BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

Bay Area Clean Water Agencies
Lorien Fono, Executive Director
PO Box 24055, MS 702
Oakland, CA 94623

Re: Board of Supervisors Resolution No. 69-23

Dear Director Fono:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

f Angela Calvillo
Clerk of the Board

ak:ll:jw:ams

c. Members of the Board of Supervisors, Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

SF Bay Regional Water Quality Control Board
Eileen White, Executive Officer
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Board of Supervisors Resolution No. 69-23

Dear Executive Officer White:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alisa Somera

for Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

California Department of Fish and Wildlife
Bay Delta Region (Region 3)
Erin Chappell, Regional Manager
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

Re: Board of Supervisors Resolution No. 69-23

Dear Ms. Chappell:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alicia Romero

f Angela Calvillo
Clerk of the Board

ak:ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Nancy Pelosi
Speaker Emerita
1236 Longworth House Office Building
Washington, DC 20515

Re: Board of Supervisors Resolution No. 69-23

Dear Speaker Emerita Pelosi:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

f Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Kevin Mullin
United States House of Representatives
1404 Longworth House Office Building
Washington, DC 20515

Re: Board of Supervisors Resolution No. 69-23

Dear Congressman Mullin:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Dianne Feinstein
United States Senator
331 Hart Senate Office Building
Washington, DC 20510

Re: Board of Supervisors Resolution No. 69-23

Dear Senator Feinstein:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alicia Somera

for Angela Calvillo
Clerk of the Board

ak:ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Alex Padilla
United States Senator
112 Hart Senate Office Building
Washington, DC 20510

Re: Board of Supervisors Resolution No. 69-23

Dear Senator Padilla:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

f Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Gavin Newsom
Governor of the State of California
1020 O Street, Suite 9000
Sacramento, CA 95814

Re: Board of Supervisors Resolution No. 69-23

Dear Governor Newsom:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alisa Somera

for Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Scott Wiener
California State Senator
California State Capitol
1021 O Street, Suite 6630
Sacramento, CA 95814-4900

Re: Board of Supervisors Resolution No. 69-23

Dear Senator Wiener:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alicia Romero

for Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Phil Ting
California State Assembly Member
California State Capitol, Suite 8230
P.O. Box 942849
Sacramento, CA 94249-0019

Re: Board of Supervisors Resolution No. 69-23

Dear Assembly Member Ting:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

Alicia Somera

f Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Jessica Duong, Assembly Member Phil Ting Chief of Staff
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place
Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

March 13, 2023

The Honorable Matt Haney
California State Assembly Member
California State Capitol, Room 5310
P.O. Box 942849
Sacramento, CA 94249-0017

Re: Board of Supervisors Resolution No. 69-23

Dear Assembly Member Haney:

On February 14, 2023, the Board of Supervisors of the City and County of San Francisco adopted Resolution No. 69-23 (Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022), which was enacted on February 24, 2023.

The Board of Supervisors directs the Clerk of the Board to forward the following document to your attention:

- One copy of Resolution No. 69-23 (File No. 230150)

If you have any questions or require additional information, please contact the Office of the Clerk of the Board at (415) 554-5184, or by e-mail: board.of.supervisors@sfgov.org.

Sincerely,

f Angela Calvillo
Clerk of the Board

ak;ll:jw:ams

c. Members of the Board of Supervisors; Supervisors Aaron Peskin, Connie Chan, Myrna Melgar
Tom Paulino, Mayor's Liaison to the Board of Supervisors
Sarah Owens, Mayor's Manager of State and Federal Legislative Affairs
Andres Power, Mayor's Policy Director
Susanna Conine-Nakano, Mayor's Office
Paul Yoder, Karen Lange, Erica Smith, City Lobbyists - Shaw/Yoder/Antwih Inc.

[Urging Nutrient Pollution Reduction from Wastewater in Response to the San Francisco Bay Harmful Algal Bloom of 2022]

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

WHEREAS, The San Francisco Bay is suffering from excessive nitrogen loads, which are excessive amounts of nitrogen compounds sourced primarily from wastewater treatment plants, but also from agricultural runoff, stormwater, and atmospheric deposition which contribute to negative impacts on the Bay's ecosystem, including harmful algal blooms, low oxygen levels, and loss of habitat for fish and other aquatic species; and

WHEREAS, High nitrogen levels can affect water quality, making it unsuitable for recreational uses such as swimming and fishing and to address this issue, various management strategies should be implemented, focused on improvements to wastewater treatment processes; and

WHEREAS, Presentations at the October 17, 2022, Land Use and Transportation Committee hearing, on file with the Clerk of the Board of Supervisors in File No. 220962, which is hereby declared to be a part of this Resolution as if set forth fully herein; and

WHEREAS, The San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the "Bay-Delta Estuary") is critical to the natural environment and economy of the City and County of San Francisco, the San Francisco Bay Area at large, and State of California, providing some of the drinking water to two-thirds of the State's population, irrigating some of the State's most productive farmland, and constituting one of the largest and most unique estuarine ecosystems for fish and wildlife habitats in North America; and

WHEREAS, San Francisco Bay receives over 400 million gallons per day ("mgd") of treated wastewater from forty sewage treatment plants serving more than seven million people in the Bay Area, including about 50,000 pounds of nitrogen pollution and 4,000 pounds of phosphorus on a daily basis, making it among the most nutrient-rich estuaries in the world; and

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) discharges approximately 20% of all municipal wastewater-borne nutrients to San Francisco Bay, despite discharging less than 12% of the total wastewater flow to San Francisco Bay; and

WHEREAS, In July and August of 2022, the largest ever recorded harmful algal bloom occurred in Central San Francisco Bay, comprised of the 'red tide' species, *Heterosigma akashiwo*, which relied on abundant nutrients to reach an unprecedented magnitude; and

WHEREAS, This algal bloom coincided with the death of uncountably large numbers of fish, including what leading scientists believe to be a significant proportion of the Bay's population of White Sturgeon, a Species of Special Concern, and Green Sturgeon, a threatened species under the Endangered Species Act; and

WHEREAS, The harmful algae species *H. akashiwo* produces toxins dangerous to fish and reduces the oxygen available to fish and other aquatic wildlife, resulting in the largest fish kill ever recorded in San Francisco Bay; and

WHEREAS, The State Water Board updated the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the "Bay-Delta Plan"); the State Water Board is to require 40% unimpaired flow from each of the Stanislaus, Tuolumne, and Merced Rivers during February through June, to maintain inflow conditions from the San Joaquin River watershed sufficient to support and maintain the natural production of viable native populations of San Joaquin River migratory fish species; and

WHEREAS, It is state policy and an objective of the Bay-Delta Plan to double natural production of Chinook Salmon in the Central Valley relative to the years 1967-1991 average, including in the Tuolumne River; and

WHEREAS, The SFPUC adopted the OneWaterSF Vision and Guiding Principles in 2016, and reaffirmed them in 2022, which includes a commitment to "the health and quality of watersheds, San Francisco Bay, and the Pacific Ocean" and to pursue multiple benefits across SFPUC's enterprises; and

WHEREAS, In recent years, up to 90% of the San Joaquin River's flow and up to 92% of the Tuolumne River's flow have been diverted or withheld in reservoirs upstream, causing Tuolumne River salmon populations to plummet from 40,322 Chinook salmon in 1984, to less than 300 in 2020; and

WHEREAS, San Francisco Bay's watershed experienced two extreme droughts in the past ten years, punctuated by extreme precipitation events; and

WHEREAS, Climate change scientists warn that California, and the San Joaquin River watershed in particular, may experience droughts of greater duration and severity in the near future; and

WHEREAS, In 2018 the State Water Resources Control Board ("State Water Board") established a goal to increase wastewater recycling by 350% by 2030, compared with a 2015 baseline, and reuse of all dry weather discharges of treated wastewater from enclosed bays, estuaries and coastal lagoons, and ocean waters, which includes San Francisco Bay; and

WHEREAS, The SFPUC recycles less than one-percent of its wastewater discharges, and provides no treated wastewater for direct or indirect potable reuse; and

WHEREAS, The SFPUC plays an outsized role in nutrient loading, with nearly four times the amount of nitrogen discharged to San Francisco Bay, compared to San Jose's plant; and

WHEREAS, California allows for the augmentation of groundwater and reservoir-based water supplies with advanced-purified water, and in 2023 plans to codify the direct potable reuse of advanced purified water; and

WHEREAS, Technologies exist to remove nutrients and other pollutants from concentrated wastewater streams, including reverse osmosis concentrate and wastewater side streams; and

WHEREAS, In May 2022, the SFPUC released the San Francisco Purified Water Opportunities Study and found up to forty-three mgd of purified water is potentially available for recycling through various projects and concluded that "...there are feasible projects that can reliably produce a significant new water supply within the City;" and

WHEREAS, On October 17, 2022, Thomas Mumley, Assistant Executive Officer of the SF Bay Regional Water Quality Control Board ("Regional Board") described their Nutrient Management Strategy to the San Francisco Land Use and Transportation Committee; through their regulatory authority, the Regional Board has issued two permits governing nutrient discharges from wastewater facilities throughout the region; the Regional Board intends to issue a third permit in the year 2024 and is considering inclusion of a load reduction clause; this requires exploring the science on how to execute this and how much it would cost; now, therefore, be it

RESOLVED, That San Francisco is a recognized leader in the State and region in green infrastructure; this infrastructure helps San Francisco manage excess stormwater to our combined sewer system; San Francisco has demonstrated the will to step up to the challenges put forth and must once again rise to the challenge to reduce our nutrient loading in the Bay; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors instructs the SFPUC to evaluate and report to the Board on a full range of technologies and strategies to

reduce the amount of wastewater nutrients released into San Francisco Bay and the outer coast, including, but not limited to multi-benefit strategies; and, be it

FURTHER RESOLVED, That the San Francisco Board of Supervisors urges the SFPUC to take necessary steps to further diversify its water supply and reduce reliance on the Tuolumne River; and, be it

FURTHER RESOLVED, That the Clerk of the Board of Supervisors forward this Resolution to the SFPUC, Bay Area Clean Water Agencies, California State Water Board, California Department of Fish and Wildlife, and each of the City's elected State and Federal representatives.

City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 230150 **Date Passed:** February 14, 2023

Resolution urging the San Francisco Public Utilities Commission to reduce nutrient loading to San Francisco Bay and the outer coast through appropriate technologies, including wastewater recycling and advanced treatment.

February 14, 2023 Board of Supervisors - ADOPTED

Ayes: 11 - Chan, Dorsey, Engardio, Mandelman, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 230150

I hereby certify that the foregoing Resolution was ADOPTED on 2/14/2023 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

Unsigned

London N. Breed
Mayor

2/24/2023

Date Approved

I hereby certify that the foregoing resolution, not being signed by the Mayor within the time limit as set forth in Section 3.103 of the Charter, or time waived pursuant to Board Rule 2.14.2, became effective without her approval in accordance with the provision of said Section 3.103 of the Charter or Board Rule 2.14.2.

Angela Calvillo
Clerk of the Board

2/24/2023
Date