The following information has been prepared following a request from County officials to post responses to questions received during recent town hall community meetings.

Community Pipeline Safety Initiative
Pacific Gas and Electric Company’s (PG&E) Community Pipeline Safety Initiative is one of several important measures the company has made over the past several years to improve the safety and reliability of our natural gas system across Northern and Central California. The program involves, among other things, a close review of the area above and around our natural gas transmission pipelines to identify structures, trees or brush that could block access by first responders and safety crews in the event of an emergency or natural disaster. Generally, PG&E will cover the costs for trees that need to be removed and replaced due to safety reasons. Below are responses to questions we received from our customers about the program during recent town hall community meetings in Durham. If you have additional questions, please feel free to contact Alison Feliz, PG&E’s local Customer Outreach Specialist, at (916) 216-7482. Additional information can also be found at pge.com/GasSafety.

Questions and Answers

Can you provide information on all the trees you plan to remove in Butte County? Can you provide information on the location, pressure, depth, and age of the pipelines? Will this information be made available on your website? Can you share a map of the whole area?
PG&E performed an in-depth review of trees located above or near the transmission pipeline within areas owned by Butte County, including county roads and bike paths, to determine which trees pose an emergency access or public safety threat and must be removed and replaced for safety reasons. PG&E shared the results of that review with County leaders and with community members during recent community meetings.

In response to requests from some members of the community for more information about this work, we have compiled this data into a report that is publicly available. The report includes the results of the in-depth analysis of important site-specific data, such as the tree size, species and location. This review indicates whether a tree is a manageable risk to the pipeline and can potentially remain in place for the time being with regular monitoring, or whether the tree poses an unacceptable risk and must be replaced. Trees that pose an unacceptable safety risk are typically within 0-5 feet from the pipeline where they can directly interfere with emergency access to the pipe and cause other potential damage.
For trees located in close proximity to the pipeline on private property, PG&E will be working with property owners to schedule time to review the proposed tree work, share information on safety risks, and develop a joint plan that balances the need for public safety with the needs of the property owner. This information will be shared only with the property owner.

PG&E has also developed maps of the proposed work areas as part of this report.

**Can you provide a detailed list of risk factors or tree-by-tree report for each tree planned for removal and replacement? What factors were considered in making the determination that certain trees could stay?**

PG&E conducts an in-depth analysis to determine if a tree poses an emergency access or public safety threat and must be replaced, or if it poses a manageable risk to the pipeline and can potentially remain in place with regular monitoring. A number of factors are taken into consideration when determining whether a tree poses an unacceptable safety risk. These include:

- Distance from pipeline to tree
- Diameter at breast height (DBH)
- Distance from the top of pipeline to the surface (depth of cover)
- Tree species
- Potential for pipeline corrosion from tree roots
- Pipeline coating type
- Lightning exposure
- Soil instability
- Date of construction
- Ability to access the pipeline for patrols and inspection
- Presence/visibility of line markers
- Ability to access pipeline for emergency response
- Tree health/condition and density of trees in a given planting area
- Potential wind and flooding conditions
- Potential seismic activity

**Is there a managed risk plan?**

PG&E manages risk every day on its gas and electric systems to keep six million customers and their families safe. Manageable risk trees that are left in place for the time being will be monitored as part of our regular patrols and inspection of our gas transmission system, which is done on a periodic basis through a combination of aerial and ground patrols. Depending on the circumstances, we may increase patrols or modify patrolling methods along sections of pipeline where trees are left in place.

**Why are some trees marked with yellow ribbons and others are not?**

The yellow strips were used to identify the 32 trees along the Midway that need to be replaced for safety reasons.

**Are you working with environmental experts in addition to safety experts?**

PG&E’s vegetation management teams include arborists, biologists, restoration coordinators and other environmental experts, and are coordinated on both gas and electric work. Every project and site is individually assessed by a team of arborists and environmental consultants before any tree removal and replacement takes place. We’re especially mindful of the nesting bird season and the
safety of these species. We have environmental specialists perform nesting bird surveys before any work begins.

Is there a proposed timeline for this work?
We are in the process of working with the City of Chico and Butte County to develop a schedule for the proposed work on county-owned property. Once those details are confirmed, we will reach out to the community about when the work will take place and how long it will last. We are working directly with individual property owners on the timing for work proposed for private properties.

Do you have data outlining the risks involved for corrosion to pipeline coating? What evidence do you have supporting risk? What proof do you have that tree roots can penetrate pipe? Are both access and roots the issue?
There are many reasons why it is important to have direct and immediate access to the area above a pipeline. The way we approach pipeline access is similar to why cars cannot park in front of a fire hydrant. While fire trucks do not need to regularly access the fire hydrant, when they do, they need immediate and unblocked access. In an emergency or natural disaster, trees located over or around an underground pipe can delay access by first responders and slow response times. Every second counts in an emergency.
There is also the potential for tree roots to damage underground pipes. To better understand the impact tree roots may have on underground pipelines and protective coatings, PG&E commissioned Dynamic Risk Assessment Systems, a leading pipeline integrity management provider, to conduct a multi-year tree root study. A pipeline’s external coating is its primary layer of protection against external corrosion. When the protective coating fails, the possibility of corrosion and pipeline cracking increases. The study found tree roots can wrap around a pipe and cause stress to it, especially during windstorms that can uproot trees and potentially damage pipes. The study found that at 75 percent of the sites surveyed, 90 percent of those cases where trees were within five feet of the pipeline, tree roots caused damage to the pipe’s external protective coating (see photo below).

Is there another report available outside of Dynamic Risk Assessment Systems?
Industry experts and pipeline operators across the country advise keeping a minimum of 10 feet on either side of the pipeline clear to ensure immediate access to the pipeline for first responders and safety crews. A November 2010 report by the U.S. Department of Transportation’s Pipelines and Informed Planning Alliance provides additional information on recommended practices near pipelines.

Can you move the pipeline?
We know through regular inspections and surveys that the pipelines in this area are operating safely. We are addressing the trees above and around the pipeline in an effort to keep the community safe for years to come. Relocating and rerouting a gas transmission line is a major undertaking that can take a long time and be very disruptive to the environment and the community.
Can you transplant the trees on the Midway? What is the long-term plan for younger trees that are marked for removal?
Moving these trees would require the use of equipment that could potentially harm the pipe. We are working with Butte County and the City of Chico on a plan for tree replacements, and will also offer replacement trees for any tree removed on private property.

Can you reduce the pressure on the pipe or centralize distribution to solve the issue?
Replacing structures and trees located above a gas transmission pipeline is necessary to help ensure first responders and safety crews have immediate access to the pipe in the event of an emergency or natural disaster, and to help prevent damage to the pipeline. Adjusting pipe pressure or distribution practices will not help ensure safe access to the pipeline, nor protect it from potential damage.

Are you considering alternatives to tree removal like root pruning and root barriers?
According to first responders and national experts on pipeline safety like the U.S. Department of Transportation’s Pipelines and Informed Planning Alliance, keeping the area above the pipeline safe and clear is the best way to keep the community safe as it ensures ready emergency access to the pipe. Root barriers do not prevent regrowth and can actually force the roots deeper, which could cause additional problems for underground pipelines. Root barriers are most commonly used to direct roots downward, away from shallow infrastructure such as sidewalks. Root pruning also does not prevent regrowth and can make the tree unstable and more susceptible to disease.

Will you be holding a community meeting so everyone has a chance to provide input? Will it be run by a public official? How are PG&E and the County working together to ensure transparency in this process?
PG&E is committed to working closely with the community to ensure that information about this program is transparent and available in a number of formats. As part of this process, we have mailed information to all residents living near the proposed gas safety work, conducted one-on-one outreach, notified the media of the proposed work, and invited the community to two public meetings, all in close coordination with the City and County. We have also prepared an in-depth tree analysis report that is publically available. We will continue to work with both the City and County on any additional outreach or meetings that they believe are appropriate for the program.

How is this program being funded?
The cost for this program is paid for by our shareholders, not our customers. When a structure or tree poses a safety concern on residential property, PG&E will pay to replace the item as part of this program. In most cases, commercial property owners will be responsible for the removal of any incompatible items located above the pipeline. We will work with commercial property owners to determine the best course of action for each property.

Learn more about PG&E’s gas safety efforts at pge.com/GasSafety
As part of our commitment to safety, Pacific Gas and Electric Company (PG&E) is working with our customers and communities to review the area near our gas transmission pipelines to ensure first responders and safety crews have immediate access to the pipeline in the event of an emergency or natural disaster. This includes reviewing all items such as structures, trees and bushes within 10 feet of the gas pipelines in Butte County to identify those items that must be replaced due to safety reasons. In response to the community’s request for additional information about the program, included below are details about the pipelines in this area as well as the trees that have been found to pose an unacceptable risk to public safety. If you have any questions or would like more information, please contact Alison Feliz, PG&E outreach specialist, at 1-916-216-7482.

### 1. Chico-Durham Bike Path

**Location Description**

- **Cross Streets:** Along Chico-Durham bike path between Entler Avenue and McFadden Lane

**Pipeline Information**

- **Name:** 050A
- **Diameter:** 10”
- **Maximum Operating Pressure:** 400 psig
- **Year Installed:** 1987

**Vegetation Information**

- **Tree Count:** 8
- **Species:** California Pepper, Brazilian Pepper
- **Average Diameter at Breast Height:** 6”

**Unacceptable Risk Determinations**

- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
2. Chico-Durham Bike Path

**Location Description**
- **Cross Streets:** Along the Chico-Durham bike path between Marybill Ranch Road and Oroville-Chico Highway

**Pipeline Information**
- **Name:** 050A
- **Diameter:** 10”
- **Maximum Operating Pressure:** 400 psig
- **Year Installed:** 1987

**Vegetation Information**
- **Tree Count:** 11
- **Species:** Chinese Pistache
- **Average Diameter at Breast Height:** 6.5”

**Unacceptable Risk Determinations**
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)

![Map of Community Pipeline Safety Initiative - Butte County Overview]
### 3. Chico-Durham Bike Path

#### Location Description
- **Cross Streets:** Along the Chico-Durham bike path between McFadden Lane and Oroville-Chico Highway

#### Pipeline Information
- **Name:** 050A
- **Diameter:** 10”
- **Maximum Operating Pressure:** 400 psig
- **Year Installed:** 1987

#### Vegetation Information
- **Tree Count:** 12
- **Species:** California Pepper, Chinese Pistache
- **Average Diameter at Breast Height:** 7”

#### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
### 4. Chico-Oroville Highway

#### Location Description
- **Cross Streets:** Along the Chico-Oroville Highway between Neal Road and Los Cabos Drive

#### Pipeline Information
- **Name:** 050A
- **Diameter:** 10"
- **Maximum Operating Pressure:** 400 psig
- **Year Installed:** 1990

#### Vegetation Information
- **Tree Count:** 3
- **Species:** Sweetgum Liquidambar, Atlas Blue Cedar
- **Average Diameter at Breast Height:** 12"

#### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)

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Community Pipeline Safety Initiative  
Vegetation Project Area Including Unacceptable Risk Tree(s)  
Durham CDP  
Project Area 4

*Gas Transmission Pipeline  
Vegetation Project Area *

*Unacceptable trees within this project area will be removed and replaced for safety reasons.

1 inch equals 150 feet
### 5. Highway 99

#### Location Description
- **Cross Streets:** Along Highway 99 between Nelson Road and Shipee Road

#### Pipeline Information
- **Name:** 050A
- **Diameter:** 6”
- **Maximum Operating Pressure:** 400 psig
- **Year Installed:** 1952

#### Vegetation Information
- **Tree Count:** 2
- **Species:** Willow
- **Average Diameter at Breast Height:** 15”

#### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
### 6. Highway 99

#### Location Description
- **Cross Streets:** Along Highway 99 north of Richvale Avenue

#### Pipeline Information
- **Name:** 1027-01
- **Diameter:** 6”
- **Maximum Operating Pressure:** 235 psig
- **Year Installed:** 1947

#### Vegetation Information
- **Tree Count:** 1
- **Species:** Willow
- **Average Diameter at Breast Height:** 16”

#### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)

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**Community Pipeline Safety Initiative**

**Vegetation Project Area Including Unacceptable Risk Tree(s)**

**Butte County (rural)**

**Project Area 6**

- Gas Transmission Pipeline
- Vegetation Project Area *

* - Unacceptable risk trees within this project area will be removed and replaced for safety reasons.

1 inch equals 150 feet
## 7. Highway 99

### Location Description
- **Cross Streets:** Along Highway 99 north of Chatfield Avenue

### Pipeline Information
- **Name:** 050A
- **Diameter:** 8”
- **Maximum Operating Pressure:** 250 psig
- **Year Installed:** 1987

### Vegetation Information
- **Tree Count:** 1
- **Species:** Mulberry
- **Average Diameter at Breast Height:** 6”

### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
8. Highway 99

**Location Description**

- **Cross Streets:** Along Highway 99 between Biggs East Highway and Dakota Avenue

**Pipeline Information**

- **Name:** 050A
- **Diameter:** 8"
- **Maximum Operating Pressure:** 250 psig
- **Year Installed:** 1987

**Vegetation Information**

- **Tree Count:** 1
- **Species:** Valley Oak
- **Average Diameter at Breast Height:** 4"

**Unacceptable Risk Determinations**

- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
### Location Description
- **Cross Streets:** Along Orchard Way north of Marian Avenue

### Pipeline Information
- **Name:** 177B
- **Diameter:** 10"
- **Maximum Operating Pressure:** 469 psig
- **Year Installed:** 1954

### Vegetation Information
- **Tree Count:** 1
- **Species:** Almond
- **Average Diameter at Breast Height:** 8"

### Unacceptable Risk Determinations
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
10. Neal Road

**Location Description**
- **Cross Streets:** Along Neal Road between Bayleaf Road and Wayland Road

**Pipeline Information**
- **Name:** 050B
- **Diameter:** 8"
- **Maximum Operating Pressure:** 720 psig
- **Year Installed:** 1966

**Vegetation Information**
- **Tree Count:** 1
- **Species:** Gray Pine
- **Average Diameter at Breast Height:** 1"

**Unacceptable Risk Determinations**
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)

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Community Pipeline Safety Initiative
Vegetation Project Area including Unacceptable Risk Tree(s)
Butte County (rural)
Project Area 10

- Unacceptable risk trees within this project area will be removed and replaced for safety reasons.

1 inch equals 100 feet
### 11. Colusa Highway

#### Location Description

- **Cross Streets:** Along Colusa Highway west of Cherokee Canal Road

#### Pipeline Information

- **Name:** 167
- **Diameter:** 12”
- **Maximum Operating Pressure:** 800 psig
- **Year Installed:** 1955

#### Vegetation Information

- **Tree Count:** 3
- **Species:** Valley Oak, Sitka Alder
- **Average Diameter at Breast Height:** 5”

#### Unacceptable Risk Determinations

- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)

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**Community Pipeline Safety Initiative**

**Vegetation Project Area Including Unacceptable Risk Tree(s)**

**Butte County (rural)**

**Project Area 11**

- Gas Transmission Pipeline
- Vegetation Project Area *

*Unacceptable risk trees within this project area will be removed and replaced for safety reasons.

1 inch equals 500 feet
12. Chico-Durham Bike Path

**Location Description**
- **Cross Streets:** Along Highway 99 between E Evans Reimer Road and Turner Avenue

**Pipeline Information**
- **Name:** 050A
- **Diameter:** 8”
- **Maximum Operating Pressure:** 250 psig
- **Year Installed:** 1987

**Vegetation Information**
- **Tree Count:** 3
- **Species:** Valley Oak
- **Average Diameter at Breast Height:** 13”

**Unacceptable Risk Determinations**
- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
13. B Street

**Location Description**

- **Cross Streets:** Along B Street east of 1st Street

**Pipeline Information**

- **Name:** DREG4005
- **Diameter:** 3”
- **Maximum Operating Pressure:** 250 psig
- **Year Installed:** 1982

**Vegetation Information**

- **Tree Count:** 1
- **Species:** Magnolia
- **Average Diameter at Breast Height:** 29”

**Unacceptable Risk Determinations**

- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
14. River Road

<table>
<thead>
<tr>
<th>Location Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cross Streets:</strong> Along River Road north of Ord Ferry Road</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pipeline Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong> 169B</td>
</tr>
<tr>
<td><strong>Diameter:</strong> 16”</td>
</tr>
<tr>
<td><strong>Maximum Operating Pressure:</strong> 800 psig</td>
</tr>
<tr>
<td><strong>Year Installed:</strong> 1956</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vegetation Information</th>
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</thead>
<tbody>
<tr>
<td><strong>Tree Count:</strong> 1</td>
</tr>
<tr>
<td><strong>Species:</strong> English Walnut</td>
</tr>
<tr>
<td><strong>Average Diameter at Breast Height:</strong> 4”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unacceptable Risk Determinations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distance from the pipeline to tree</strong></td>
</tr>
<tr>
<td><strong>Distance from the top of the pipeline to the surface (depth of cover)</strong></td>
</tr>
<tr>
<td><strong>Diameter at breast height (DBH)</strong></td>
</tr>
</tbody>
</table>

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Community Pipeline Safety Initiative
Vegetation Project Area Including Unacceptable Risk Tree(s)
Butte County (rural)
Project Area 14

- Unacceptable risk trees within this project area will be removed and replaced for safety reasons.
- 1 inch equals 200 feet
### Location Description

- **Cross Streets:** Along River Road north of Ord Ferry Road

### Pipeline Information

- **Name:** 169B
- **Diameter:** 16”
- **Maximum Operating Pressure:** 800 psig
- **Year Installed:** 1956

### Vegetation Information

- **Tree Count:** 3
- **Species:** Willow, Cottonwood
- **Average Diameter at Breast Height:** 6”

### Unacceptable Risk Determinations

- Distance from the pipeline to tree
- Distance from the top of the pipepline to the surface (depth of cover)
- Diameter at breast height (DBH)

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**Community Pipeline Safety Initiative**  
**Butte County Overview**  
August 2015
### Location Description

- **Cross Streets:** Along Highway 99 between Wright Avenue and E Evans Reimer Road

### Pipeline Information

- **Name:** 050A
- **Diameter:** 8”
- **Maximum Operating Pressure:** 250 psig
- **Year Installed:** 1987

### Vegetation Information

- **Tree Count:** 1
- **Species:** Valley Oak
- **Average Diameter at Breast Height:** 20”

### Unacceptable Risk Determinations

- Distance from the pipeline to tree
- Distance from the top of the pipeline to the surface (depth of cover)
- Diameter at breast height (DBH)
Community Pipeline Safety Initiative Overview Map
Vegetation Project Areas Including Unacceptable Risk Tree(s)

*Unacceptable risk trees within this project area are proposed to be removed and replaced for safety reasons

1 inch equals 3 miles