

**MEMORANDUM**

Public Works Department

DATE: June 21, 2018

TO: Daniel H. Rich, City Manager

FROM: Michael A. Fuller, Public Works Director

SUBJECT: PG&E Gas Pipeline Safety Initiative

BACKGROUND

Since the San Bruno gas transmission main explosion in 2010, PG&E has undertaken a number of initiatives through its Community Pipeline Safety Initiative (CPSI) to improve gas pipeline safety, including improved inspections and maintenance and strategic replacement of equipment and infrastructure. A portion of this effort includes removing vegetation (including trees) that can damage pipelines and impede inspection, maintenance, and repair.

PG&E has performed a thorough inventory of trees near gas transmission pipelines and has proposed removal of trees that PG&E has deemed pose a threat to pipeline safety based on a number of factors, including:

1. **Tree Characteristics:** Examples include species, size, distance to pipe, and potential for root interaction.
2. **Pipeline Information:** Examples include pipe depth, installation date, pipeline coating type, and pipe size.
3. **Site Conditions:** Examples include the ability to access pipeline in case of emergency and/or for maintenance patrols, lightning and wind exposure, and seismic activity.

For background, transmission pipelines are those that carry gas at a relatively high pressure (up to 1,100 pounds per square inch) compared with distribution mains. Transmission mains are meant to carry gas over relatively long distances rather than to serve individual properties.

PG&E's stated reasons for removal of trees are listed below.

- **Access for first responders to the pipeline in case of emergency:** The City's Fire Chief did not find the first responder argument particularly compelling because access to a damaged or broken section of gas main would only be made after the line has been isolated by closing valves and gas evacuated from the line. The time-critical activity is accessing valves and other equipment that is not in the immediate vicinity of a leak.
- **Ability to physically or aerially inspect the area above the pipeline:** PG&E uses a number of methods to inspect the pipeline and right-of-way (ROW), including physically walking the ROW and aerial surveillance. Staff's research indicates that other utility owners and regulators share this concern.
- **Damage to the pipeline from roots:** Many gas transmission mains are steel pipe that has an exterior coating to prevent corrosion. A possible failure scenario is the coating becoming damaged, allowing moisture to contact the steel pipe and cause corrosion. Here again, staff's research found other companies and regulators share the concern about root damage to pipe coatings.

Recognizing the negative impact of tree removals, staff investigated the practices of other energy companies and regulators to test PG&E's claims, and the results of that investigation are also described below.

Guidance from Federal and State Authorities

While Public Works staff is familiar with operation and maintenance of water, sewer, and storm drain systems, gas transmission mains are different in fundamental ways. To get a sense of whether PG&E's tree removal requests are reasonable, staff researched other utility owners and regulators. Staff found that while practices and recommendations differ, there are some common themes. The results of staff's research are described briefly below.

The United States Department of Transportation, through the Pipelines and Informed Planning Alliance (PIPA), has issued recommended practices to reduce risk and improve safety associated with gas mains. The recommended practices are not mandatory, but are meant to give guidance to pipeline owners, local officials, and property owners. One recommended practice, "Plan and Locate Vegetation to Prevent Interference with Transmission Pipeline Activities," is relevant to PG&E's proposal and includes a number of examples of urban and suburban rights-of-way that clearly indicate that trees should be avoided near the pipelines.

The State Fire Marshal has also issued a bulletin on the topic stating, in part: "...It is the position of the State Fire Marshal that nothing shall encroach into or upon the pipeline easement, which would impede the pipeline operator from complete and unobstructed surface access along the pipeline right-of-way. Nor shall there be any obstructions, which would shield the pipeline right of way from observation...."

Practices of Other Pipeline Owners

Staff researched the practices of other utility owners and found a variety of practices regarding trees in pipeline rights-of-way.

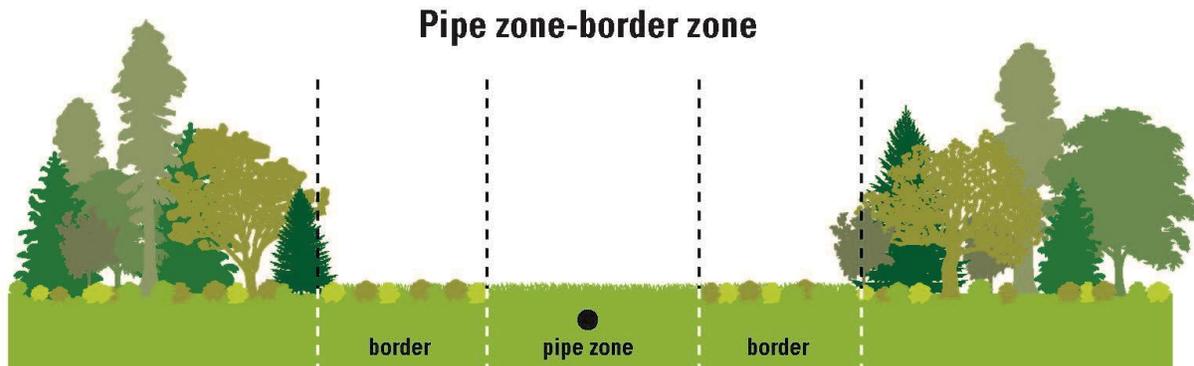
Southern California Gas Company: SoCalGas' "Pipeline Maintenance and Your Safety" information pamphlet states that: "In order to perform these important inspections and respond to pipeline emergencies, the area around our pipelines must be clear of shrubs, trees, fences, and other obstructions."

Marathon Pipeline: Marathon Pipeline operates petroleum pipelines throughout the Northern, Southern and Midwestern United States. Marathon's policy is that trees greater than 3' in height are not allowed within 25' of a pipeline.

Consumers Energy: This Michigan energy purveyor prohibits trees and shrubs within pipeline corridors.

SGN: This gas company in the United Kingdom (UK) cautions that care should be taken when planting near gas lines and reserves the right to remove any tree or shrub they deem necessary.

Xcel Energy: Xcel operates in eight Western and Midwestern states and excludes trees in a border zone around natural gas pipelines. The dimension of the border zone was not specified in the online literature that staff was able to locate, but an excerpt of an exhibit is shown below.



National Grid: National Grid operates in the Northeastern United States and the UK and requires written approval for any tree planting within their easement. They also have a list of trees that are prohibited within 6 meters of a pipeline, and other specific requirements.

Questar: Questar operates a gas system in the Western United States and prohibits deep-rooted plants and trees within gas rights-of-way. Grasses, low-growing plants and shrubs, and gardens are allowed.

While practices differed from one pipeline operator to another, all had some limitations on trees and other vegetation in the pipeline right-of-way that are generally consistent with PG&E's practice.

Applicability of the City's Heritage Tree Ordinance

While the City's Heritage Tree Ordinance regulates removal of Heritage trees, a permit is not required in the following circumstances:

"(4) Public utilities subject to the jurisdiction of the Public Utilities Commission of the State of California (CPUC) may take such action as may be necessary to comply with the safety regulations of said commission and as may be reasonably necessary to maintain the safe operation of their facilities. {...]"

Because PG&E is subject to the jurisdiction of the CPUC, and the CPSI is part of PG&E's pipeline safety program, the tree removals under the CPSI are subject to the exemption in the Heritage Tree Ordinance. While PG&E will voluntarily mitigate for the removed trees and coordinate the program with the City, Heritage Tree Removal Permits will not be issued.

Extent of Tree Removals

PG&E initially approached the City about the CPSI in 2015, with over 1,700 trees on private and public property being assessed as potential risks. Staff met with PG&E a number of times, requested that PG&E evaluate each tree closely to see if it could remain, and stated that the number of trees to be removed must be reduced to the extent possible. PG&E did evaluate each tree and has classified each as posing an “unacceptable risk” or a “manageable risk.”

After this evaluation, PG&E has identified 61 trees in the public right-of-way and on City-owned property that must be removed. Of these, 22 are non-Heritage trees and 39 are Heritage trees. On private property, 184 trees have been identified for removal. Of these, 133 are non-Heritage trees and 51 are Heritage trees.

Some of the trees slated for removal on private property are generally away from public view, while others are more visible. For the trees on private property, PG&E has secured agreements with each property owner for removal of the tree and also for restoration work to the property, including landscaping the affected area and, in some cases, replanting trees on-site.

Some of the more visible locations include Leong Drive, Walker Drive, Middlefield Road (between Shoreline Boulevard and Linda Vista Avenue), Estrada Drive, Moorpark Way, South Whisman Road, the northeast corner of Middlefield Road and Rengstorff Avenue and the Grant Road median between El Camino Real and Phyllis Avenue. All trees will be posted prior to removal.

Mitigation

PG&E has offered to mitigate for tree removals and has offered some flexibility in how that mitigation can occur. In many cases, planting replacement trees in close proximity to the removed trees is not possible. Another obstacle is lack of willingness on the part of many property owners to allow replacement trees to be planted on their property. Therefore, staff recommends the following approach:

- For most trees, PG&E will pay a mitigation fee of \$750 per tree, which will be encumbered to the City’s Tree Mitigation Fund. This is a standard mitigation fee amount. Trees will be planted in appropriate locations as determined by the Community Services Department.

- For areas of concentrated removals in the public right-of-way, PG&E will prepare a replacement landscaping plan for approval by staff and an install the landscaping.
- For other public right-of-way trees, PG&E will pay a fee, as with the private property trees.

Next Steps

PG&E will begin removal of trees on private property this summer and will make a presentation at the Parks and Recreation Commission in October or November. Staff will continue to work with PG&E on mitigation and also on replanting in medians and other areas where appropriate.

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