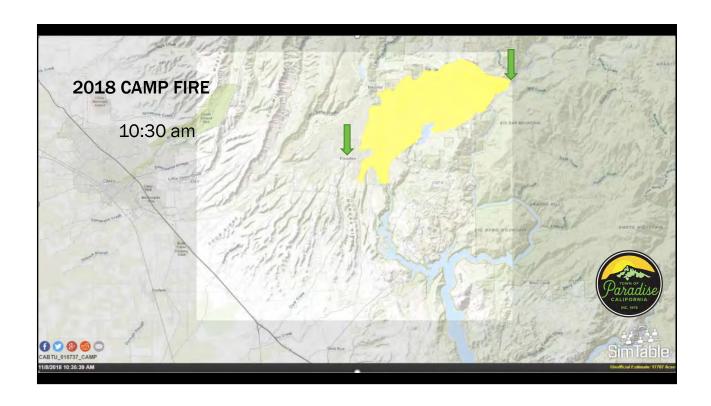




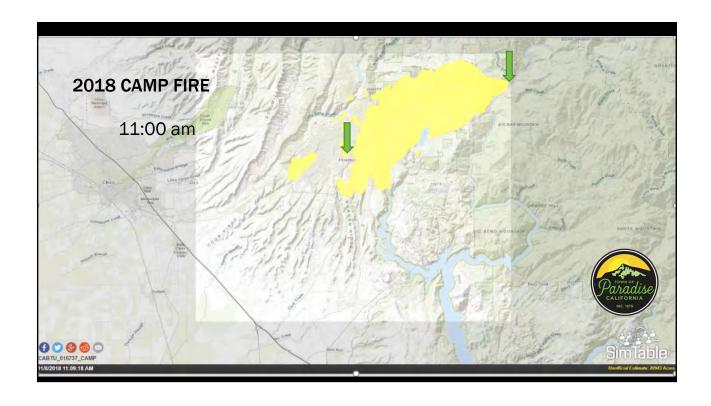




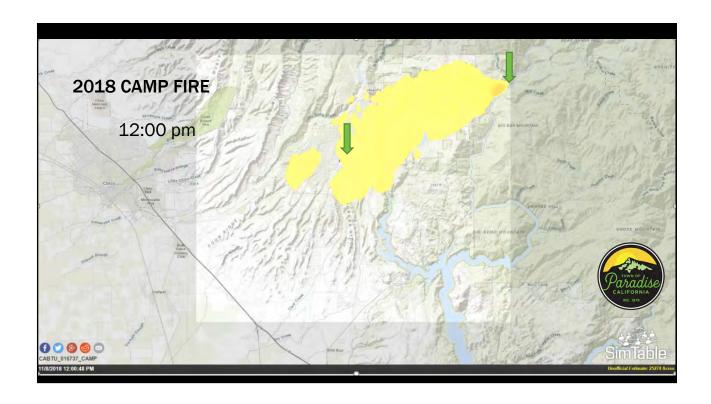




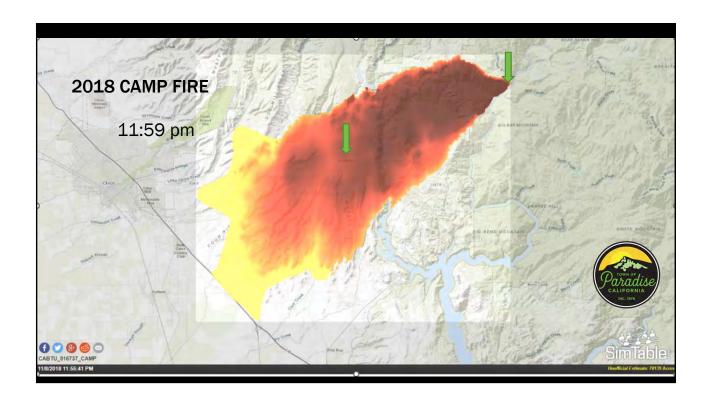


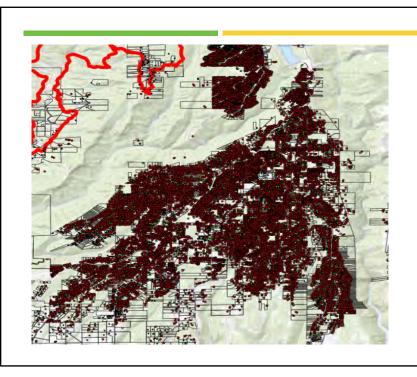












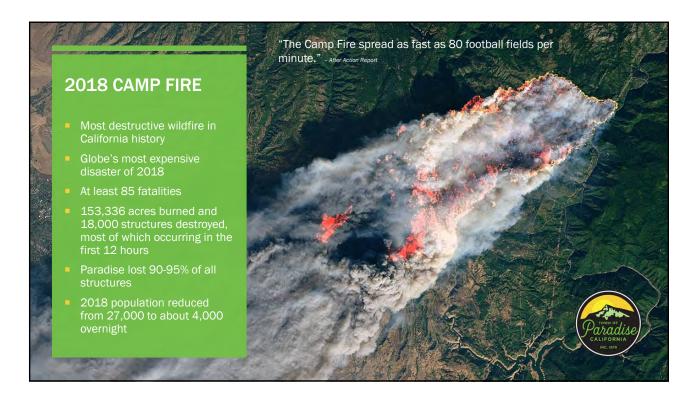
DESTROYED STRUCTURES

- Red Dots = Destroyed Structures (14,352)
- Green Dots = Standing Structures (~3,500)









RECOVERY TUBBS FIRE

LEANING INTO RECOVERY EARLY

Look Ahead

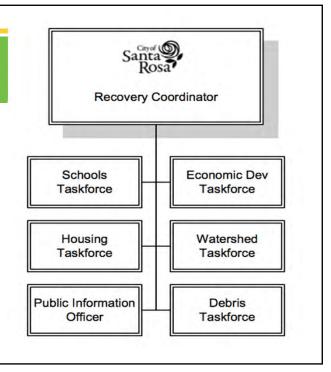
Planning for recovery while still in emergency response mode

Asking Essential Questions

What is the nature of the recovery

Organizational Structure

- City Manager designated recovery lead
- Internal staff take on recovery roles
- Supplemented with outside assistance from consultants



COUNCIL SUPPORT

Urgency Ordinances adopted by City Council to expedite rebuilding process

- Expedites review for hillside development & design review
- Waives fees for discretionary planning, demolition and temporary housing permits
- Allows residents to live in temporary housing, (RVs, tiny homes, etc.) on their property while rebuilding
- Incentivizes construction of new ADUs; allows residents to build detached ADUs to live in while rebuilding main residence

- Resilient City Permit Center
 Council approved expedited contract for outside firm to operate separate permit center exclu sively for fire survivors rebuilding homes and/or
- Permit center opened November 28, 2017



COUNCIL SUPPORT

Established Rebuild/Build Council Ad Hoc Committee

Appointed members meet weekly with City recovery staff

Weekly Fire Recovery & Rebuilding Updates

Added as standing item on City Council weekly meeting agenda





BENCHMARK PROGRESS

Utilizing available technology, developed tools to track recovery efforts

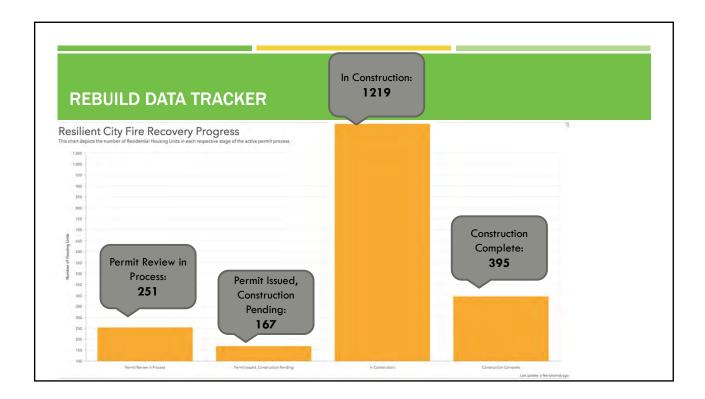
- · Tools are public facing
- Easily accessible to all staff, citizens, and members of the media

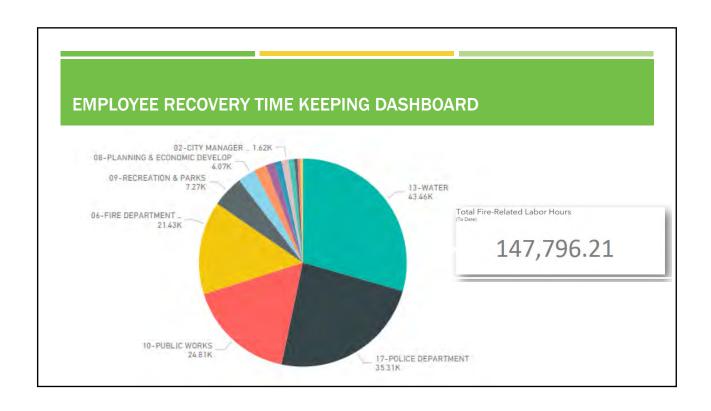






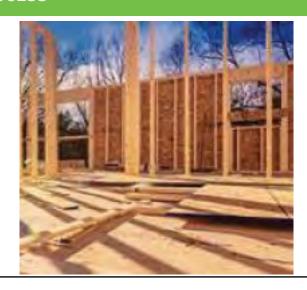






STREAMLINED PERMITTING PROCESS

Santa Rosa reaches out to property owners



COMMUNITY OUTREACH Over 250 Rebuild & Recovery meetings Welcome Home Package Welcome Home Package



EARLY DETECTION

- Camera Network System:
 - alertwildfire.org/northbay
- Remote Automated Weather Stations

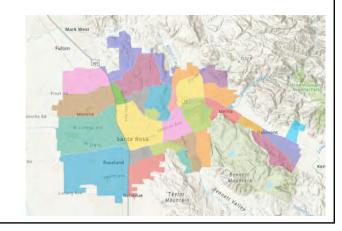
Station	Time	RH	Wind	Duration	Temp	Fuel	Elev	Zonet
Los Altos	9:10AM	19%	NE2G7mph	010	58	9	539	CA508
San Carlos	8:49AM	11%	N5mph	1 5	59		3	CA508
San Francisco	8:56AM	25%	E17mph	6 9	61		10	CA508
Palo Alto	9:47AM	20%	NE7mph	0 2	61		7	CA508
Oakland	9:53AM	8%	ESE6mph	7/12	66		3	CA508
Mountain View	6:55AM	14%	N22G30mph	3 5	55		33	CA508
Hayward	8:54AM	9%	E10mph	9 14	62		46	CA508
Oak Ridge	9:33AM	5%	NNE12G25mph	7 13	60	8	1890	CA507
Atlas Peak	9:29AM	10%	NNE10G32mph	10 18	54	7	1934	CA507
Middle Peak	9:36AM	9%	NNW14G23mph	13 14	52	8	2339	CA507
Big Rock	9:33AM	6%	SE8G17mph	6 14	62	7	1500	CA507
Woodacre	9:51AM	10%	ENE6G11mph	0 12	61	10	1400	CA507
Hawkeye	8:56AM	5%	NNE16G35mph	18 18	57	7	2024	CA507
Barnaby	9:11AM	7%	NW4G7mph	0 11	61		810	CA507
Novato Fire	9:31AM	7%	N5G8mph	7 14	65	6	482	CA508
Petaluma	9:35AM	8%	SSW7mph	7 13	63		89	CA508
Novato	9:35AM	6%	N7mph	7 12	66		3	CA508
Calfire Portable 14	9:49AM	6%	NW5G16mph	2 17	65	6	280	CA508
Santa Rosa	9:29AM	6%	NE9G29mph	15 18	62	7	599	CA508
Santa Rosa	9:53AM	5%	NNE20G29mph	17 18	67		125	CA508
Napa	8:54AM	10%	VRB3mph	15 18	62		33	CA506
Olema Valley	9:13AM	56%		010	47		37	CA505





ALERT/WARNING/PREPARATION

- Change in philosophy
 - Pre-positioning of resources
 - Controlled burns
- Alerting tools:
 - City access to IPAWS (WEA/EAS/NOAA)
 - SoCoAlert
 - Hi-Lo Sirens
 - (Nixle and Social Media)
 - www.srcity.org/emergency
- Early evacuations
- Pre-designated Evacuation Zones
 - www.srcity.org/evacuation-zones



RECOVERY CAMP FIRE

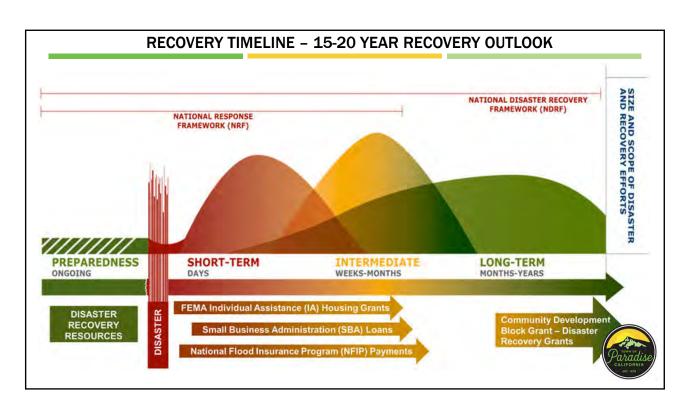


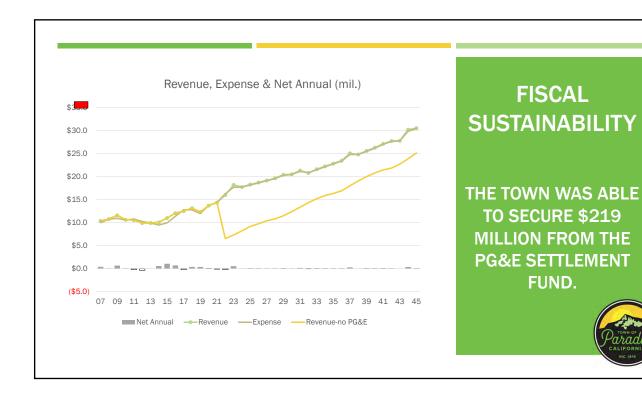
RECOVERY

- Immediately following the fire, infrastructure damage was concerning
- Town of Paradise the municipal corporation had just lost nearly all population and associated revenues for at least two decades
- Financial solvency was a top concern









FEDERAL AND STATE ASSISTANCE

- Water System Repair
- Debris Removal
- Hazard Tree Removal
- Road Repairs





QUICK PLANNING, FORWARD THINKING.

- Safer
- Better
- Stronger
- Welcoming
- Greener



- Drafting the Plan started in January 2019
- Extensive Community Outreach
- Adopted by the Town Council in June 25, 2019
- 18 Town-Led Projects and 22 Partner-Led Projects across all aspects of the Town's Recovery

BUILDING RESILIENCY CENTER





LESSONS LEARNED

- Employee Care
- Plan for the Worst
- Stress TestInsurance
- Communication
- Regional Partnerships



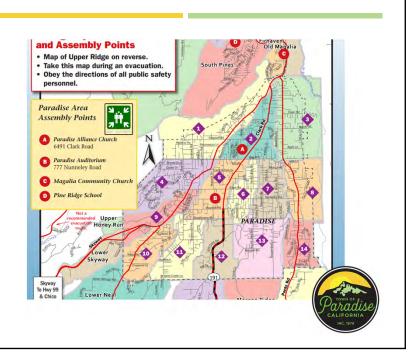
EMPLOYEE CARE

- All Town Staff impacted
- Most lost homes
- Logistical/Housing issues
- Trauma





- The Camp Fire far surpassed our "worst case scenario"
- Plan for what you think is the worst that could happen, then multiply it by 10



STRESS TEST YOUR INSURANCE

- Challenges with insurance
- Revenue Replacement
- Property Coverage



COMMUNICATION

- Most important non-first responder function in an emergency
- Accurate and timely
- Hard to get it right
- Frequent, reliable, vetted
- Listening to each story



REGIONAL PARTNERSHIPS

- 50,000 peopleevacuated within 6hours on Nov 8, 2018
- Challenges with interjurisdictional
- Surrounding counties received thousands of evacuees





SO MUCH HAS BEEN ACCOMPLISHED

- 3.6 million tons of debris removed by Nov 2021
- First Rebuild permit issued March 2019
- Building Resiliency Center opened Jan 2020
- Hundreds of thousands of hazard trees removed
- \$93 Million received from FEMA and FHWA for road repair
- Transportation Master Plan Completed
- Rebrand of Town Seal and Marketing

- 350 businesses reopened
- Sustainable Fiscal Model created
- Sewer Environmental Impact Report in process
- Early Warning System construction funding awarded – out to bid now
- Walkable downtown project underway
- Undergrounding utilities underway (PG&E, Comcast and AT&T) to be completed 2025



AND THERE'S SO MUCH LEFT TO DO!

- Sewer connection to City of Chico
- \$800 million in unfunded road projects
 - Connecting dead end roads
 - Improving Evacuation Routes
- Early Warning System Construction and implementation/education
- Roadway reconstruction of 30 miles per year
- Economic Recovery and Development Strategy

- Home Hardening Program
- Defensible Space Code Enforcement
- Category 4 Hazard Tree Removal
- Affordable Housing and Insurance
- Continue supporting residents rebuilding!





THANK YOU!