

1 **EXECUTIVE SUMMARY**

2 **PROJECT OBJECTIVES, PURPOSE, AND NEED**

3 Pacific Gas and Electric Company (PG&E) is proposing to construct and operate
4 multiple natural gas transmission pipelines that would ultimately cross California's
5 Central Valley in the counties of Yolo, Sutter, Sacramento, and Placer. The
6 proposed Project would specifically involve the construction and operation of three
7 new transmission pipelines: Line 406, Line 407 (West and East), and the Powerline
8 Road Distribution Feeder Main (DFM). The Project would also include the
9 construction of six aboveground facilities. Fully constructed, the pipelines would
10 span the lower Sacramento Valley.

11 PG&E identified the following objectives for the proposed Line 406/407 Natural Gas
12 Pipeline Project (Project):

- 13 • Provide greater capacity and service reliability to the existing gas transmission
14 and distribution pipeline system while minimizing costs to PG&E's customers;
- 15 • Extend natural gas service to planned residential and commercial
16 developments in Placer, Sutter, and Sacramento counties;
- 17 • Install Project facilities in a safe, efficient, environmentally sensitive, and cost-
18 effective manner; and
- 19 • Locate the pipeline to minimize the potential of environmental impacts resulting
20 from damage by outside sources.

21 **DESCRIPTION OF PROPOSED PROJECT**

22 The Project would involve construction of approximately 40 miles of new pipeline, as
23 well as aboveground features. At its western terminus, the Project would add a new
24 major connection point to Lines 400 and 401, the Capay Metering Station, located
25 approximately 15 miles south of the Buckeye Pressure Limiting Station in Yolo
26 County. From this connection point, the Project would construct a large-diameter
27 (30-inch) transmission pipeline across the lower Sacramento Valley, essentially
28 bisecting the existing pipeline loop system. The Project would connect to existing
29 Line 172 and Line 123 to further reinforce the reliability of the region's natural gas
30 system by providing a second large-diameter connection point between Lines 400
31 and 401 and existing pipelines serving the area.

1 Six fenced, aboveground pressure limiting, pressure regulating, metering, and main
2 line valve stations would be constructed along the Project alignment to ensure that
3 proper pressures are maintained in the transmission system and to reduce the
4 pressure of the gas before delivering it to the distribution pipeline system. These
5 facilities would also require the installation of valve extensions, actuators, valve hand
6 wheels, risers, meters, Supervisory Control and Data Acquisition (SCADA) pipeline
7 system monitoring equipment, and other appurtenances within and adjacent to the
8 stations.

9 PG&E proposes a 100-foot-wide temporary use area (TUA) for general pipeline
10 trenching consisting of a 50-foot wide permanent easement and a 50-foot wide
11 temporary construction easement (TCE) to accommodate the equipment needed to
12 lay the 30-inch-diameter pipe in a 3.5- to 5-foot-wide trench, an equipment travel
13 lane, and a spoil pile for the excavated soils. A 60-foot wide TUA would be used for
14 construction in constricted workspaces and would require that excavated soil be
15 transported to an adjacent TUA. Each of the twelve proposed Horizontal Directional
16 Drilling (HDD) locations would require an additional 18,750-square-foot temporary
17 use area for equipment that would be set up at the proposed entry and exit points.
18 PG&E proposes to obtain a 50-foot wide permanent easement over the proposed
19 alignment. Restrictions in the easement would prohibit the planting of deep-rooted
20 plants such as trees and vines within 15 feet of the pipeline centerline for protection
21 of the pipeline, but other agricultural uses would be allowed. The primary staging
22 areas for vehicles, equipment, materials, and other supplies required for the
23 construction of the pipeline and regulator stations would be near the Project right-of-
24 way (ROW) in existing industrial and commercial yards where accessible. Staging
25 areas would generally be approximately 300 feet by 200 feet. Two areas would be
26 used for pipe storage. One area is located in Arbuckle, and the other is located
27 north of the City of Woodland. Both of these areas are currently disturbed land in
28 commercial zones.

29 New pipeline construction would involve the following activities:

- 30 • Clearing and grading;
- 31 • Trenching and topsoil stockpiling;
- 32 • Horizontal Directional Drilling (HDD);
- 33 • Hammer boring;

- 1 • Auger boring/Jack-and-boring;
- 2 • Epoxy coating of pipe;
- 3 • Pipeline stringing and welding;
- 4 • Lowering in the pipeline and backfilling;
- 5 • Hydrostatic testing of the pipe sections; and
- 6 • Pigging.

7 The main travel routes that would be used for construction access and delivery of
8 pipe along Line 406 would include County Road (CR) 85, CR-87, CR-88A, CR-17,
9 CR-19, and some smaller roads on the east side of Interstate (I) 5. Travel routes to
10 be used for construction access and delivery of pipe along Line 407 would include
11 CR-16, CR-16A, CR-17, Baseline Road, Riego Road, and Powerline Road. Streets
12 and roads perpendicular to the main routes that may also be used to access the
13 Project area include Watt Avenue, West Elverta Road, Walerga Road, State Route
14 (SR) 70/99, and SR-113. During construction, the transporting of the required
15 amount of pipe and associated construction equipment could result in a temporary
16 increase of up to 40 trucks a day (80 trips per day) on these respective roadways.

17 The pipeline would be operated and maintained in accordance with all applicable
18 requirements included in the U.S., Department of Transportation (DOT) regulations
19 in 49 CFR 192, "Transportation of Natural and Other Gas by Pipeline: Minimum
20 Federal Safety Standards." Further, the proposed Project would be subject to
21 California Public Utilities Commission (CPUC) standards as embodied under
22 General Order 112E. Operations and maintenance activities that would occur at
23 regular intervals include the following: cathodic protection (protection against
24 pipeline corrosion), cathodic protection monitoring, valve testing, pipeline patrols,
25 and High Consequence Area (HCA) risk assessment.

26 **ALTERNATIVES TO PROPOSED PROJECT**

27 The California Environmental Quality Act (CEQA) Guidelines (section 15126.6(a))
28 require that a range of reasonable alternatives to the proposed Project be described,
29 analyzed, and (1) would feasibly attain most of the basic objectives of the proposed
30 Project, and (2) would avoid or substantially lessen any of the significant impacts of
31 the proposed Project.

1 The CEQA Guidelines requires the selection of an environmentally superior
2 alternative. The determination of an environmentally superior alternative is based on
3 the consideration of how the alternative fulfills the Project objectives and how the
4 alternative either reduces significant, unavoidable impacts or substantially reduces
5 the impacts to the surrounding environment. The CEQA Guidelines section
6 15126.6(e)(2) state, in part, that “If the environmentally superior alternative is the
7 “No Project” alternative, the EIR would also identify an environmentally superior
8 alternative among the other alternatives.”

9 Not all alternatives that were developed are completely analyzed in the EIR.
10 Feasible alternatives that did not clearly offer the potential to reduce significant
11 environmental impacts along with infeasible alternatives were removed from further
12 analysis. Four alternatives were eliminated from detailed analysis. These
13 alternatives include:

- 14 • Line 406 and 407 Northern Alternative was eliminated from further analysis
15 since this proposed pipeline alignment alternative would be exposed to the
16 greatest risk of fault rupture, and because a substantial segment of the
17 alignment would be located along side-hills adjacent to CR-13;
- 18 • Line 407 Southern Alternative was eliminated from further analysis because
19 this proposed pipeline alignment alternative would require more crossings of
20 tributaries of Steelhead Creek, and would affect more vernal pool habitat;
- 21 • Line 406 Central Alternative was eliminated from further analysis because this
22 proposed pipeline alignment alternative would parallel an ephemeral stream,
23 passing through natural habitats to CR-14A; and
- 24 • Systems Alternatives was eliminated from further analysis because the
25 proposed alignment alternative would require 15 separate projects with
26 substantially greater amounts of pipeline resulting in greater construction
27 impacts.

28 Alternatives that were analyzed include the No Project Alternative, and twelve
29 different pipeline alignment options. Each option (or alternative) represented a
30 particular segment of alignment that differed in location from the Project so as to
31 attempt to reduce environmental impacts. The twelve options are briefly described
32 below.

1 **No Project Alternative.** Under the No Project Alternative, a natural gas pipeline
2 would not be constructed between existing Lines 400 and 401 in Yolo County and
3 the existing Line 123 in Placer County. PG&E's studies indicate that the natural gas
4 transmission and distribution system may not be able to serve customers reliably
5 and planned development in Yolo, Sacramento, Sutter, and Placer counties by 2009
6 (see Section 2, Project Description). Additionally, continued growth in those
7 counties would put further strain on existing natural gas infrastructure, and could
8 result in emergency restriction or interruption of services.

9 **Option A.** From Lines 400 and 401, Option A would follow CR-16 to I-505, then
10 head north through a grape vineyard to align with CR-15B on the west side of I-505.
11 The route would continue east on CR-15B through the Dunnigan Hills and across
12 Smith Creek until CR-15B becomes CR-93. From this juncture, this alternative
13 would continue east from the intersection of CR-15B and CR-93, and proceed cross-
14 country to Line 172A just south of the town of Dufour. It would then parallel Line
15 172A south to the tie-in point with Line 172A and Line 407, north of the town of Yolo.
16 This option would increase the overall pipeline length by approximately 2,200 feet.
17 Figure 3-2B shows Option A.

18 This option would result in a reduction in the magnitude of impacts to aesthetics and
19 noise due to the movement of a portion of the pipeline construction further away
20 from residences. This option would have similar impacts as the proposed Project in
21 the resource areas of air quality, hydrology and water quality, recreation, population
22 and utilities, and energy and mineral resources.

23 This option would result in a greater magnitude of impacts to agricultural resources,
24 biological resources, cultural resources, soils, seismic and risk of upset hazards,
25 land use, and traffic. These impacts would be increased in magnitude due to an
26 increase in the length of the pipeline along the boundaries of agricultural fields,
27 increased disturbance of soils, the potential for increased introduction of invasive
28 species, and the potential for increased disturbance of sensitive plants. The
29 difference in impacts to cultural resources is assumed to be greater since Option A
30 would increase the area of disturbance and occur outside of the corridor surveyed
31 for cultural resources. This option would increase the seismic impacts by crossing
32 the southern end of the Dunnigan Hills Fault in the vicinity of an apparent surface
33 fault rupture. Also, by placing the pipeline in close proximity to Durst Organic
34 Farmers, a new "high consequence area" or "HCA" would be created along the
35 pipeline as defined by DOT 192.903, based upon the number of employees and the
36 number of days they would congregate near the pipeline. Option A would affect

1 traffic during pipeline construction along roadways used by Durst for employees,
2 visitors, and workers transporting their produce.

3 Option A would not reduce the significant and unavoidable impacts associated with
4 the proposed Project (construction air quality, hazards from the risk of pipeline
5 upset, and land use compatibility).

6 **Option B.** From Lines 400 and 401, approximately 1.5 miles north of the proposed
7 Project, Option B would extend east along farm roads, crossing CR-86 and aligning
8 with CR-16. The route would continue along the south side of CR-16 for
9 approximately 3 miles to CR-86, and then turn south along farm roads to a point
10 intercepting the proposed I-505 crossing. This option would increase the overall
11 pipeline length by approximately 2,640 feet. Figure 3-2B shows Option B.

12 This option would not result in a reduction of any impacts associated with the
13 proposed Project. This option would have similar impacts as the proposed Project in
14 the resource areas of air quality, hydrology and water quality, noise, recreation,
15 population and utilities, and energy and mineral resources.

16 This option would result in a greater magnitude of impacts to agricultural resources,
17 aesthetics, biological resources, cultural resources, soils, risk of upset hazards, land
18 use, and traffic. These impacts would be increased in magnitude due to an increase
19 in the length of the pipeline along the boundaries of agricultural fields and the
20 placement closer to roadways where construction activities would be more visible.
21 Option B would also increase the potential for introduction of invasive species,
22 increase the potential for disturbance to sensitive plants, increase the number of
23 trees impacted (potential Swainson's hawk nesting habitat), increase disturbance to
24 soils, and place the pipeline outside of the area surveyed for cultural resources.
25 Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new
26 "high consequence area" or "HCA" would be created along the pipeline as defined
27 by DOT 192.903, based upon the number of employees and the number of days
28 they would congregate near the pipeline. Option B would affect traffic during
29 pipeline construction along roadways used by Durst for employees, visitors, and
30 workers transporting their produce.

31 Option B would not reduce the significant and unavoidable impacts associated with
32 the proposed Project (construction air quality, hazards from the risk of pipeline
33 upset, and land use compatibility).

1 **Option C.** Option C would follow the proposed alignment of Line 406 from the
2 Capay Metering Station to the Hungry Hollow Canal, which it would parallel
3 northeast until crossing to line up with an unnamed farm road to the east. This
4 alternative would cross CR-85 and extend east along the farm road and the northern
5 edge of Microp Limited Property, APN # 048-140-140-191. At the end of the
6 property, the route would turn south along another unnamed farm road until it
7 intersects the proposed Line 406 route, which it then would follow to the Yolo
8 Junction Station. This option would increase the overall pipeline length by roughly
9 1,150 feet. Figure 3-2C depicts Option C.

10 This option would not result in a reduction of any impacts associated with the
11 proposed Project. This option would have similar impacts as the proposed Project in
12 the resource areas of aesthetics, air quality, cultural resources, geologic and risk of
13 upset hazards, hydrology and water quality, land use and planning, noise,
14 recreation, population and utilities, energy and mineral resources, and
15 transportation. While Option C would result in similar impacts to agricultural
16 resources as the proposed Project, it would result in less segmenting of agricultural
17 fields.

18 This option would result in a greater magnitude of impacts to biological resources
19 and soils. These impacts would be increased in magnitude due to an increase in the
20 number of trees impacted, the increased disturbance of soils, and the increased
21 potential for introduction of invasive species.

22 Option C would not reduce the significant and unavoidable impacts associated with
23 the proposed Project (construction air quality, hazards from the risk of pipeline
24 upset, and land use compatibility).

25 **Option D.** Option D would involve a minor variation to the proposed Line 406 in the
26 vicinity of the Hungry Hollow area in north-central Yolo County, but it would maintain
27 Line 406 within CR-17 east of CR-87, and then extend south after crossing an
28 unnamed irrigation lateral where it would realign with the proposed Line 406 route,
29 just west of the I-505 HDD crossing. East of I-505, this alternative would follow the
30 same alignment as the proposed Project. This option would increase the overall
31 pipeline length by roughly 860 feet. Figure 3-2D shows Option D.

32 This option would not result in a reduction of any impacts associated with the
33 proposed Project. This option would have similar impacts as the proposed Project in
34 the resource areas of aesthetics, air quality, cultural resources, geologic hazards,

1 hydrology and water quality, land use and planning, noise, recreation, population
2 and utilities, energy and mineral resources, and transportation. While Option D
3 would result in similar impacts to agricultural resources as the proposed Project, it
4 would result in less segmenting of agricultural fields.

5 This option would result in a greater magnitude of impacts to noise, aesthetics,
6 hazards, biological resources, soils, and cultural resources. These impacts would
7 be increased in magnitude due to placing the construction of the pipeline closer to
8 residences and thereby increasing the construction noise, visibility of construction
9 activities, and the risk of upset hazards to a greater number of people. Option D
10 would also increase the number of trees impacted, and place the pipeline outside of
11 the area previously surveyed for cultural resources.

12 Option D would not reduce the significant and unavoidable impacts associated with
13 the proposed Project (construction air quality, hazards from the risk of pipeline
14 upset, and land use compatibility).

15 **Option E.** Option E would involve a minor realignment of the proposed Line 406
16 route. This would position the route to follow CR-19, east of CR-87. At CR-19A, it
17 would extend back to the north via an existing dirt road and underneath a large
18 electrical transmission corridor. This route alternative would then cross an irrigation
19 lateral and continue north where it would converge back with the proposed Line 406
20 route, just west of I-505. This alternative would then follow the same route as the
21 proposed Project east of I-505. This option would increase the overall pipeline
22 length by roughly 3,480 feet. Figure 3-2D shows Option E.

23 This option would not result in a reduction of any impacts associated with the
24 proposed Project. This option would have similar impacts as the proposed Project in
25 the resource areas of air quality, cultural resources, geologic hazards, hydrology and
26 water quality, land use and planning, noise, recreation, population and utilities,
27 energy and mineral resources, and transportation. While Option E would result in
28 similar impacts to agricultural resources as the proposed Project, it would result in
29 less segmenting of agricultural fields.

30 This option would result in a greater magnitude of impacts to aesthetics, noise,
31 biological resources, soils, and cultural resources. These impacts would be
32 increased in magnitude due to placing the construction of the pipeline closer to
33 residences and thereby increasing the construction noise, visibility of construction
34 activities, and the risks of upset hazards to a greater number of people. Option E

1 would also increase the number of trees impacted, increase the disturbance of soils,
2 and place the pipeline outside of the area previously surveyed for cultural resources.

3 Option E would not reduce the significant and unavoidable impacts associated with
4 the proposed Project (construction air quality, hazards from the risk of pipeline
5 upset, and land use compatibility).

6 **Option F.** Option F would follow the proposed alignment for Line 406 from Lines
7 400 and 401 to the eastern end of the Dunnigan Hills, where it would turn north off
8 CR-17 approximately 5,000 feet west of CR-95A. This alternative option would not
9 alter the length of the segment, but would turn north to align with the I-5 crossing
10 further east than the proposed alignment. Figure 3-2E shows Option F.

11 This option would result in a reduction in the number of trees impacted. This option
12 would also result in a reduced number of residences to evaluate for eligibility for
13 listing on the NRHP or the CRHR. This option would have similar impacts as the
14 proposed Project in the resource areas of aesthetics, agricultural resources, air
15 quality, hydrology and water quality, geologic and risk of upset hazards, recreation,
16 land use, noise, population and utilities, traffic, and energy and mineral resources.

17 This option would increase the magnitude of impacts to biological resources by
18 bordering an ephemeral drainage with adjacent wetlands that the Project avoids.

19 Option F would not reduce the significant and unavoidable impacts associated with
20 the proposed Project (construction air quality, hazards from the risk of pipeline
21 upset, and land use compatibility).

22 **Option G.** Option G would be located at the western end of Line 407 West, just east
23 of the Yolo Junction Station and existing Line 172A. This alternative leaves the
24 proposed Yolo Junction Station and aligns with an unnamed farm road, which it
25 follows along a field edge until the intersection of CR-16A and CR-98. This
26 alternative option would not alter the length of the segment. Figure 3-2F shows
27 Option G.

28 This option would not result in a reduction of any impacts associated with the
29 proposed Project. This option would increase the magnitude of impacts to biological
30 resources due to an increase in the number of trees impacted. This option would
31 have similar impacts as the proposed Project in the resource areas of aesthetics,
32 agricultural resources, air quality, hydrology and water quality, geologic and risk of

1 upset hazards, recreation, land use, noise, population and utilities, traffic, cultural
2 resources, and energy and mineral resources.

3 Option G would not reduce the significant and unavoidable impacts associated with
4 the proposed Project (construction air quality, hazards from the risk of pipeline
5 upset, and land use compatibility).

6 **Option H.** Near the western levee of the Yolo Bypass, Option H would head
7 southeast through agricultural fields within the Yolo Bypass to a point on the
8 Sacramento River directly across from West Elverta Road. It would then cross the
9 Sacramento River and parallel West Elverta Road to Powerline Road. The route
10 would head north paralleling Powerline Road to Riego Road and would then parallel
11 Riego Road through the Natomas Basin Conservancy to Steelhead Creek. The
12 route would parallel the northern border of the Placer Vineyards Specific Plan area
13 along Baseline Road (Riego Road becomes Baseline Road in Placer County) until
14 the tie-in with Line 123 at the intersection of Baseline Road and Fiddymont Road.
15 This alternative option would reduce the overall pipeline length by roughly 2,900
16 feet. Figure 3-2G shows Option H.

17 This option would result in a reduction in the magnitude of impacts to aesthetics and
18 noise due to the movement of a portion of the pipeline further away from residences.
19 Because of the reduced length, this option would reduce impacts to soils and reduce
20 the potential for introduction of invasive species.

21 This option would have similar impacts as the proposed Project in the resource
22 areas of agricultural resources, air quality, hydrology and water quality, geologic and
23 risk of upset hazards, recreation, land use, population and utilities, traffic, and
24 energy and mineral resources.

25 This option would increase the magnitude of impacts to biological resources due to
26 an increase in the number of trees, wetlands, and riparian woodland communities
27 impacted. The difference in impacts to cultural resources is unknown since Option H
28 would occur outside of the corridor surveyed for cultural resources.

29 Option H would not reduce the significant and unavoidable impacts associated with
30 the proposed Project (construction air quality, hazards from the risk of pipeline
31 upset, and land use compatibility).

32 **Option I.** This option would follow the proposed alignment for Line 407-E along
33 Base Line Road to South Brewer Road, where the pipeline would extend north along

1 the west side of South Brewer Road, crossing one seasonal wetland, to a point
2 approximately 1,500 feet north of the intersection of Base Line Road and South
3 Brewer Road. This alternative would then extend east for approximately 1.0 mile
4 through agricultural land, crossing Steelhead Creek and two seasonal wetlands
5 before reaching Country Acres Lane. From this point, this alternative would turn
6 south and travel through pasture/fallow agricultural fields along the east side of
7 Country Acres Lane, crossing seasonal wetlands. At the intersection with Base Line
8 Road, the pipeline would join and follow the remainder of the proposed alignment for
9 Line 407-E along Base Line Road. This option would increase the overall pipeline
10 length by roughly 2,900 feet. Figure 3.2-H depicts Option I.

11 This option would result in a reduction in the magnitude of impacts to aesthetics and
12 noise due to the movement of a portion of the pipeline to a location with fewer
13 residences. This option would reduce the risk of upset hazards to a planned high
14 school site.

15 This option would have similar impacts as the proposed Project in the resource
16 areas of agricultural resources, air quality, hydrology and water quality, geologic
17 hazards, recreation, land use, population and utilities, traffic, and energy and mineral
18 resources.

19 This option would increase the magnitude of impacts to biological resources such as
20 seasonal wetlands and swales, a vernal pool, and an additional creek, though it
21 would reduce impacts to trees. This option would also increase the magnitude of
22 disturbance to soils, which may increase the potential for introduction of invasive
23 species.

24 Option I would not reduce the significant and unavoidable impacts associated with
25 the proposed Project (construction air quality, hazards from the risk of pipeline
26 upset, and land use compatibility).

27 **Option J.** This option would follow the proposed alignment for Line 407-E along
28 Base Line Road to South Brewer Road, where the pipeline would extend north along
29 the west side of South Brewer Road, crossing one seasonal wetland, a vernal pool,
30 and Steelhead Creek, to a point approximately 2,600 feet north of the intersection of
31 Base Line Road and South Brewer Road. This alternative would then extend
32 approximately 0.5 mile east through agricultural land and seasonal wetlands before
33 turning south for approximately 0.1 mile. This alternative would then turn east again
34 and extend approximately 0.5 mile along the edge of a rice field to Country Acres

1 Lane. From this point, this alternative would turn south and travel through
2 pasture/fallow agricultural fields along the east side of Country Acres Lane, crossing
3 a seasonal swale and seasonal wetlands. At the intersection with Base Line Road,
4 the pipeline would join and follow the remainder of the proposed alignment for Line
5 407-E along Base Line Road. This option would increase the overall pipeline length
6 by roughly 5,250 feet. Figure 3.2-I shows Option J.

7 This option would result in a reduction in the magnitude of impacts to aesthetics and
8 noise due to the movement of a portion of the pipeline to a location with fewer
9 residences. This option also would reduce the risk of upset hazards to a planned
10 high school site.

11 This option would have similar impacts as the proposed Project in the resource
12 areas of agricultural resources, air quality, hydrology and water quality, geologic
13 hazards, recreation, land use, population and utilities, traffic, and energy and mineral
14 resources.

15 This option would increase the magnitude of impacts to biological resources such as
16 seasonal wetlands and swales, and a vernal pool, though reduce impacts to trees
17 (potential Swainson's hawk nesting habitat). This option would also increase the
18 magnitude of disturbance to soils, which may increase the potential for introduction
19 of invasive species.

20 Option J would not reduce the significant and unavoidable impacts associated with
21 the proposed Project (construction air quality, hazards from the risk of pipeline
22 upset, and land use compatibility).

23 **Option K.** Option K would follow the proposed alignment for Line 407-E along Base
24 Line Road to a location approximately 3,300 feet east of Country Acres Lane. This
25 alternative would then extend northeast, at an angle, to a point approximately 150
26 feet north of Base Line Road. The pipeline would then turn and extend directly east
27 for approximately 0.2 mile, and then would turn southeast and extend, at an angle,
28 back to Base Line Road. The pipeline would then join and follow the remainder of
29 the proposed alignment for Line 407-E along Base Line Road. This alternative
30 would cross a vernal pool and seasonal wetlands, and would require the redesign or
31 relocation of the proposed HDD at this location in order to construct this alternative
32 alignment. This option would increase the overall pipeline length by roughly 70 feet.
33 Figure 3.2-J shows Option K.

1 This option would result in a reduction in the magnitude of impacts to aesthetics and
2 noise due to the movement of a portion of the pipeline to a location with fewer
3 residences. This option would help reduce the risk of upset to a planned elementary
4 school.

5 This option would have similar impacts as the proposed Project in the resource
6 areas of agricultural resources, air quality, hydrology and water quality, geologic
7 hazards, recreation, land use, population and utilities, traffic, and energy and mineral
8 resources.

9 This option would increase the magnitude of impacts to biological resources such as
10 seasonal wetlands and swales, and a vernal pool. Option K would not reduce the
11 significant and unavoidable impacts associated with the proposed Project
12 (construction air quality, hazards from the risk of pipeline upset, and land use
13 compatibility).

14 **Option L.** Option L would follow the proposed alignment for Line 407-E along Base
15 Line Road, but would extend the proposed HDD approximately 1,345 feet to the
16 east. This alternative would increase the depth of cover through the buffer zone to
17 approximately 35 feet and reduce the risk potential to a planned elementary school
18 south of Base Line Road. Approximately 1,000 feet of trenching for Line 407 E
19 would be replaced by HDD construction. Figure 3.2-K shows Option L. This option
20 would include the following PG&E Applicant Proposed Measure:

21 **APM ALT-L**

22 PG&E would partner with the Center Unified School District to jointly develop
23 a risk analysis in accordance with section 14010(h) of Title 5 of the California
24 Code of Regulations regarding the location of a school site within 1,500 feet
25 of a pipeline. The risk analysis would include a quantitative risk assessment
26 to evaluate potential pipeline impacts to the school. If the assessment
27 determines that there is a risk of serious injury or fatality presented by the
28 pipeline, corrective measures would be recommended to reduce the
29 probability and/or consequence such that the risk is reduced to an acceptable
30 level per the above-mentioned regulation.

31 This option would help reduce the risk of upset to a planned elementary school.
32 This option would not result in an increase in the magnitude of any impacts
33 associated with the proposed Project. This option would have similar impacts as the

1 proposed Project in the resource areas of aesthetics, agricultural resources, air
2 quality, hydrology and water quality, geologic and risk of upset hazards, recreation,
3 land use, noise, population and utilities, traffic, cultural resources, and energy and
4 mineral resources.

5 Option L would not reduce the significant and unavoidable impacts associated with
6 the proposed Project (construction air quality, hazards from the risk of pipeline
7 upset, and land use compatibility).

8 **ENVIRONMENTAL IMPACTS AND MITIGATION**

9 Table ES-1 presents a summary of impacts and mitigation measures for the
10 proposed Project. This table is presented by issue area. Within each issue area,
11 each impact that requires mitigation is described and classified, and recommended
12 mitigation is listed, and the level of impact with mitigation is stated.

13 **COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES**

14 The CEQA Guidelines (section 15126.6 (d)) requires that an EIR include sufficient
15 information about each alternative to allow meaningful evaluation, analysis, and
16 comparison with the proposed Project. A matrix displaying the major characteristics
17 and significant environmental effects of each alternative may be used to summarize
18 the comparison. Table ES-2 provides a comparison of the proposed Project with
19 each of the Alternatives evaluated in this document, including the No Project
20 Alternative.

21

22

23

24

25

Table ES-1: Summary of Environmental Impacts for the Proposed Project

Impact Class	Description
I	Significant adverse impact that remains significant after mitigation.
II	Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III	Adverse impact that does not meet or exceed an issue's significance criteria.
IV	Beneficial impact.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.1 Aesthetic/Visual Resources			
AES-1	The Project would substantially degrade the existing visual character or quality of the site and its surroundings.	II	AES-1 Replanting of screening vegetation.
AES-2	The proposed Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	II	AES-2 Light shielding and positioning away from residences.
Section 4.2 Agricultural Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.3 Air Quality			
AQ-1	The Project would result in construction or operational emissions that exceed quantitative significance thresholds (including quantitative thresholds for ozone precursors) established by air pollution control districts in which the Project would be constructed.	I	AQ-1a Fugitive PM ₁₀ Control. AQ-1b NO _x Mitigation Menu.
AQ-2	The Project would result in emissions that substantially contribute to an exceedance of a State or Federal ambient air quality standard.	I	AQ-1a Fugitive PM ₁₀ Control. AQ-1b NO _x Mitigation Menu.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
AQ-3	The Project would produce greenhouse gas emissions and contribute to climate change.	II	AQ-3 GHG Emission Offset Program.
Section 4.4 Biological Resources			
BIO-1	The proposed Project would fill or alter a wetland or vernal pool, resulting in a long-term change in its hydrology or soils, or the composition of vegetation of a unique, rare, or special concern wetland community.	II	BIO-1a Wetland avoidance and restoration. BIO-1b Trench backfill and topographic restoration. BIO-1c Riparian avoidance and restoration.
BIO-2	The Project would result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types, riparian vegetation, or natural communities.	II	BIO-2a Tree avoidance and replacement. BIO-2b Avoidance of valley oak woodland.
BIO-3	The Project would introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities.	II	BIO-3 Prepare and implement an invasive species control program.
BIO-4	The Project would cause a temporary loss or alteration of habitat important for one or more listed species that could result in avoidance by a listed species, or that could cause increased mortality or lowered reproductive success of the species.	II	BIO-4a Protect special-status wildlife. BIO-4b Mitigation for potential impacts to Natomas Basin Conservancy mitigation lands. BIO-4c Mitigation for potential impacts to Sacramento River Ranch Conservation Bank mitigation lands. BIO-4d Protect special-status bird species.
Section 4.5 Cultural Resources			
PALEO-1	Project construction or operation would result in damage or loss of vertebrate or invertebrate fossils that are considered important by paleontologists and land management agency staff.	II	PALEO-1 Proper curation of fossil collection.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
PALEO-2	The Project is considered to be a resource having scientific or educational value based on the significance criteria given in Section 4.6.3.	II	PALEO-2 Delivery of fossil collection to appropriate location.
Section 4.6 Geology and Soils			
GEO-1	The Project would result in a risk of damage to structures from ground motion due to a seismic event or resulting phenomenon such as liquefaction or settlement, or from rupture of a known earthquake fault as delineated on the most recent Alquist Priolo Earthquake fault Zoning Map.	II	GEO-1 Site specific seismic field investigation.
Section 4.7 Hazards and Hazardous Materials			
HAZ-1	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; but could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	II	HAZ-1 Minimize risk of fire.
HAZ-2	The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.	I	HAZ-2a Corrosion mitigation. HAZ-2b Installation of automatic shutdown valves.
Section 4.8 Hydrology and Water Quality			
HWQ-1	The Project could result in violation of Federal or State Agency quantitative or qualitative water quality criteria, standards, or objectives (including objectives promulgated by the CVRWQCB and criteria set forth in the Proposed California Toxics Rule).	II	HWQ-1 Response to unanticipated release of drilling fluids.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
HWQ-2	The Project could interrupt or degrade groundwater used for private or municipal purposes.	II	HWQ-2 Verify well locations.
HWQ-3	The Project would place permanent structures within the 100-year floodplain that would be damaged by flooding.	II	HWQ-3 Flood-proof pump houses within 100-year floodplain.
Section 4.9 Land Use and Planning			
LU-1	The proposed Project would not conflict with development plans for the Sutter Pointe Specific Plan Area, Placer Vineyards Specific Plan, the Sierra Vista Specific Plan, or the Curry Creek Specific Plan, but would cross lands included in the Natomas Basin Conservancy and River Ranch Conservation Bank. The Project could also conflict with operation of Western Area Power Administration (WAPA) power lines.	II	LU-1a Mitigation for impacts to the Natomas Basin Conservancy mitigation lands. LU-1b Mitigation for impacts to the Sacramento River Ranch Conservation Bank mitigation lands. LU-1c WAPA license agreement.
LU-2	The proposed Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.	I	LU-2a Mitigation for safety risk to nearby land uses. LU-2b Mitigation for safety risk to nearby land uses.
Section 4.10 Noise			
NOI-1	Noise levels from Project construction would exceed criteria defined in a construction noise ordinance or general plan of the local jurisdiction in which the activity occurs.	II	NOI-1a Limited construction hours. NOI-1b Best management practices. NOI-1c Noise reduction plan.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
NOI-2	Groundborne vibrations or groundborne noise from Project activities would have substantial direct or indirect effects on persons or structures.	II	NOI-2a Distance from residences. NOI-2b Heavy-loaded trucks. NOI-2c Earth-moving equipment/distance from vibration-sensitive sites. NOI-2d Nighttime construction.
Section 4.11 Recreation (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.12 Population and Housing/Public Services/Utilities and Service Systems (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.13 Transportation and Traffic (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.14 Energy and Mineral Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			

1
2

Table ES-2: Summary of Environmental Impacts for Proposed Project and Alternatives

Impact Class	Description
I	Significant adverse impact that remains significant after mitigation.
II	Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III	Adverse impact that does not meet or exceed an issue's significance criteria.
IV	Beneficial impact.

Magnitude of Alternative Option Impact as compared to the Proposed Project is shown by the following:

- 0 = No Impact**
- / = Similar Impact**
- = Lesser Magnitude of Impact**
- + = Greater Magnitude of Impact**

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.1 Aesthetics and Visual Resources															
AES-1	The Project substantially degrade the existing visual character or quality of the site and its surroundings.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II -	II -	II -	II /	II /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
AES-2	The Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II -	II -	II -	II /	II /
Section 4.2 Agricultural Resources (No Impact)															
Section 4.3 Air Quality															
AQ-1	The Project would result in construction or operational emissions that exceed quantitative significance thresholds (including quantitative thresholds for ozone precursors) established by air pollution control districts in which the Project would be constructed.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
AQ-2	The Project would result in emissions that substantially contribute to an exceedance of a State or Federal ambient air quality standard.	I	No Impact 0	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
AQ-3	The Project would produce greenhouse gas emissions and contribute to climate change.	II	No Impact 0	II +	II +	II +	II +	II +	II /	II /	II -	II +	II +	II +	II +
Section 4.4 Biological Resources															
BIO-1	The Project would fill or alter a wetland or vernal pool, resulting in a long-term change in its hydrology or soils, or the composition of vegetation of a unique, rare, or special concern wetland community.	II	No Impact 0	II +	II +	II /	II /	II /	II /	II /	II +	II +	II +	II +	II -
BIO-2	The Project would result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types, riparian vegetation, or natural communities.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
BIO-3	The Project would introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities.	II	No Impact 0	II +	II +	II +	II +	II +	II -	II +	II -	II +	II +	II -	II -
BIO-4	The Project would cause a temporary loss or alteration of habitat important for one or more listed species that could result in avoidance by a listed species, or that could cause increased mortality or lowered reproductive success of the species.	II	No Impact 0	II -	II +	II +	II +	II +	II /	II +	II +	II +	II +	II -	II -
BIO-5	The Project would result in direct or indirect impact on special-status plant species that could reduce the abundance or substantially reduce the species numbers of	No Impact	No Impact 0	II +	II +	III /	II +	II +	III /	III /	II +	II +	II +	III /	III /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	special-status plant species.														
Section 4.5 Cultural Resources															
PALEO-1	Project construction or operation would result in damage or loss of vertebrate or invertebrate fossils that are considered important by paleontologists and land management agency staff.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
PALEO-2	The Project is considered to be a resource having scientific or educational value based on the significance criteria given in Section 4.6.3.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
CR-1	The Project would result in damage to, disruption of or otherwise adversely affect an important archeological or a listed important historic resource.	No Impact	No Impact 0	II +	II +	III /	II +	II +	III -	III /	II +	III -	III -	III /	III /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.6 Geology, Soils, and Mineral Resources															
GEO-1	The Project would result in a risk of damage to structures from ground motion due to a seismic event or resulting phenomenon such as liquefaction or settlement, or from rupture of a known earthquake fault as delineated on the most recent Alquist Priolo Earthquake fault Zoning Map.	II	No Impact 0	II +	II +	II +	II +	II +	II /	II /	II -	II +	II /	II /	II /
Section 4.7 Hazards and Hazardous Materials															
HAZ-1	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; but could expose people or structures to a significant	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.														
HAZ-2	The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.	I	No Impact 0	I +	I +	I /	I +	I +	I +	I /	I /	I -	I -	I -	I -

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.8 Hydrology and Water Quality															
HWQ-1	The Project could result in violation of Federal or State Agency quantitative or qualitative water quality criteria, standards, or objectives (including objectives promulgated by the CVRWQCB and criteria set forth in the Proposed California Toxics Rule).	II	No Impact 0	II +	II /	II +	II -	II -	II /	II /	II +	II +	II +	II /	II /
HWQ-2	The Project could interrupt or degrade groundwater used for private or municipal purposes.	II	No Impact 0	II -	II +	II /	II +	II +	II -	II +	II -	II -	II -	II /	II /
HWQ-3	The Project would place permanent structures within the 100-year floodplain that would be damaged by flooding.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.9 Land Use and Planning															
LU-1	The Project would not conflict with development plans for the Sutter Pointe Specific Plan Area, Placer Vineyards Specific Plan, the Sierra Vista Specific Plan, or the Curry Creek Specific Plan, but would cross lands included in the Natomas Basin Conservancy and River Ranch Conservation Bank. The Project could also conflict with operation of Western Area Power Administration (WAPA) power lines.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II +	II +	II -	II -	II -
LU-2	The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for	I	No Impact 0	I +	I +	I /	I +	I +	I +	I /	I /	I -	I -	I -	I -

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	fires, explosions, or the release of natural gas into the environment.														
Section 4.10 Noise															
NOI-1	Noise levels from Project construction would exceed criteria defined in a construction noise ordinance or general plan of the local jurisdiction in which the activity occurs.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II /	II -	II -	II /	II /
NOI-2	Groundborne vibrations or groundborne noise from Project activities would have substantial direct or indirect effects on persons or structures.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II /	II -	II -	II /	II /
Section 4.11 Recreation (Less than Significant (Class III) – No Impact Statements or Mitigation Measures)															
Section 4.12 Socioeconomics (Less than Significant (Class III) – No Impact Statements or Mitigation Measures)															
Section 4.13 Transportation and Traffic															

Impact No.	Impact Description	Proposed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
TRANS-1	Project related traffic or other activities could restrict one or more travel lanes of a primary or secondary arterial during peak-hour traffic, thereby reducing the roadway's capacity and creating congestion.	III	No Impact 0	II	II	III	III	III	III	III	III	III	III	III	III
				+	+	/	+	+	/	/	/	/	/	/	+
Section 4.14 Energy and Mineral Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)															

1
2

1 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

2 The CEQA Guidelines (section 15126.6 (d)) require that an EIR include sufficient
3 information about each alternative to allow meaningful evaluation, analysis, and
4 comparison with the proposed Project. The Guidelines (Section 15126.6 (e)(2))
5 further state, in part, that “*If the environmentally superior alternative is the “No
6 Project” alternative, the EIR shall also identify an environmentally superior
7 alternative among the other alternatives.*” (*Emphasis added*).

8 A narrative summary of the impacts associated with Alternative Options A through L,
9 as compared to the proposed Project impacts, was provided above. Table ES-2
10 summarizes the environmental impacts for the proposed Project, the No Project
11 Alternative, and the twelve alternative options analyzed in the Draft EIR. None of
12 the alternative options A through L that were analyzed would reduce the significant
13 and unavoidable (Class I) impacts associated with the proposed Project. Those
14 impacts are associated with construction air quality, hazards from the risk of pipeline
15 upset, and land use compatibility.

16 While none of the alternative options A through L reduce any of the Class I impacts
17 to less than significant, nor any of the Class II impacts to less than significant without
18 mitigation, some of the options do reduce the magnitude of the impacts associated
19 with the proposed Project. Table ES-2 also depicts whether the impacts associated
20 with the project are the same, reduced in magnitude, or increased in magnitude by
21 each alternative option.

22 Under the No Project Alternative, a natural gas pipeline would not be constructed
23 between existing Lines 400 and 401 in Yolo County and the existing Line 123 in
24 Placer County. PG&E’s studies indicate that the natural gas transmission and
25 distribution system may not be able to reliably serve current customers and planned
26 development in Yolo, Sacramento, Sutter, and Placer counties by 2009.
27 Additionally, continued growth in those counties would put further strain on existing
28 natural gas infrastructure, and could result in emergency restriction or interruption of
29 services. The No Project alternative would not result in any of the impacts
30 associated with the proposed Project. Therefore, the No Project alternative is
31 considered the environmentally superior alternative.

32 Among the other alternatives, the determination of an environmentally superior
33 alternative is difficult because of the many factors that must be balanced, and none
34 of the alternative options reduce the Class I impacts. Some of the impacts may be

1 reduced in magnitude while, at the same time, others are increased in magnitude. In
2 general, there would be minor differences in the magnitude of impacts between the
3 proposed Project and the alternatives, but all would result in the same impact
4 significance levels within each environmental resource area.

5 Some of the alternative options would reduce the number of agricultural fields that
6 would be segmented by the Project pipeline. However, this would result in the
7 movement of the pipeline closer to roadways, residences, and in some cases
8 businesses, thereby increasing the number of people that would be at risk if a leak
9 or rupture of the pipeline were to occur with a subsequent explosion and/or fire.

10 The following discussion includes alternative options that would help to reduce the
11 magnitude of some of the impacts associated with the proposed Project, even
12 though some of the other impacts would be greater in magnitude than the proposed
13 alignment in the same segment area.

14 Alternative Option I would reduce the risk of upset hazards to a planned high school
15 along Baseline Road by moving the pipeline to a location outside of the 1,500-foot
16 safety buffer required by state school regulations. This option would reduce impacts
17 to trees, and would reduce construction noise by moving the pipeline location further
18 from residences along Baseline Road. However, this option would increase the
19 magnitude of impacts to biological resources by impacting a seasonal wetland,
20 swale, vernal pool and a creek not associated with the proposed alignment. All of
21 these impacts would be mitigated in a manner similar to the proposed Project.

22 Alternative Option L would reduce the risk of upset hazards to a planned elementary
23 school south of Baseline Road. This option would not result in the increase or
24 decrease in the magnitude of any impacts associated with the proposed alignment.

25 The environmentally superior alternative would be incorporating Alternative Options I
26 and L into the proposed Project alignment. The decrease in the magnitude of
27 impacts to safety risks to planned schools would outweigh the additional impacts to
28 biological resources. The increased magnitude of wetland and vernal pool impacts
29 would be mitigated by the measures outlined in Sections 4.4.4 and 4.4.5.

30 **KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES**

31 The comments received during the Notice of Preparation (NOP) public scoping
32 period raised issues related to impacts to aesthetic/visual, agricultural, air quality,
33 biological resources, geology and soils, hazards and safety, hydrology and water

- 1 quality, land use, socioeconomics, and traffic and transportation resources.
- 2 Appendix B provides a copy of the NOP, copies of comment letters received during
- 3 the NOP and scoping process, and copies of the transcripts taken at the scoping
- 4 meetings, and indicates the section of the EIR in which the issue is addressed.

