Attachment 2

American Seafoods Company

August 26th, 2008

The Honorable Mike Chrisman, Secretary of Resources,
Chair, Ocean Protection Council
c/o Christine Blackburn
Ocean Protection Council
1330 Broadway, 13th Floor
Oakland, CA 94612

Dear Secretary Chrisman,

I am writing to urge the California Ocean Protection Council to fund a proposed study by Dr. Victoria Fabry of California State University-San Marcos and colleagues, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO_2 and O_2 on the California shelf, and effects on red sea urchins, abalone and oysters."

American Seafoods is one of the largest seafood companies in the U.S. We do not have fishing operations in waters off of California but are actively engaged in fisheries off the coasts of Oregon, Washington and Alaska. Ocean acidification is not limited geographically though and research conducted off the coast of California is directly relevant to other areas and fisheries.

This study will shed light on carbon dioxide-driven changes that could affect the chemistry of seawater, organisms that utilize carbon compounds, and ultimately the food chain that fish stocks depend on. The proposed project will establish monitoring systems for CO_2 and pH along the coast and will conduct experiments on effects of low oxygen, CO_2-acidified water on red sea urchins, abalone and oysters. In particular, this project will illuminate some of the impacts on calcification—the ability of many organisms to build and maintain themselves out of the ocean's soup of calcium and carbonate ions.

This work will also benefit efforts to understand effects on other fisheries. Many commercially important fish species rely heavily on zooplankton, phytoplankton and other shelled organisms as food. Especially at early life stages, these prey organisms are likely to be vulnerable to calcification impacts of CO_2-enriched seawater.

Market Place Tower 2025 First Ave. Suite 900 Seattle, Washington 98121 USA
(206) 448-0300 Sales and Marketing FAX (206) 448-0505 Operations FAX (206) 448-0303

Seasonal acidification along the West Coast appears to be reaching levels that are likely to impact fishery resources. If we wish to retain the productive fisheries and marine ecosystems, there is an urgent need to better understand these changes and develop effective measures in response. This proposed research will help and again I encourage you to fund it as fully as possible.

Best regards,

Jan Jacobs

Jan Jacobs
Director of Government Affairs
American Seafoods Company

Attachment 2

UNITED CATCHER BOATS

Washington · Oregon · California · Alaska

August 26, 2008

The Honorable Mike Chrisman
Chair, Ocean Protection Council
c/o Christine Blackburn
Ocean Protection Council
1330 Broadway, 13th Floor
Oakland, CA 94612

Dear Secretary Chrisman,

I am writing to join with others who have signed earlier versions of this letter in urging the California Ocean Protection Council to fund a proposed study by Dr. Victoria Fabry of California State University-San Marcos and colleagues, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO_2 and O_2 on the California shelf, and effects on red sea urchins, abalone and oysters."

The relevance of this study to numerous West Coast fisheries is clear: it's the food. This study will shed light on changes that may be diminishing the food supply for commercially harvested fish stocks as a result of global emissions of carbon dioxide, mainly from fossil fuel use.

The proposed project will establish monitoring systems for CO_2 and pH along the coast and will conduct experiments on effects of low oxygen, CO_2-acidified water on red sea urchins, abalone and oysters. An indirect benefit of this work will be to clarify and improve our knowledge of CO_2-driven changes in West Coast marine food webs, including those that support many other fishery resources.

In particular, this project will illuminate some of the impacts on calcification. Data collected from this monitoring will be useful in future efforts to predict the resulting seasonal and long-term variations in productivity of urchin and shellfish resources. The work will also benefit efforts to understand effects on other fisheries.

4005 20th Ave. W - Suite 116, Fisherman's Terminal • Seattle, WA 98199 • Tel. (206) 282-2599 • Fax (206) 282-2414
3491 Andree Dr. #A • Anchorage, AK 99517 • Tel. (907) 243-2222

Many commercially important fish species rely heavily on zooplankton, phytoplankton and other shelled organisms as food. Especially at early life stages, these prey organisms are likely to be vulnerable to calcification impacts of CO_2-enriched seawater.

United Catcher Boats is a non-profit trade organization that represents the interests of the owners of 64 commercial fishing vessels that participate in groundfish and crab fisheries in Alaska and off the West Coast. Our members live in California, Oregon, Washington and Alaska.

Sincerely,

Brent Paine
Executive Director

June 17, 2008

Honorable Mike Chrisman, Secretary for Resources
Chair, California Ocean Protection Council
1416 Ninth Street, Suite 1300
Sacramento, CA 95814
Attn: Sam Schuchat, OPC Secretary

Dear Secretary Chrisman: Subject: Research Proposal by Dr. Victoria Fabry

The California Sea Urchin Commission supports the research proposal submitted by Dr. Victoria Fabry to examine the status of CO_2 and pH along the California coast and conduct experiments on the effects of elevated acidification on commercially important shellfish and other species that serve as critical links in the marine ecosystem.

The sea urchin industry has long supported and funded research and data collection efforts to more fully understand natural species and ecosystem dynamics of the sea urchin resource. However more and more the challenges we face in ensuring a sustainable fishery are beyond our means and capacity to overcome. This proposed research will address one such situations.

Increasingly the world is realizing that far too often we put off doing anything meaningful to resolve difficult problems. Sometimes we even put off learning about them. Fishing communities understand too well the consequences of doing nothing – being shut down due to others actions (or lack of action).

Certainly one purpose of the Ocean Protection Council is to promote creative long term thinking and analysis of emerging issues confronting the State. Sadly what we already know about ocean acidification suggests that we are already behind simply understanding what is happening much less figuring out a course of action to arrest it.

We will leave it to others to make the technical scientific arguments why this is a good proposal and simply urge the Council's approval of the research submitted by Dr. Fabry of California State University—San Marcos.

Thank you very much for considering our recommendation.

Sincerely,

O/S
Vern Goehring
Executive Director

Cc: Drew Bohan, OPC Policy Officer
Neal Fishman, OPC Ocean Program Manager

1621B 13th Street | Sacramento CA | 95814 | tel 916.444.8194 | fax 916.444.8195 | www.calurchin.org

Attachment 2

RONDYS, INC.

626 S.W. Abbey St.
Newport, Oregon 97365
541.265.2185
Fax 541.265.6285

P.O. Box 37
Kodiak, Alaska 99615
907.486.3041
Fax 907.486.2740

✓5647
~~5349~~ 229th Ave. S.E.
Issaquah, Washington 98029
425.391.9304
Fax 425.391.8105

F/V Alsea
F/V Argosy
F/V Progress
F/V Rondys
F/V Sourdough
Rondys Terminals

August 25, 2008

The Honorable Mike Chrisman,
Secretary of Resources, and Chair, Ocean Protection Council
c/o Christine Blackburn
Ocean Protection Council
1330 Broadway, 13th Floor
Oakland, CA 94612

Dear Secretary Chrisman,

With this letter, I am joining others in urging the California Ocean Protection Council to fund a proposed study by Dr. Victoria Fabry of California State University-San Marcos and her colleagues, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO_2 and O_2 on the California shelf, and effects on red sea urchins, abalone and oysters."

Our family-owned company began in the late 1930's when my father began fishing in a small bay in Oregon and then went on to pioneer the Dungeness crab industry in the Pacific Ocean in the 1940's. We continue to be economically dependent upon a healthy sea environment for our livelihood; other Americans are dependent on it as well as a source of healthful and bountiful seafood to eat. To continue our dependencies, both fishermen and policy makers such as yourself need to know what is happening, why and whether changes need to be made. I see this research as vital scientific input to that decision-making.

As you know, acidification of our oceans is a threat to our fisheries. The knowledge of how shellfish are being affected is a stepping stone to marine habitat. We need this information to sustain our fisheries, to sustain our bellies.

Please fund this study. Thank you.

Very truly yours,

Margaret E. Hall, MBA, MPH
General Manager

Sustainable Fisheries Partnership ***Fishing Vessel Owners Assoc***

June 16, 2008

California Ocean Protection Council, c/o

Mike Chrisman, Chair
Ocean Protection Council
California Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Drew Bohan
Executive Policy Officer
(916) 651-8738
drew.bohan@resources.ca.gov

State Coastal Conservancy
Sam Schuchat
Executive Officer; Council Secretary
(510) 286-1015
sschuchat@scc.ca.gov

Neal Fishman
Deputy Executive Officer, Ocean Program Manager
(510) 286-4175
nfishman@scc.ca.gov

Dear Sirs,

We are writing to urge the California Ocean Protection Council to fund a proposed study by Vicky Fabry of California State University—San Marcos and colleagues, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO_2 and O_2 on the California shelf, and effects on red sea urchins, abalone and oysters."

The relevance of this study to numerous West Coast fisheries is clear: it's the food. This study will shed light on changes that may be diminishing the food supply for commercially harvested fish stocks as a result of global emissions of carbon dioxide, mainly from fossil fuel use.

The proposed project will establish monitoring systems for CO_2 and pH along the coast and will conduct experiments on effects of low oxygen, CO_2-acidified water on red sea urchins, abalone and oysters. An indirect benefit of this work will be to clarify and improve our knowledge of CO_2-driven changes in West Coast marine foodwebs, including those that support many other fishery resources.

In particular, this project will illuminate some of the impacts on calcification—the ability of many organisms to build and maintain themselves out of the ocean's soup of calcium and carbonate ions. Acidification depletes that soup. Data collected from this monitoring will be useful in future efforts to predict the resulting seasonal and long-term variations in productivity of urchin and shellfish resources. The work will also benefit efforts to understand effects on other fisheries.

Many commercially important fish species rely heavily on zooplankton, phytoplankton and other shelled organisms as food. Especially at early life stages, these prey organisms are likely to be vulnerable to calcification impacts of CO_2-enriched seawater.

Seasonal acidification along the West Coast is now reaching levels that appear likely to undercut commercial fisheries. Last month in the prestigious journal *Science*, Feely et al (2008) reported levels of acidification in the West Coast upwelling zone that are 50 to 100 years further advanced than scientists expected. If we wish to retain the productive fisheries and marine ecosystems we have known until now, there is an urgent need to better understand these changes and develop effective measures for response. The proposed research will help.

Best regards,

Brad Warren
Director, Productive Oceans Partnership
A program of the Sustainable Fisheries Partnership
Seattle office: 440 NW 100th Place
Seattle WA 98177

Bob Alverson
Executive Director
FishingVessel Owners Assoc.
4005 - 20th Ave. West
Seattle, WA 98199-1290

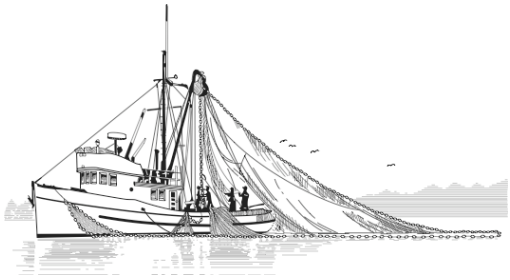
Jeanne Kohl-Welles

Senator, Washington State 36th Legislative District

Jubilee Fisheries

Deep Sea Fishermen's Union

Attachment 2



CALIFORNIA WETFISH PRODUCERS ASSOCIATION

Representing California's Historic Fishery

VISIT WWW.CALIFORNIAWETFISH.ORG FOR INFORMATION

June 16, 2008

Honorable Mike Chrisman, Secretary of Resources and
Chair, California Ocean Protection Council
1416 Ninth Street
Sacramento, CA 95814

Attn: Sam Schuchat, OPC Secretary
Drew Bohan, OPC Policy Officer
Neal Fishman, OPC Ocean Program Manager

Subject: Support for Ocean Acidification Research Proposal by Dr. Victoria Fabry

Dear Secretary Mike, members and officers of the California Ocean Protection Council;

On behalf of California's historic wetfish industry, the California Wetfish Producers Association extends our support for the critically important research proposal submitted by Dr. Victoria Fabry, CSU San Marcos, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO_2 and O_2 on the California shelf…"

CWPA stands with the Sustainable Fisheries Partnership and other fisheries organizations who urge the Ocean Protection Council to fund Dr. Fabry's work. The urgent need for this research is clear:

Acidification along the West Coast is now reaching levels that are likely to affect fisheries resources. The levels of acidification reported last month by Feely et al in the West Coast upwelling zone are 50 to 100 years further advanced than models predicted. The pH found off Trinidad Head, for example (7.76) reflects an increase that approximates 100% in relative acidity, about three times the increase found in average ocean waters, compared to preindustrial conditions.

As Brad Warren stated in his support letter from the Sustainable Fisheries Partnership: "The relevance of this study to numerous west coast fisheries is clear: it's the food. This study will shed light on changes that may be diminishing the food supply for commercially harvested fish stocks as a result of global emissions of carbon dioxide, mainly from fossil fuel use."

Worldwide food studies show that sardines rely heavily on zooplankton and phytoplankton. Likewise, around the world squid have been shown to eat amphipods, copepods, shrimp, and a variety of crustaceans. Especially at early life stages, these prey organisms are likely to be vulnerable to calcification impacts of CO2-enriched seawater.

Dr. Fabry's research project will illuminate some of the effects of acidified water on calcification—the mechanisms used by many organisms to build and maintain themselves by harvesting the ocean's soup of

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EMAIL <DPLESCH@EARTHLINK.NET>

calcium carbonate. As Brad Warren pointed out, acidification depletes the soup. Data collected from this monitoring will be useful in future efforts to predict the resulting seasonal and long-term variations in productivity of urchin and other shellfish resources. The work will also benefit efforts to understand effects on other fisheries.

For example, seasonal acidification data may be incorporated into the market squid GIS database developed by CWPA, thus enabling us to study potential future impacts of acidification on the movements and abundance of market squid, one of California's most important fishery resources.

We join the Sustainable Fisheries Partnership and other California fisheries organizations to urge the OPC to fund this critically important research.

Thanks very much for your consideration.

Best regards,

Diane Pleschner-Steele
Executive Director

CLIMATE IMPACTS GROUP

Climate Science in the Public Interest

Center for Science in the Earth System (CSES)

Joint Institute for the Study of the Atmosphere and Ocean (JISAO)

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July 31, 2008

The Honorable Mike Chrisman
Secretary of Resources and Chair
Ocean Protection Council
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Dear Secretary Chrisman,

I am writing to join the Sustainable Fisheries Partnership and the Fishing Vessel Owners Association (who signed an earlier version of this letter) in urging the California Ocean Protection Council to fund a proposed study by Vicky Fabry of California State University-San Marcos and colleagues, entitled "Ocean acidification exacerbated by coastal upwelling: monitoring of CO2 and O2 on the California shelf, and effects on red sea urchins, abalone and oysters."

The relevance of this study to numerous West Coast fisheries is clear: it's the food. This study will shed light on changes that may be diminishing the food supply for commercially harvested fish stocks as a result of global emissions of carbon dioxide, mainly from fossil fuel use.

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Many commercially important fish species rely heavily on zooplankton, phytoplankton and other shelled organisms as food. Especially at early life stages, these prey organisms are likely to be vulnerable to calcification impacts of CO2-enriched seawater.

Climate Impacts Group
UNIVERSITY OF WASHINGTON

Seasonal acidification along the West Coast is now reaching levels that appear likely to undercut commercial fisheries. Recently in the journal Science, Feely et al (2008) reported levels of acidification in the West Coast upwelling zone that are 50 to 100 years further advanced than scientists expected. If we wish to retain the productive fisheries and marine ecosystems we have known until now, there is an urgent need to better understand these changes and develop effective measures for response. The proposed research will help.

Best regards,

Edward Miles
Bloedel Professor of Marine Studies and Public Affairs
School of Marine Affairs
Co-Director of the Center for Science in the Earth System and Team Leader,
Climate Impacts Group, JISAO
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