

LED Streetlight Upgrade City of Calistoga

August 19, 2016

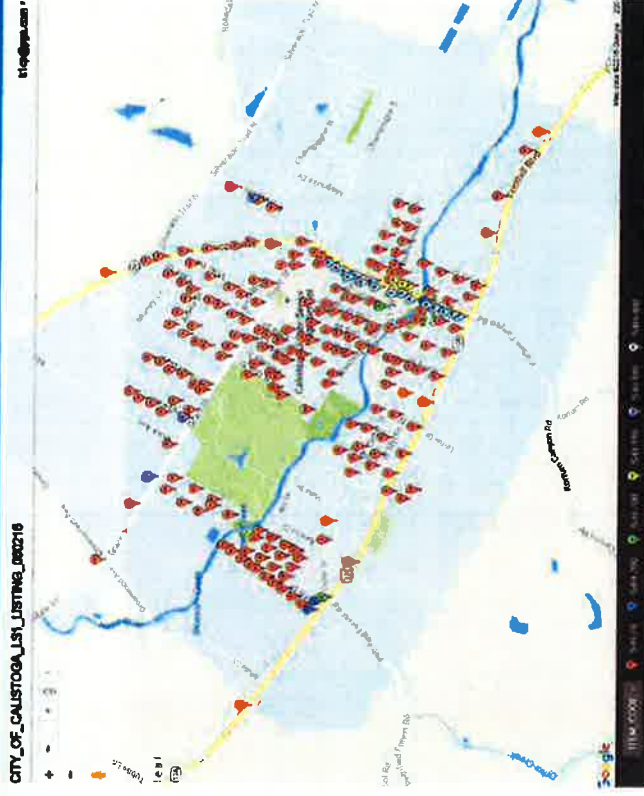


Together, Building
a Better California

Program Overview

LED Streetlight Upgrades

- CPUC approved Program to replace approximately 150,000 PG&E owned, High Pressure Sodium (HPS), non-decorative fixtures with high efficiency LED fixtures
- 50,000,000 kWh estimated annual energy savings across PG&E Territory
- Voluntary Program – Customer of Record must opt-in to participate
- May change fixture wattage – PG&E to provide inventory
- Expected annual savings of about **74,668 kWh** and **\$7,509**



Existing HPS Wattage	LED Equivalent Wattage	Per Fixture Annual Savings	Quantity of each fixture type	Annual kWh Reduction by fixture type	Amount & savings by fixture type
70 Watt HPS	29 Watt	\$3.23	197	46334.4	\$637.22
100 Watt HPS	34 Watt	\$22.65	3	1076.4	\$67.96
150 Watt HPS	56 Watt	\$42.45	3	1454.4	\$127.36
200 Watt HPS	73 Watt	\$70.36	6	3974.4	\$422.14
400 Watt HPS	139 Watt	\$168.02	17	21828	\$2,856.38
TOTAL			226	74,668	\$7,509.82



LED Light Fixtures

- Manufactured by CREE
- Substantial energy & GHG reductions
- Long product warranties expected to result in lower maintenance costs
- Stable light output
- 4,000 Kelvin CCT, CRI 70
- Full cutoff, low glare and minimal light trespass
- 29, 34, 56, 73, 101 & 139 Watt fixtures

Before

After



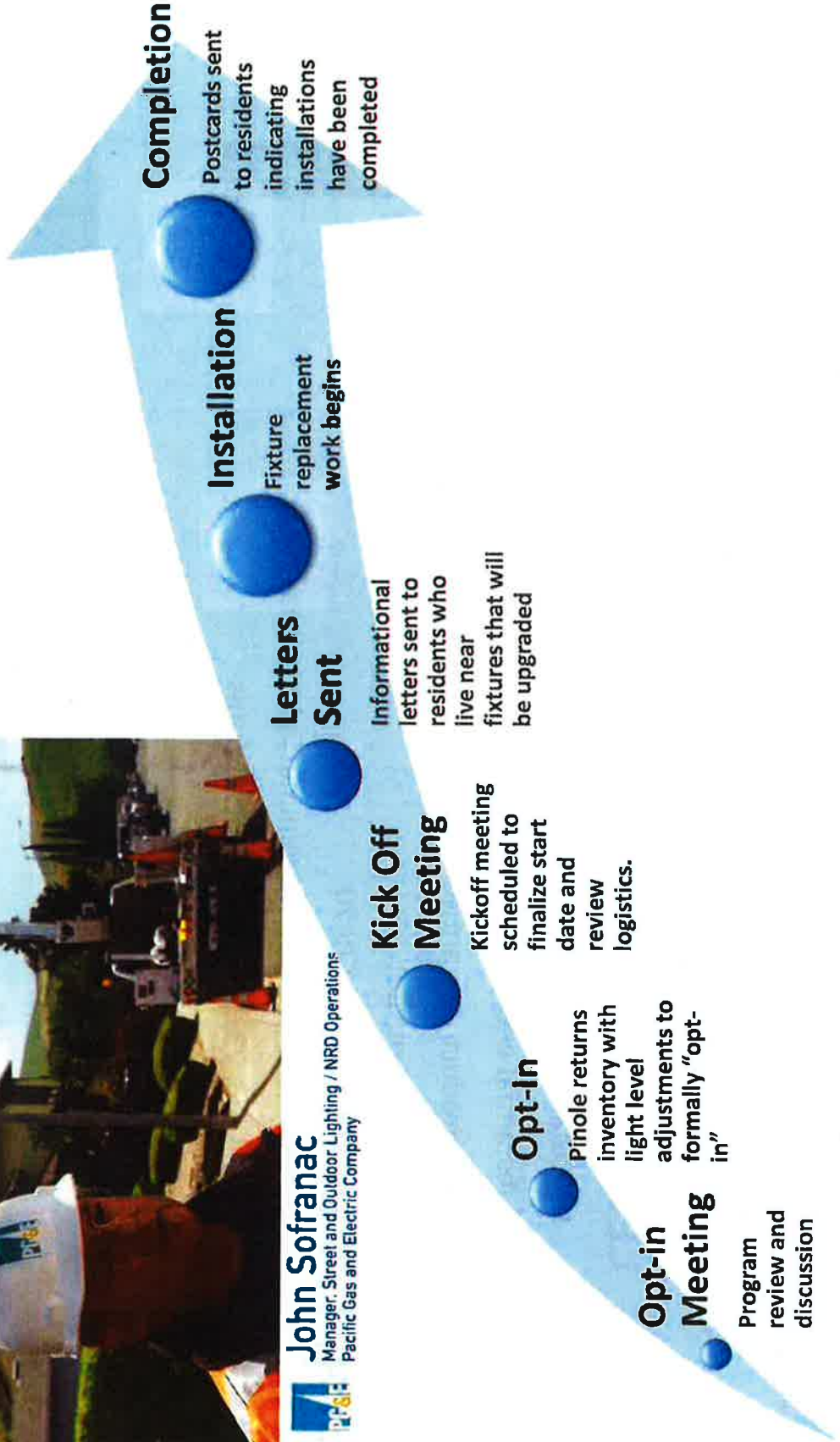


Schedule



John Sofranac

Manager, Street and Outdoor Lighting / NRD Operations
Pacific Gas and Electric Company



Installation of LED Lights

- Approximately 226 PG&E owned lights (LS1) (Does not include decorative or any City owned lights (LS2))
- Bucket trucks with 1 or 2 person crews
- Less than 10 minutes per lamp fixture
- No parking and traffic impacts are anticipated
- Special cases (school zones, etc.) will be coordinated
- Completion within 2-3 weeks (weather pending)



Outreach Strategy

Method	Audience	Timing
Pre-installation letter & fact sheet	Direct to Residents	Mailed 1 to 3 weeks in advance of work
Website	Self Service	Ongoing at: pge.com/streetlightupgrade
Videos	Self Service	Ongoing at: pge.com/streetlightupgrade
Social Media – Facebook, Twitter, Instagram	Broad	Content Available
Joint Press Release	Broad	Usually the day before we start field work
Post-installation post card	Direct to Residents	2 weeks post completion
Post-installation telephone survey	Direct to Residents	2-4 weeks post completion

Inquiry Management

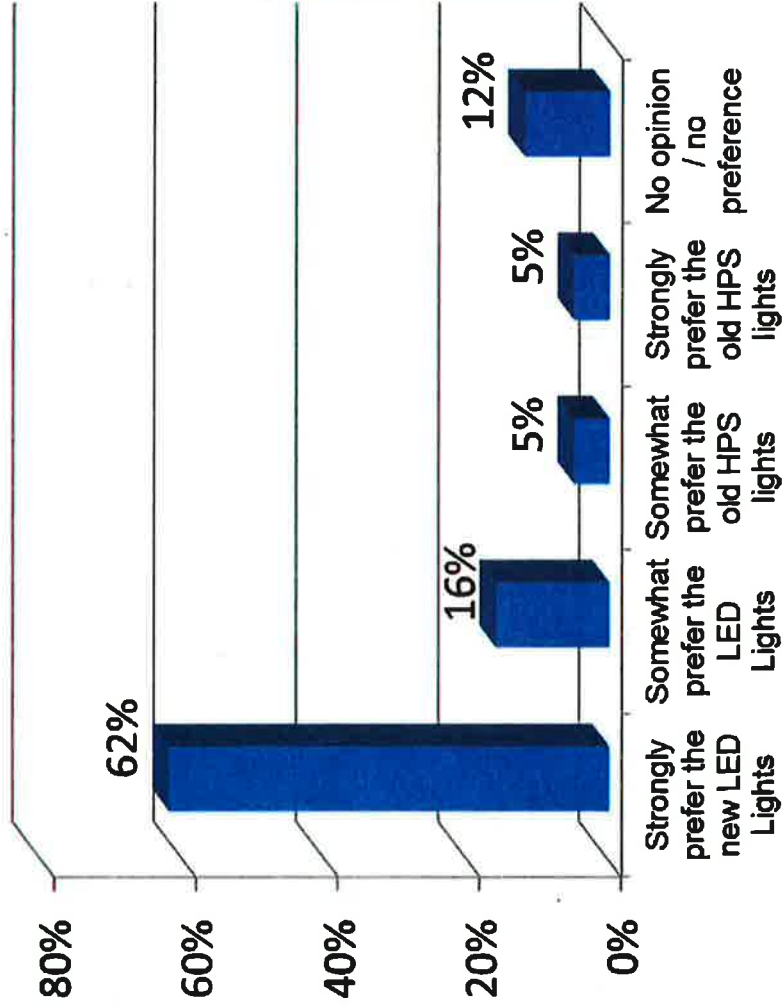
- Local Specialist (Tara Mortimeyer) will receive and manage inquiries
- Typical inquiries include:
 - General information request
 - Too bright
 - Light intrusion
 - Not enough light
 - Add a light
 - Adding shields or changing wattage is up to the City
 - Specialist will review inquiries with City staff
 - Post installation field changes are \$200 per fixture while we are still in the area





Survey Results

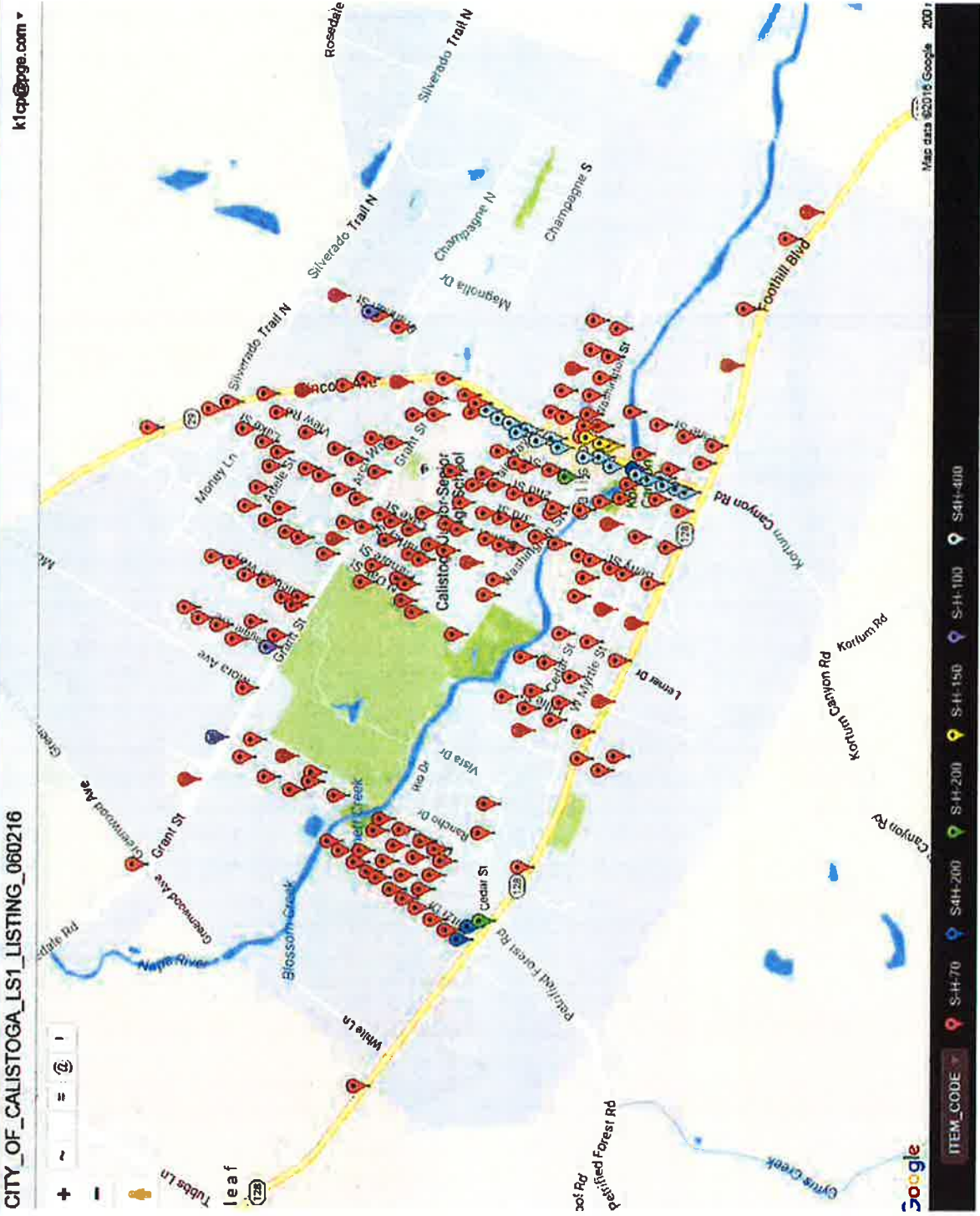
1,175 Customers participated in phone survey



Appendix



Streetlight Locations





How to Opt In

Wattage changes-complete column N, if no changes confirm opt in via email to PG&E

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
OF	PERSONNAM	ACC	TNU	RADGENIL	FX_COD	STATIL	DESC_ADDR	MAPNUMRE	RATE	SCORE	ITEM_CODE	UNIT	SIZE	LITE	TYPE	DESI	RELEU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NL	CITY OF CALUSTOGA	0626	7915	PS37	1	A	DUNWAL LIT100 WASTE WATER TREATMENT PLANT	FF32	0L1		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	150		1	A	BERRY ST & CEDAR ST NWC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	147		1	A	BERRY ST ON OPP	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	31		1	A	CEDAR ST & SILVER ST NWC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	88		1	A	CEDAR ST & GOLD ST NWC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	89		1	A	CEDAR ST & OAK ST NEC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	214		1	A	OAK ST & SCHOOL ST NEC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	177		1	A	CEDAR ST 1812	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	205		1	A	CEDAR ST & LULLU, CALUSTOGA ST NWC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	365		1	A	CEDAR ST 1811	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	159		1	A	LAKE ST 1414	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	32		1	A	MYRTLE ST & SILVER ST NWC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	83		1	A	MYRTLE ST 1622	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	153		1	A	MYRTLE ST & OAK ST NEC	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	152		1	A	MYRTLE ST 1816	FF313	LST-A		S-H-70	70					
NL	CITY OF CALUSTOGA	5232	270		1	A	MYRTLE ST & LILLE ST NWC	FF313	LST-A		S-H-70	70					

1) ALL ELIGIBLE FIXTURES ON MAP 2) ALL ELIGIBLE FIXTURES ON MAP 3) SUMMARY OF ELIGIBLE LIGHTS 4) ALL ACTIVE BILLING

