Attachment C

PG&E's Comments on the North Fork Feather River Listing for Mercury

WATER SEGMENT: North Fork Feather River (NFFR) below Lake Almanor (The proposed 2008 listing included the entire 56+ mile stretch from below Lake Almanor to Lake Oroville – without any segmentation)

POLLUTANT: Mercury

SOURCE: Resource Extraction

STATUS of Proposed 2008 303(d) LISTING: Listed

CVRWQCB STAFF BASIS: After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.

PG&E RECOMMENDATION: Address potential for listing by water segments (river reach) and delist or list based upon known available data or evidence for each individual water segment. Based upon known available data the CVRWQCB should list only the Big Bend Reach (in Big Bend Reservoir specifically) for mercury. CVRWQCB should not list Seneca, Belden, Rock Creek, Cresta, and Poe reaches of the NFFR for mercury based upon the known available data.

PG&E COMMENT: The CVRWQCB listed the entire 56+ miles of the NFFR from the Seneca Reach through the Big Bend Reach due to exceedances of mercury criteria that indicate possible impairment only in the Big Bend Reach of the NFFR (in Big Bend Reservoir specifically), (PG&E 2003).

PG&E collected fish tissue samples and had them analyzed for mercury in three project reservoirs (Belden Forebay, Poe Reservoir, and Big Bend Reservoir) in 2001, 2002, and 2003 (PG&E 2002 and 2003). No fish were collected from the river. Fish tissue samples were collected from the Belden Forebay as part of the Upper NFFR Project (FERC 2105) in support of the application for license in 2001 (PG&E 2002). These samples were analyzed as whole body with skin for both methyl mercury and total mercury per the recommendations by the Upper NFFR collaborative group.

Fish tissue samples were also collected from Poe Reservoir and Big Bend Reservoir of the Poe Hydroelectric Project (FERC No. 2107) for the application for new license in 2002 and 2003 (PG&E 2003). Only samples

collected from Big Bend Reservoir indicate possible impairment due to mercury. Known available data from Belden Reach (Belden Forebay) and Poe Reach (Poe Reservoir) do not indicate impairment per the listing requirements described in Table 3.1 of the State Water Resource Control Board (SWRCB) Listing Policy (SWRCB 2004); and there are no known available data from the Seneca, Rock Creek, and Cresta reaches. Therefore, there is insufficient justification for listing these water segments on the 303(d) list of impaired water bodies.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

PG&E believes that the TMDL process will be more reflective of current conditions and truly impaired water segments may be addressed more efficiently if water segment delineation were followed when determining the list of 303(d) impaired waters. In addition, all known available data should only be applied to the reach or water segment in which it was collected; possible impairment cannot be inferred to upstream or downstream reaches if known available data for those river reaches do not indicate impairment, are not available, or have not been collected.

PG&E has provided factsheets for each reach of the NFFR (Seneca, Belden, Rock Creek, Cresta, Poe, and Big Bend) in this submission (see Figure C-1). Factsheets for the Seneca, Belden, Rock Creek, Cresta, and Poe reaches demonstrate that these reaches should not be listed for mercury because known available data do not indicate impairment or there are no known data available to make a determination regarding listing. The only water segment with known available data that does show possible impairment for mercury in fish tissue is the Big Bend Reach (in Big Bend Reservoir only).

References

PG&E. 2002. *Upper North Fork Feather River Project (FERC No. 2105), Final Application for New License*. October 2002.

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Projects. FERC/FEIS – 0172D. November 2005.

State Water Resources Control Board (SWRCB). 2004. *Water Quality Control Policy (Listing Policy) for Developing California's Clean Water Act Section 303(d) List.* September 2004.

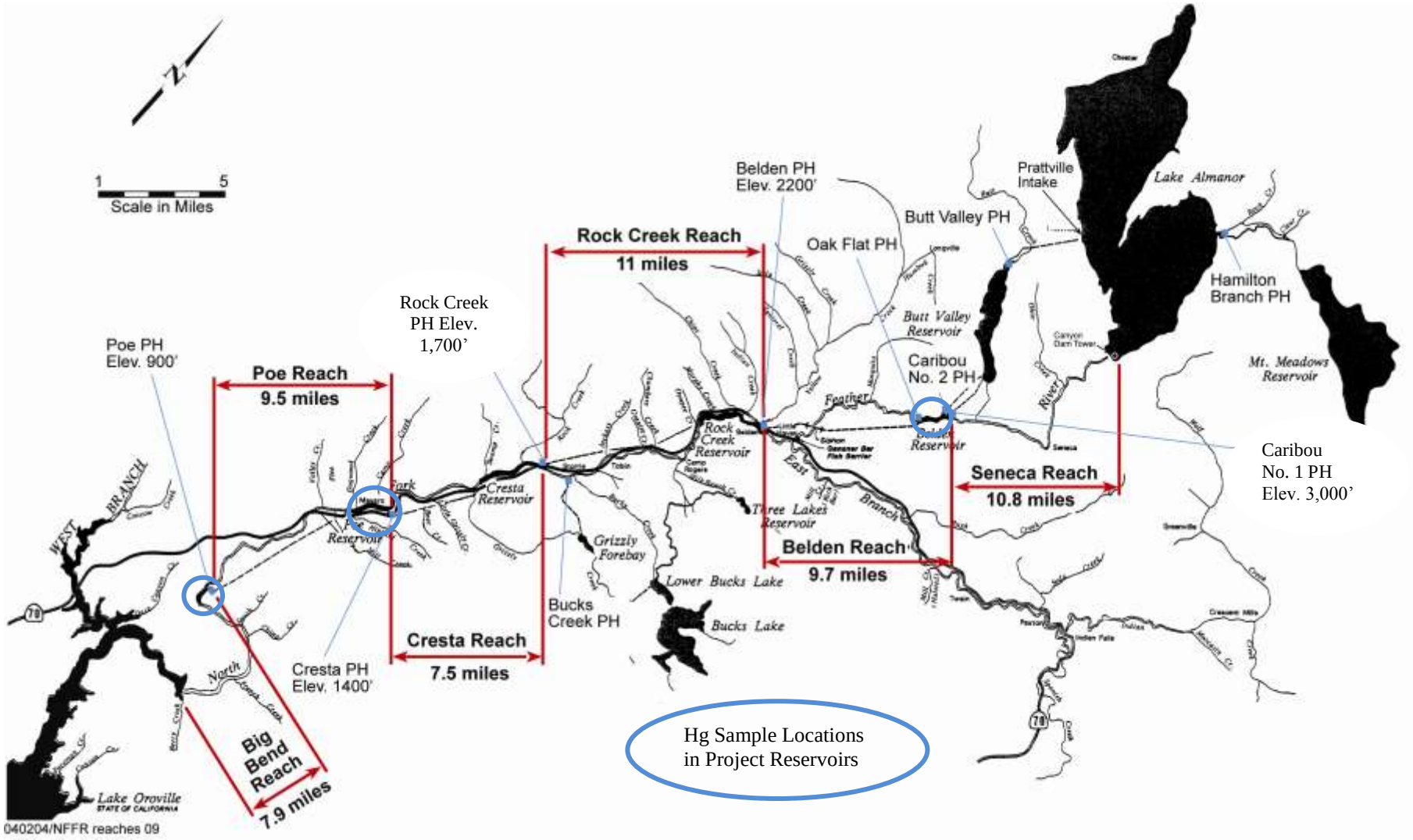

Figure C-1. Water Segment Delineation and Actual Sampling Locations in the NFFR Project (Belden Forebay) and Poe Project (Poe Reservoir and downstream of Poe Powerhouse in Big Bend Reservoir).

FACTSHEETS

EVALUATION OF NORTH FORK FEATHER RIVER

BY SEGMENT OR REACH

WATER SEGMENT:	North Fork Feather River – Seneca Reach (between Canyon Dam and Caribou 1 and 2 powerhouses)
POLLUTANT:	Mercury
SOURCE:	None; no known available data
STATUS of Proposed 2008 303(d) LISTING:	Listed
CVRWQCB STAFF BASIS:	After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.
PG&E RECOMMENDATION:	Do Not List
PG&E COMMENT:	No known fish tissue mercury data have been collected in the Seneca Reach; therefore this water segment should not be listed for mercury. However, the CVRWQCB listed the entire NFFR, including the Seneca Reach based upon data that may indicate possible impairment due to mercury in fish collected from Big Bend Reservoir only (PG&E 2002 and 2003, and FERC 2005). It is incorrect to infer impairment due to mercury from data collected in Big Bend Reservoir approximately 48.5 miles downstream from the top of Seneca Reach. Consequently, there are no known available data that would justify listing of Seneca Reach for mercury impairment, therefore it should be delisted. Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References:

PG&E. 2002. *Upper North Fork Feather River Project (FERC No. 2105), Final Application for New License*. October 2002.

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

WATER SEGMENT: North Fork Feather River – Belden Reach (Belden Forebay to Belden Powerhouse)

POLLUTANT: Mercury

SOURCE: None; known available data do not indicate impairment

STATUS of Proposed 2008 303(d) LISTING: Listed

SWRCB STAFF BASIS: After review of the available data and information the CVRWQCB staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded.

PG&E RECOMMENDATION: Do Not List

PG&E COMMENT: Fish tissue (total of 7) and crayfish (total of 1) samples have been collected in the Belden Reach (in Belden Forebay specifically; no samples were collected in the river) during the summer of 2001 in support of PG&E's Upper NFFR License Application (PG&E 2002). The specific species of fish sampled for the Upper NFFR project were chosen in consultation with the collaborative group for the project. The tissue samples that were collected and analyzed in Belden Forebay included 1 rainbow trout, 1 brown trout, 3 Sacramento suckers, 2 smallmouth bass, and 1 crayfish.

Samples collected from the Belden Forebay were analyzed as whole body with skin for both methyl mercury and total mercury per the recommendations by the Upper NFFR collaborative group. Results of the analyses for mercury indicated that there were no exceedances of the Office of Environmental Health Hazard Assessment (OEHHA) criterion for mercury (0.3 ppm or 300 ppb) in any of the samples collected from Belden Forebay (PG&E 2002). This information was correctly identified in the CVRWQCB's factsheet for 2008.

However, the CVRWQCB listed the entire NFFR, including this river segment based upon data that may indicate possible impairment due to mercury in fish collected from Big Bend Reservoir only (PG&E 2002 and 2003). It is incorrect to infer impairment due to mercury from data collected in Big Bend Reservoir approximately 37.7 miles downstream from the top of Belden Reach. Consequently, the known available data for Belden

Reach indicate that there is no impairment due to mercury in this Belden Reach and it should be delisted.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References:

PG&E. 2002. *Upper North Fork Feather River Project (FERC No. 2105), Final Application for New License*. October 2002.

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

WATER SEGMENT: North Fork Feather River – Rock Creek Reach (Rock Creek Reservoir to Rock Creek Powerhouse)

POLLUTANT: Mercury

SOURCE: None; no known available data

STATUS of Proposed 2008 303(d) LISTING: Listed

CVRWQCB STAFF BASIS: After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.

PG&E RECOMMENDATION: Do Not List

PG&E'S RESPONSE: No known fish tissue mercury data have been collected in Rock Creek Reach; therefore this water segment should not be listed for mercury impairment.

However, the CVRWQCB listed the entire NFFR, including the Rock Creek Reach based upon data that may indicate possible impairment due to mercury in fish collected from Big Bend Reservoir only (PG&E 2002 and 2003, and FERC 2005). It is incorrect to infer impairment due to mercury from data collected in Big Bend Reservoir approximately 28 miles downstream from the top of Rock Creek Reach. Consequently, there are no known available data that would justify listing of Rock Creek Reach for mercury impairment, therefore it should be delisted.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References:

PG&E. 2002. *Upper North Fork Feather River Project (FERC No. 2105), Final Application for New License*. October 2002.

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

WATER SEGMENT: North Fork Feather River – Cresta Reach (Cresta Reservoir to Cresta Powerhouse)

POLLUTANT: Mercury

SOURCE: None; no known data available

STATUS of Proposed 2008 303(d) LISTING: Listed

CVRWQCB STAFF BASIS: After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.

PG&E RECOMMENDATION: Do Not List

PG&E'S RESPONSE: No known fish tissue mercury data have been collected in Cresta Reach; therefore this water segment should not be listed for mercury impairment.

However, the CVRWQCB listed the entire NFFR, including the Cresta Reach based upon data that may indicate possible impairment due to mercury in fish collected from Big Bend Reservoir only (PG&E 2002 and 2003, and FERC 2005). It is incorrect to infer impairment due to mercury from data collected in Big Bend Reservoir approximately 17 miles downstream from the top of Cresta Reach. Consequently, there are no known available data that would justify listing of Cresta Reach for mercury impairment, therefore it should be delisted.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References:

PG&E. 2002. *Upper North Fork Feather River Project (FERC No. 2105), Final Application for New License*. October 2002.

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

WATER SEGMENT: North Fork Feather River – Poe Reach (Poe Reservoir to Poe Powerhouse)

POLLUTANT: Mercury

SOURCE: None; known available data do not indicate impairment

STATUS of Proposed 2008 303(d) LISTING: List

CVRWQCB STAFF BASIS: After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.

PG&E RECOMMENDATION: Do Not List the Poe Reach of the NFFR

PG&E'S COMMENT: The CVRWQCB listed the entire NFFR, including Poe Reach based upon data provided in PG&E's Upper NFFR Final License Application (PG&E 2002), the Poe Final License Application (PG&E 2003), and FERC's Final Environmental Impact Statement (FERC 2005).

Results from fish tissue sampling conducted in Poe Reservoir (no samples were collected in the river) are presented in tables E3.1.-44 and 45 on pages E3.1-163-165 of PG&E's Poe License Application (PG&E 2003). A total of 12 fish were collected in Poe Reservoir (1 rainbow trout, 2 Sacramento pikeminnow, and 9 smallmouth bass), (shown in Table E3.1-44). According to the results in the table, two fish exceeded the OEHHA's criteria of 0.3 ppm for mercury (a pikeminnow [0.33 ppm] and a smallmouth bass [incorrectly recorded as 0.90 ppm]). PG&E would like to clarify that only the data for the pikeminnow are accurate in the Poe License Application due to a reporting/transcription error (PG&E 2003).

The reported level of 0.9 ppm for the smallmouth bass was incorrect due to a simple transcription error; it should have been reported as 0.09 ppm, which is below the recommended OEHHA criterion of 0.3 ppm. Therefore, only 1 of 12 fish sampled from Poe Reservoir exceeded the recommended OEHHA criterion for mercury in fish tissue. This does not exceed the allowable

frequency in Table 3.1 of the Listing Policy (which states that for a sample size of 2-24, greater than or equal to 2 exceedances is sufficient justification for listing a water body/pollutant combination), (SWRCB 2004).

PG&E would like to clarify that the data and information presented in the CVRWQCB factsheet is not completely correct. The CVRWQCB factsheet for mercury for the NFFR states that a total of 2 of 18 samples exceeded the OEHHA criterion for mercury in Poe Reservoir (per information detailed in the factsheet). This value is incorrect because a total of 12 samples were collected from Poe Reservoir for mercury analysis. The CVRWQCB incorrectly included the number of Sacramento suckers that were collected for other analyses in the total number of fish that were sampled for mercury (while 6 Sacramento suckers had been collected from Poe Reservoir, they were not analyzed for mercury). In addition, a transcription error in one of the Poe Reservoir smallmouth bass samples led to the CVRWQCB to document in the factsheet that a total of 2 samples had exceeded the OEHHA criterion when in reality only 1 fish from Poe Reservoir exceeded the criterion.

Additionally, it is incorrect to infer impairment due to mercury from data collected in Big Bend Reservoir approximately 9.5 miles downstream from the top of Poe Reach. Therefore, based on the known available information and data, the Poe Reach of the NFFR (specifically the Poe Reservoir) should NOT be listed for mercury impairment.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

State Water Resources Control Board (SWRCB). 2004. *Water Quality Control Policy (Listing Policy) for Developing California's Clean Water Act Section 303(d) List.* September 2004.

WATER SEGMENT: North Fork Feather River – Big Bend Reach (Big Bend Reservoir to Lake Oroville)

POLLUTANT: Mercury

SOURCE: Resource Extraction

STATUS of Proposed 2008 303(d) LISTING: List

CVRWQCB STAFF BASIS: After review of the available data and information, the Central Valley Regional Water Quality Control Board (CVRWQCB) staff concluded that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards were exceeded and a pollutant contributes to or causes the problem.

PG&E RECOMMENDATION: List the Big Bend Reach (specifically Big Bend Reservoir) of the NFFR

PG&E'S COMMENT: The CVRWQCB listed the entire NFFR, including Big Bend Reach based upon data provided in PG&E's Upper NFFR Final License Application (PG&E 2002), the Poe Final License Application (PG&E 2003), and FERC's Final Environmental Impact Statement (FERC 2005).

Results from fish tissue sampling conducted in Big Bend Reservoir below the Poe Powerhouse (no samples were collected in the river) are presented in Table E3.1-45 (page E3.1-162 – 165) of the Poe Final License Application, (PG&E 2003). According to the table, 28 fish were sampled for mercury (2 rainbow trout, 8 Sacramento pikeminnow, 9 smallmouth bass, and 9 spotted bass). Of the 28 fish sampled, 12 had a value for mercury that was equal to or greater than 0.3 ppm (PG&E 2003). This does exceed the allowable frequency in Table 3.1 of the SWRCB's Listing Policy (which states that for a sample size of 25-36, greater than or equal to 3 exceedances is sufficient justification for listing the water body/pollutant combination as impaired), (SWRCB 2004).

PG&E would like to clarify that the data and information presented in the CVRWQCB factsheet is not completely correct. The CVRWQCB factsheet for mercury for the NFFR states that a total of 12 of 34 samples exceeded the OEHHA criterion for mercury in Big Bend Reservoir (per information detailed in the factsheet).

This value is incorrect because a total of 28 samples were collected from Big Bend Reservoir, not 34 samples as indicated in the factsheet. The CVRWQCB incorrectly included the number of Sacramento suckers that were collected from Big Bend Reservoir for other analyses in the total number of fish that were sampled for mercury (6 Sacramento suckers had been collected in Big Bend Reservoir, but they were not analyzed for mercury and should not be included in the total number of fish that were analyzed for mercury).

Therefore, based on the known available information and data, the Big Bend Reach of the NFFR (specifically Big Bend Reservoir) should be listed for mercury.

Arguments provided in the Water Segment Delineation Factsheet explain the necessity for determining appropriateness of listing or delisting based upon water segmentation of long rivers with regard to environmental, biological, physical differences, as well as known availability of data within each individual reach (Attachment A).

References

PG&E. 2003. *Poe Hydroelectric Project (FERC No. 2107), Application for New License*. December 2003.

Federal Energy Regulatory Commission (FERC). 2005. *Final Environmental Impact Statement, Upper North Fork Feather River Project California, (FERC No. 2105)*. Office of Energy Project. FERC/FEIS – 0172D. November 2005.

State Water Resources Control Board (SWRCB). 2004. *Water Quality Control Policy (Listing Policy) for Developing California's Clean Water Act Section 303(d) List.* September 2004.