

PG&E and San Mateo County – Pacifica

Community Partnership and Education

Scott Hart – Local Government Relations
Mike Kerans – Supervising Gas Engineer
Stephen Kwong – Gas Distribution Engineer





PG&E's Natural Gas System

PG&E's pipeline network is one of the largest in the US. If built in a straight line it would run from San Francisco to Boston and back 15 times.

6,750 miles of
transmission
pipeline

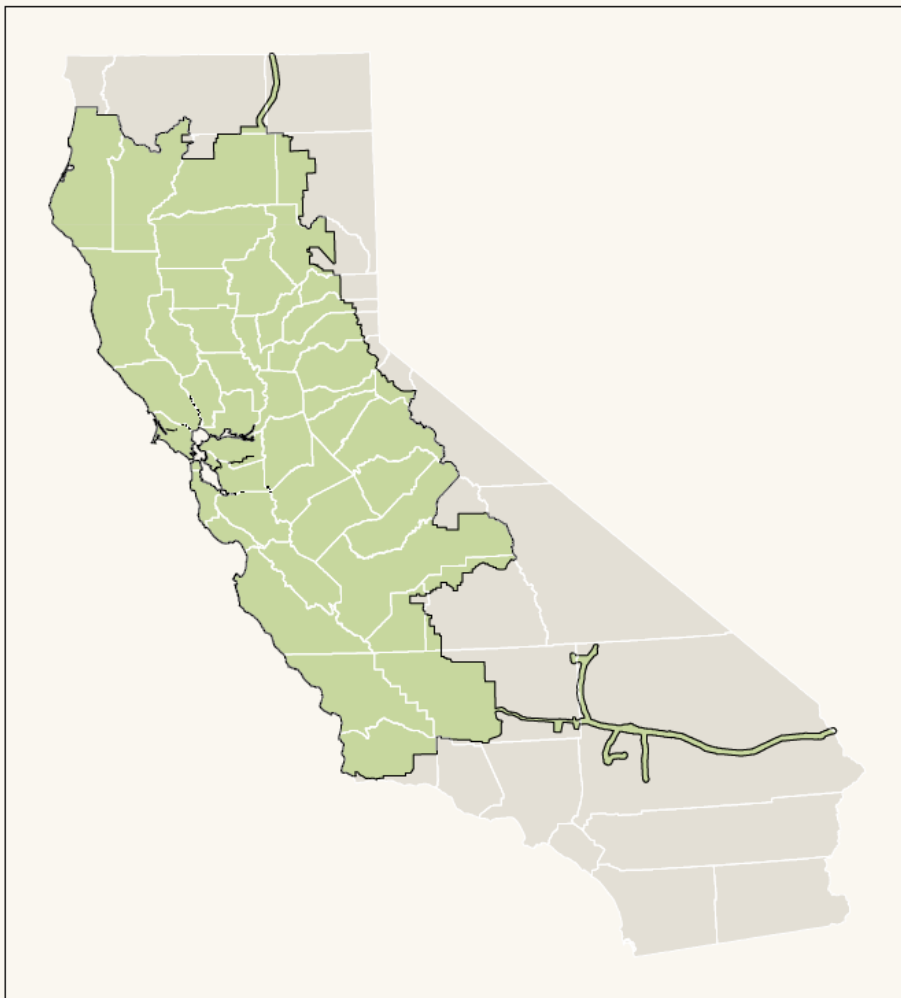
42,000 miles of low-pressure
distribution pipeline

More than 3.3 million very low-pressure service lines

970 billion cubic feet (BCF) of gas delivered each year (2.6 BCF/day)



PG&E's Natural Gas System



Gas Transmission Service Area

Three components:

Backbone system 

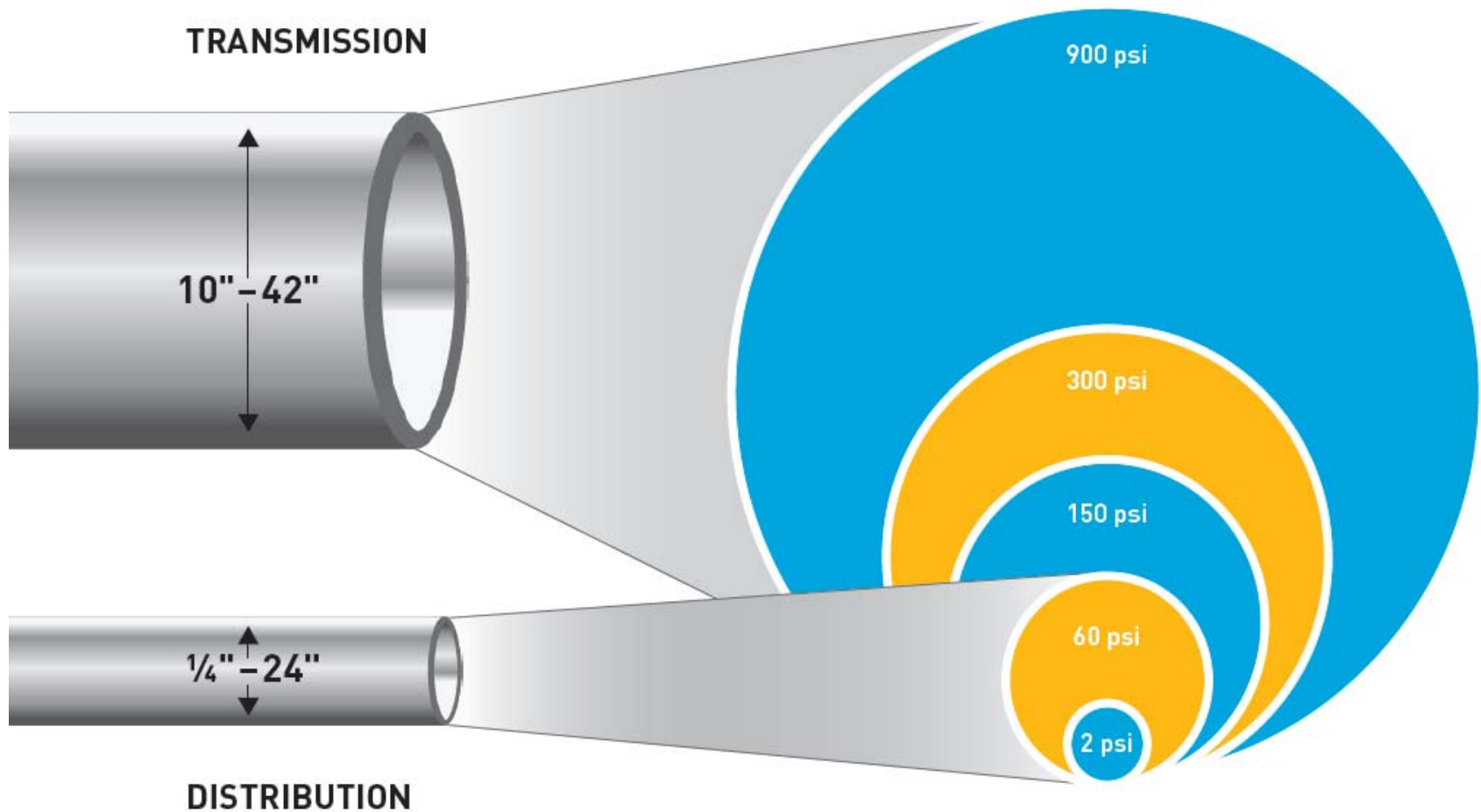
Gas storage facilities 

Local transmission lines 





Pipelines: Transmission vs. Distribution



These represent general sizes and pressures.



PG&E's Gas System in San Mateo County

Service Area: 467 square miles

Population: 750,000

Cities: Atherton, Belmont, Brisbane, Burlingame, Colma, Daly City, East Palo Alto, Foster City, South San Francisco, San Bruno, Pacifica, San Mateo, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Pescadero, Portola Valley, Woodside, and Redwood City

PG&E Employees: 615

<u>Gas Service Agreements</u>	
Residential:	262,918
Non-residential:	14,118
Total:	277,036

<u>Gas Lines (approx. miles)</u>	
Distribution:	2,000
Transmission:	100
Total:	2,100



Key Initiatives to improve the safety and reliability of our gas service.



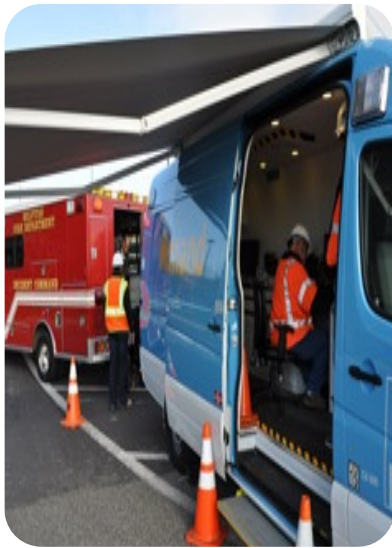
Pipeline Safety Verification



**Infrastructure Upgrades
Valve Automation**



Key Initiatives to improve the safety and reliability of our gas service.



Enhanced Emergency Response



Modern Data Management



Gas Control Center



Our Progress – The Metrics

Improving transmission pipeline records

- Digitized nearly **4 million records**, going back many decades
- Validated the maximum allowable operating pressure of all **6,750 miles** of the entire gas transmission system
- Completed a centerline survey of all **6,750 miles** of transmission pipeline

Testing and replacing pipelines and valves

- Replaced **107 miles** of transmission pipeline
- Validated **658 miles** of transmission pipeline
- Installed **150 automated valves**

Increasing visibility and control of our gas system

- Opened new 42,000 square-foot Gas Control Center in San Ramon where transmission, distribution, and dispatch works side-by-side 24/7



Our Progress in San Mateo County

Validated the safe operating pressure for all 100 miles of transmission pipeline in San Mateo County

Completed through 2013

Pipeline replaced	1.6 miles
Valves automated	20 valves
Pipeline hydrotested	41.3 miles

Planned for 2014

Pipeline to replace	2.91 (2015, 4.48 miles)
Valves automation	4 valves
Pipeline to hydrotest	0.13 miles
ILI Upgrades / Tests	6.5 / 4.04 miles



Enhancing the Safety of Our Gas Transmission System

Transmission Integrity Management Program (TIMP):

a comprehensive, systematic and integrated integrity management program to enhance the safety of our pipeline system.

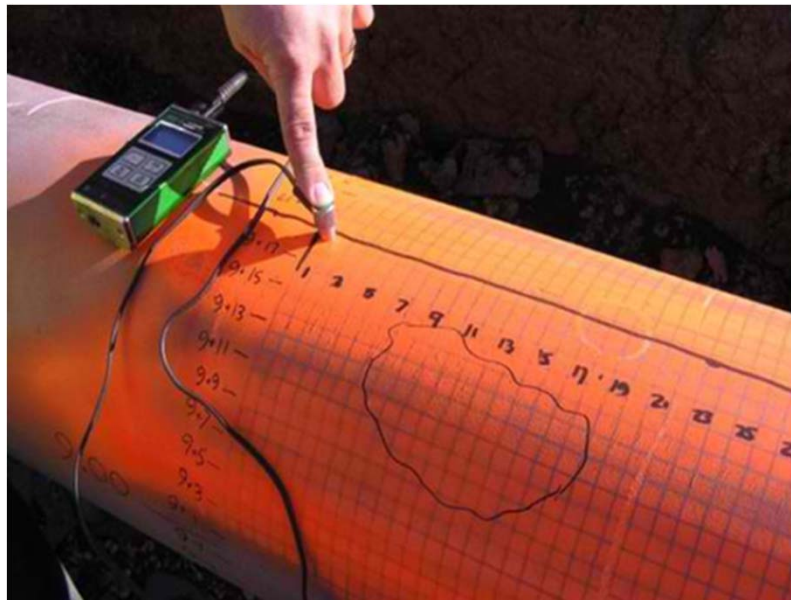
Information from TIMP helps us allocate resources for prevention, detection, and mitigation activities to enhance safety and reduce risk.

TIMP: Assessing Integrity

In-Line Inspection ⇨



Direct Assessment ⇩



Strength Testing ⇨





Regular Maintenance: Ensuring Safety and Reliability

- Leak surveys
 - Annually for routine maintenance
 - When gas odors are reported
- Leak repair
- Pipe patrol





New Technology: Picarro Leak Detection



2 minute video: [Picarro Demonstration](#)



Enhancing the Safety of Our Gas Distribution System

- **Distribution Integrity Management Program**
- **Gas Pipeline Replacement**
- **Third-Party Dig-In Mitigation**





DIMP: Third-Party Dig-In Mitigation

After determining the root cause of dig-in damage, PG&E identifies process improvements to reduce future damage, including:

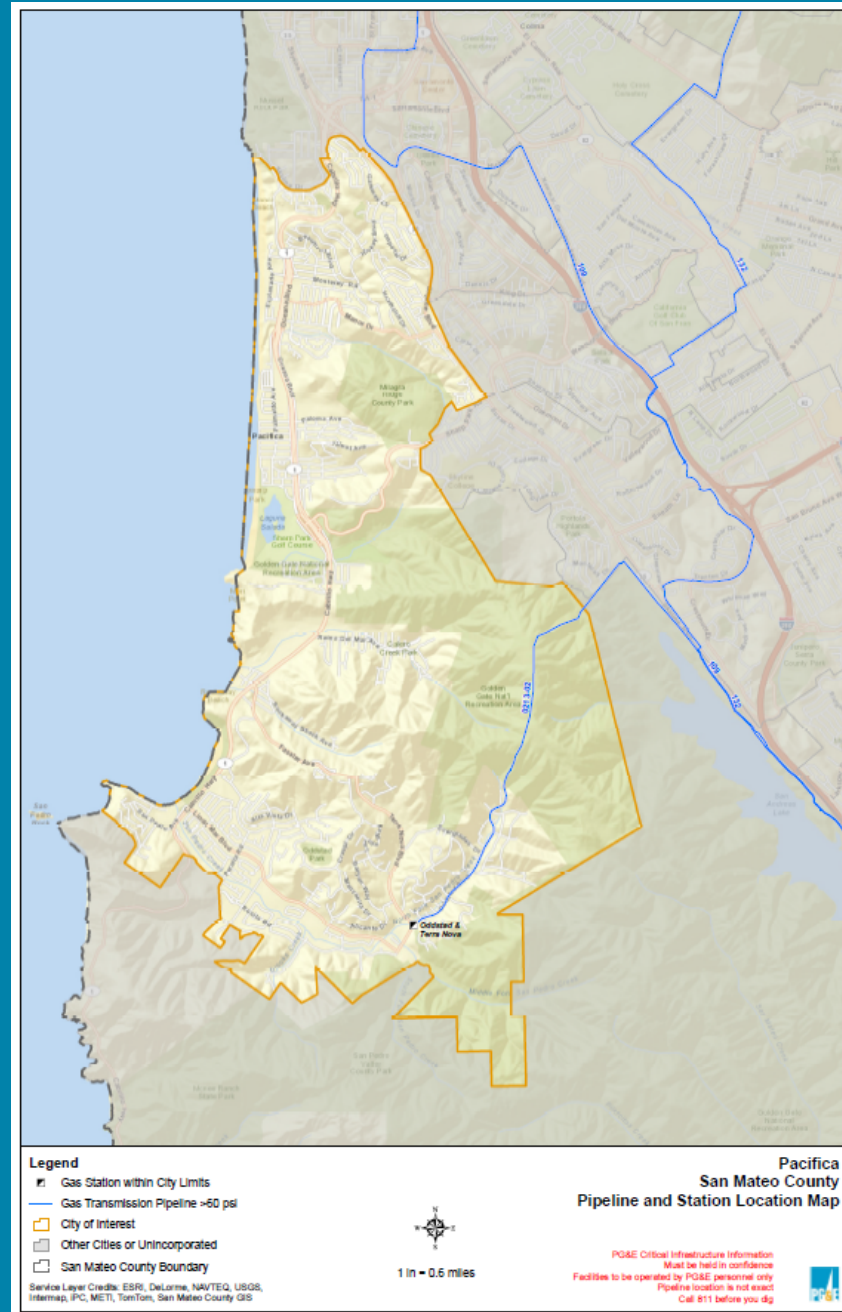
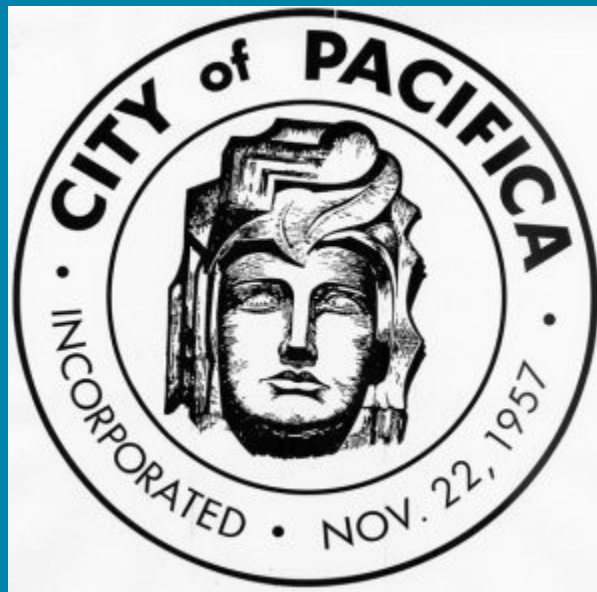
- Training of internal excavators
- Locating and marking underground PG&E facilities
- Educating customers and other key audiences

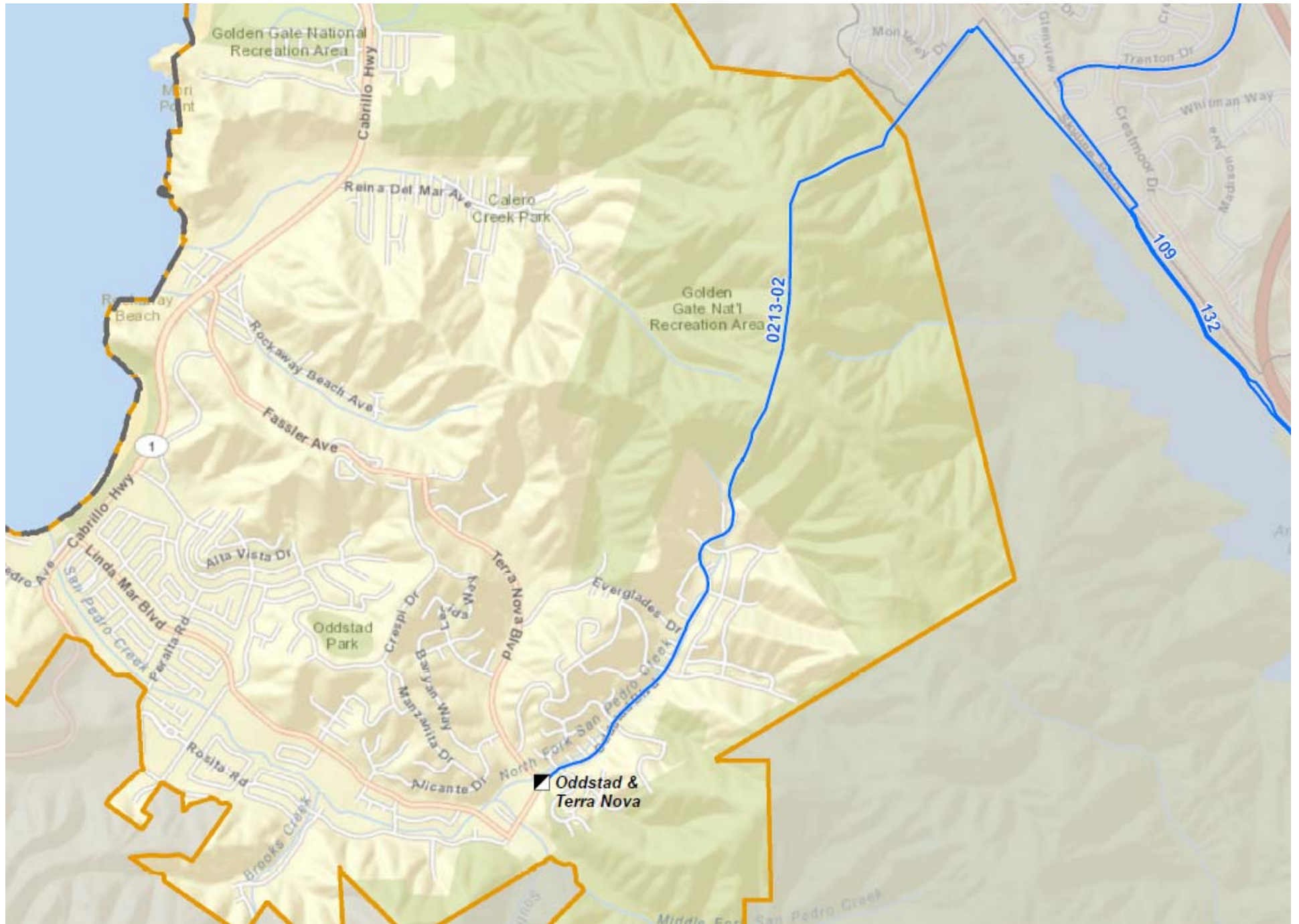


**Know what's below.
Call before you dig.**



City of Pacifica





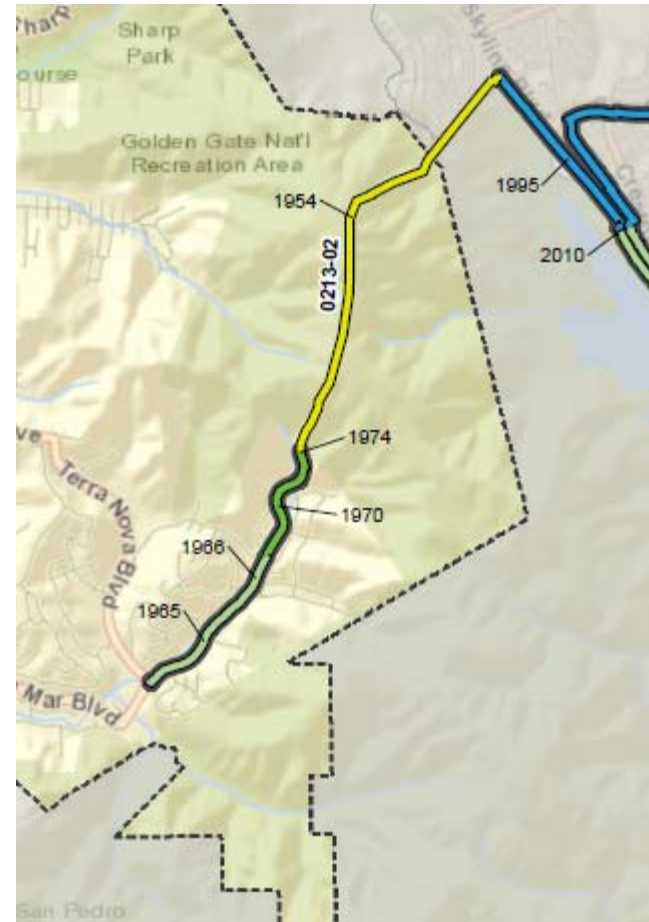


Maps



Pipe MOP

—	90 - 125 psig
—	145 - 175 psig
—	230 - 300 psig
—	330 - 375 psig



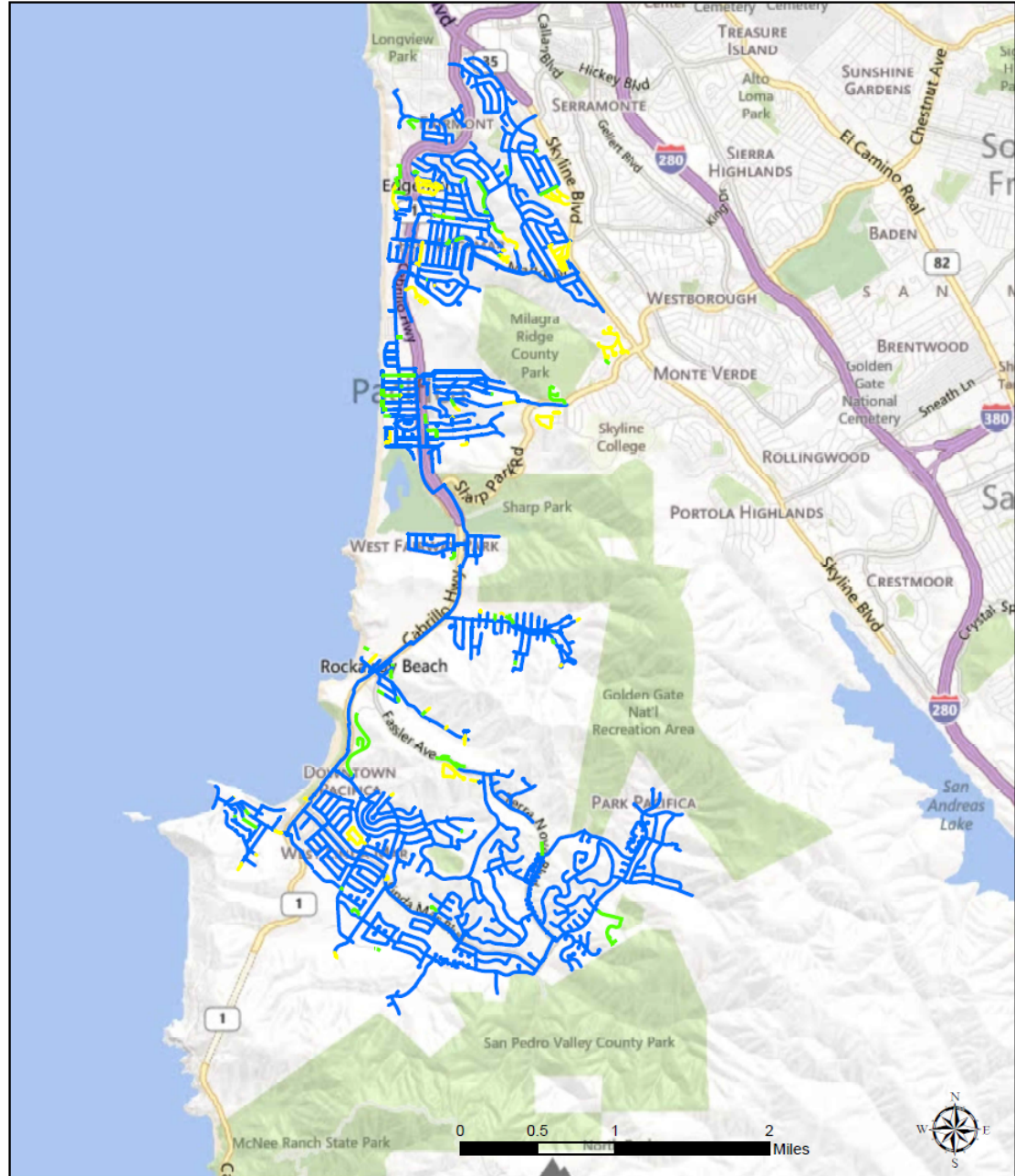
Pipe Install Date

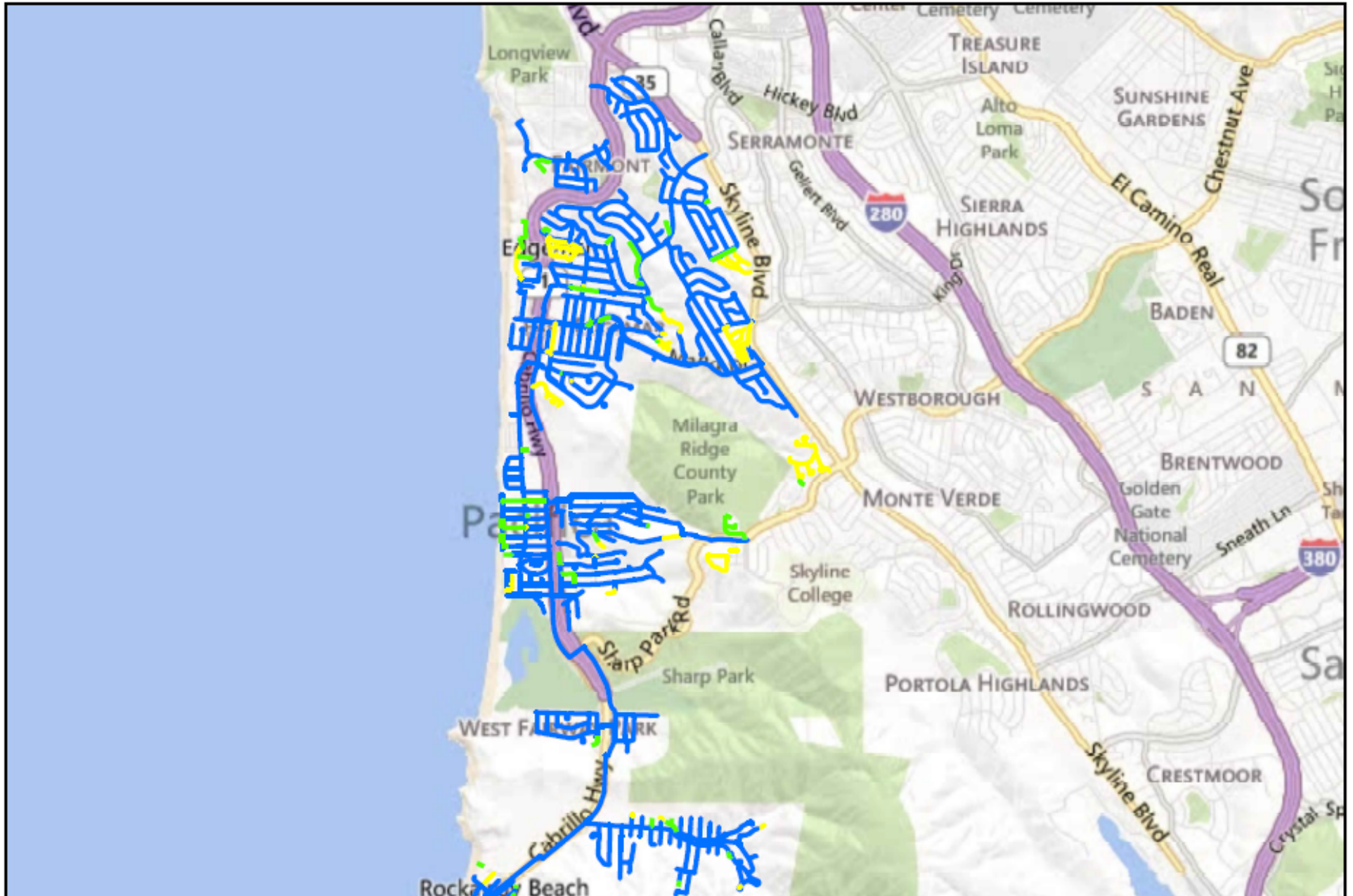
—	1920's	—	1970's
—	1930's	—	1980's
—	1940's	—	1990's
—	1950's	—	2000's
—	1960's	—	2010's

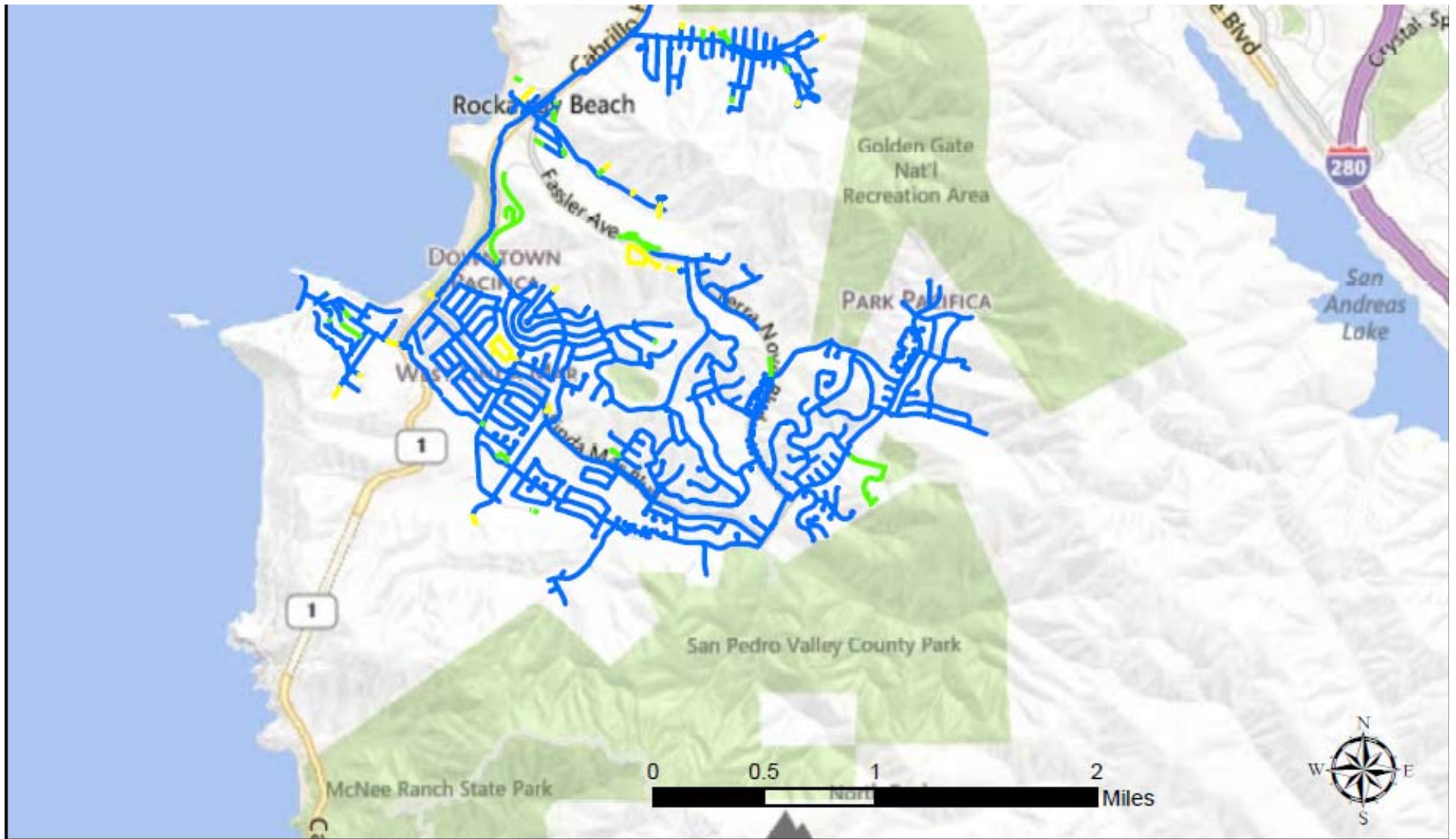


Distribution Main in Pacifica, CA Peninsula Division

Distribution Main	Aldyl-A Main
<i>Material</i>	<i>Replacement Year</i>
Plastic, Non-Aldyl-A	Unscheduled
Steel	
Cast Iron	









More Information

Customer Care gas specialist representatives are available to answer questions about natural gas pipelines or the work being done in the area at:

1-888-743-7431

between 7 a.m. and 6 p.m., Monday through Friday.

Online information about PG&E's Natural Gas Transmission System and our Pipeline Safety Programs can be viewed at:

www.pge.com/gassystem

See our progress:

www.pgeeseeourprogress.com/bay-area/

Thank You

Scott Hart

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**Know what's below.
Call **811** before you dig.**



*Pacific Gas and
Electric Company*[®]

PG&E Actively Supports 811

www.pge.com/safetycentral

