

3-19-10

**Review: Board of
Fisheries**

**Request For
Comprehensive
Evaluation of
Large-Mine
Permitting**

<target><bill></bill><subject>3-19-10 Review Board of
Fisheries Request For Comprehensive Evaluation of Large-Mine
Permitting</subject><comm>HFSH26</comm></target>

Proposed Questions for Pebble Panelists

1. You are very familiar with the environmental setting and value of fish and wildlife of Bristol Bay to Alaskans. You are also familiar with the ore body size, the minerals to be mined, the water appropriations applied for, and the size of the tailings dams that have been discussed for the Pebble prospect. What are the biggest risks, in your opinion, of this mine in this setting?
2. How would you compare the Pebble prospect to the scale, character and setting of other sulfide ore body mines in the US and Alaska? What are the key lessons learned from these other sulfide ore body mines given what you know of Pebble?
3. What areas of Alaska's statutes and regulations do you think are most important for an analysis to focus on given the issues you see with the Pebble prospect and the possible impacts it could have on Bristol Bay's fisheries?
4. Do you support choosing the National Research Council of the National Academy of Sciences to conduct an evaluation of the adequacy of Alaska statutes, regulations and permitting capacity to ensure the mine can be developed while protecting Bristol Bay's fisheries? Why shouldn't the legislature carry it out on its own? Why not an Alaskan research group such as the McDowell Group or ISER?

PARTICIPANTS:

ED FOGELS - OPMP

JOHN SHIVELY - PEBBLE
LD. PART.
CEO

DR. DAVID CHAMBERS
PRES. - CENTER FOR SCIENCE
IN PUBLIC PARTICIPATION

RICK HALFORD - FORMER
SENATE PRESIDENT.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME ALASKA BOARD OF FISHERIES

SEAN PARNELL, GOVERNOR

ADF&G
P.O. BOX 115526
JUNEAU, AK 99811-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

Representative Mike Chenault
Speaker of the House, Alaska State Legislature
State Capitol, Room 208
Juneau, Alaska 99801-1182

Senator Gary Stevens
Senate President, Alaska State Legislature
State Capitol, Room 111
Juneau, Alaska 99801-1182

January 30, 2010

Dear Representative Chenault and Senator Stevens,

The Alaska Board of Fisheries (BOF) was established by the Alaska Legislature, "For purposes of the conservation and development of the fishery resources of the state," (AS 16.05.221 (a)). The BOF is tasked by AS 16.05.251 (a) to "adopt regulations it considers advisable in accordance with AS 44.62 (Administrative Procedures Act) for (1) setting apart fish reserve areas, refuges, and sanctuaries in the waters of the state over which it has jurisdiction, subject to the approval of the legislature;" and "(7) watershed and habitat improvement, and management, conservation, protection, use, disposal, propagation, and stocking of fish".

With these directives in mind, the BOF held a meeting in Anchorage in December, 2009, for the purpose of considering regulatory proposals pertaining to Bristol Bay fisheries. Among them was a non-regulatory proposal asking the BOF to recommend that the Alaska Legislature create a fish refuge in the Kvichak and Nushagak River drainages. The authors of the proposal requested it because of concerns that creation and operation of the Pebble Mine would result in environmental damage to the fish and game habitat in the two drainages.

Before public testimony was heard, the state agencies charged with permitting large mine projects made presentations to the BOF for the purpose of showing how the permitting process worked and what safeguards are provided to protect against environmental damage that might be caused by large scale mine operations.

Many members of the public from a wide range of interests testified at the meeting. A large number of these were Bristol Bay watershed residents. The majority believed that a refuge should be established with many believing that the permitting process would be inadequate to protect the fisheries habitat within the drainages. A significant number of others, many also watershed residents, testified that a refuge was unnecessary and would prohibit legitimate economic development of the area and restrict traditional uses like subsistence hunting and fishing. Some also believed that the permitting process was sufficient to protect the area.

One thing that everyone, on all sides of the issue, had in common was concern for the protection of the Bristol Bay fisheries. They disagreed on what that protection should be.

While the BOF recognizes that no specific permitting plan has yet been proposed for the development and operation of the Pebble Mine, the board is still very concerned about the Pebble Mine development because of its potential magnitude. Both proponents and opponents of the Pebble Mine have publically stated that this development could be larger than any mining operation ever created in Alaska.

Because the habitat of the potentially affected drainages is so critical to the fish and game resources of Bristol Bay, the BOF respectfully requests that the Legislature conduct a comprehensive evaluation of the permitting protections and standards, including regulations and statutes, which provide safeguards against environmental damage. After such evaluation, we further request that the legislature enact any additional safeguards which are considered prudent to provide strict protections to the fish and game habitat of the drainages to prevent any chance of environmental damage.

The various state permitting agencies also need the financial ability to properly monitor and enforce their permit standards.

Whatever the legislature decides to do regarding the public concerns expressed about future development in this area, we would request that subsistence hunting, fishing, and gathering; commercial fishing; personal use; and sport hunting and fishing activities on state lands in this region continue to be protected for the local residents and all Alaskans.

To assist the Legislature in its evaluation, we are enclosing copies of the presentations by the state agencies and copies of the testimony by the public.

If the Alaska Board of Fisheries can be of any further assistance, please let me know what we can do to help.

Sincerely,



Vince Webster
Chairman, Alaska Board of Fisheries

cc: Governor Sean Parnell

Denby Lloyd, Commissioner, Department of Fish and Game

Tom Irwin, Commissioner, Department of Natural Resources

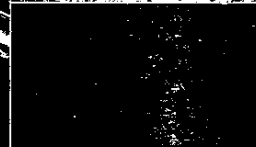
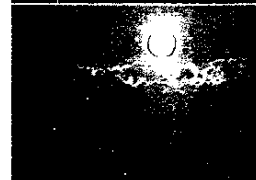
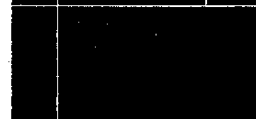
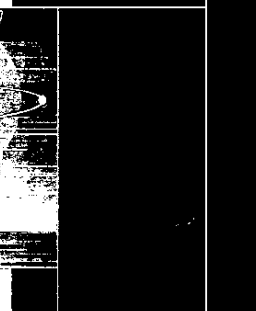
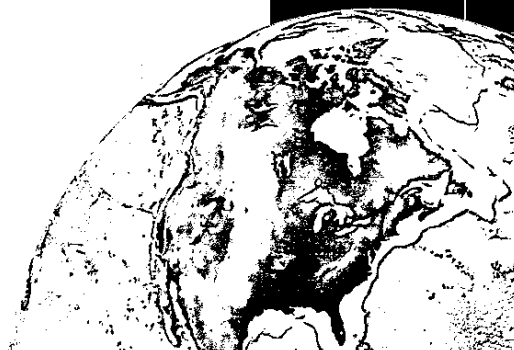
Larry Hartig, Commissioner, Department of Environmental Conservation

State and Local Guide to

Earth & Life Studies

at the National Academies

NATIONAL ACADEMY OF SCIENCES
NATIONAL ACADEMY OF ENGINEERING
INSTITUTE OF MEDICINE
NATIONAL RESEARCH COUNCIL



Providing Science Advice to Help Protect Public Health, Public Safety, and the Environment

For advice on issues of science, technology, and medicine, the nation's leaders turn to the National Academies. Established by Congress and President Abraham Lincoln as an entity separate from government that honors top scientists with membership, the institution serves the nation whenever called upon.

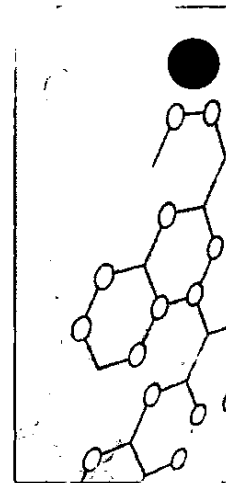
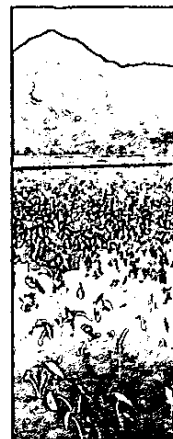
Like no other organization, the National Academies can enlist the nation's foremost scientists, engineers, health professionals, and other experts to address the scientific and technical aspects of some of society's most pressing problems. Each year, about 6,000 of these experts are selected to serve on hundreds of study committees that are appointed to answer specific sets of questions. All serve without pay.

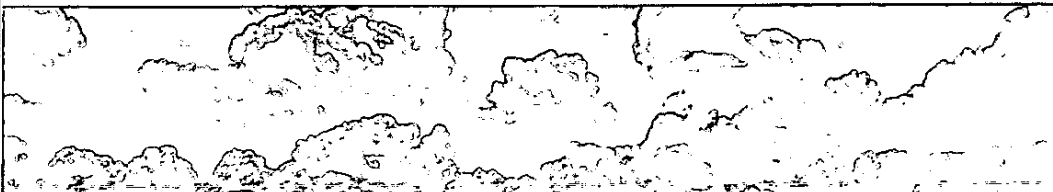
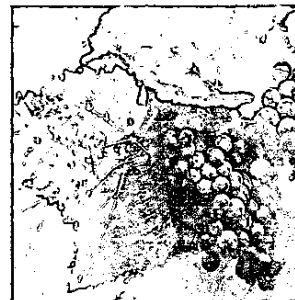
Earth & Life Studies at the National Academies cover a wide array of topics where public policy meets the geosciences, life sciences, chemical sciences, and the environment. In 2004 alone, report topics included the use of forensics in the courtroom, the safety of genetically modified foods, climate change, the safe disposal of radioactive waste, and drinking water quality. Many National Academies reports influence public policy decisions; some provide program reviews; others serve as widely used reference books.

Serving State, Local, and Regional Decision Makers

As more and more responsibility and initiative shift from the federal government to states and localities on issues such as clean air and homeland security, local officials and resource managers increasingly face decisions that affect public safety, public health, and the environment. Those decision makers can turn to the National Academies for nonpartisan, nonadvocacy expert advice on key scientific and technologic aspects of an issue, such as:

- ❑ What can be concluded from analyzing the body of scientific research and other information to help solve a problem or guide regulatory and policy decisions?
- ❑ What scientific research is still needed?
- ❑ What constitutes success, and how will it be measured?





The National Academies ARE...

- Advisers to the nation on science, engineering, and medicine—the only institution chartered by the U.S. Congress to do so.
- Independent and objective.
- Nonprofit.
- Able to draw on leading experts from scientific and technical disciplines.

The National Academies ARE NOT...

- Part of the government.
- An advocacy organization.
- Consultants to for-profit entities.
- Laboratories.
- Limited to working for federal agencies—state and local government agencies and foundations also sponsor activities.



"From the beginning, the [National Academies have] been a central part of the state of Washington's strategy to develop a new water resources management program for the Columbia River. The credibility and integrity of the [organization], its members, and staff placed it in a unique position to comment on the health and long-term management of this highly valuable resource."

Tom Fitzsimmons
Chief of Staff
Office of the Governor
State of Washington

Grant Reviews

The National Academies can simplify and enhance the state and local grant review process by organizing independent peer interviews and reviewing the progress of grant recipients. Experts from across the country who bring a fresh, broader perspective and credibility to regional programs are selected to serve on grant review committees.

Convening Activities

Convening activities bring together policy makers, members of industry, scientists, and sometimes the general public to discuss timely issues. The events include workshops, symposia, and roundtables that can have anywhere from 25 to 250 participants. For example, the Disasters Roundtable convenes in Washington, DC, several times a year to discuss urgent issues related to understanding and reducing the effects of natural and other disasters. Proceedings or workshop summaries are usually produced to capture the information discussed.

Communications

A variety of derivative products based on reports—including report briefs, posters, web sites, and brochures—are developed to help communicate the content of reports to broader audiences and aid in the public understanding of science. Examples include a question-and-answer wheel on invasive plants that helps people understand the effects of invasive plants. Another example is a Diversity Toolbox brochure and website that feature best practices for building minority-group education and employment in the chemical sciences.

Grant Review

EVALUATING RESEARCH GRANTS IN OHIO

Since 2003, the National Academies have reviewed proposals submitted to two of Ohio's major award programs—the Wright Centers of Innovation and the Biomedical Research and Technology Transfer Partnership Awards. As part of the state's \$1.1 billion "Third Frontier" plan to create high-wage jobs and support high-growth industries, the programs seek to foster partnerships between the state's universities and industrial sectors to enhance development and commercialization in fields such as biotechnology and biomedicine, information technology, advanced materials, and electronics. The National Academies bring together panels of experts from across the country to review proposals and identify those with the greatest merit for the state to consider funding. The panels also participate in site visits to review the progress of the grants that are funded.

Convening Activity

GUIDING STEM CELL RESEARCH IN CALIFORNIA

In 2004, the state of California had to decide how to best spend the \$3 billion dollars that voters approved for state-funded stem cell research. To help guide the state in research planning, the National Academies convened experts in the field for a 2-day workshop in California. Topics discussed at the workshop included grant-making processes, intellectual property, institutional review boards, facility development, and the development of standards and ethical guidelines.



A Wide Range of Products and Services Help Answer Key Scientific Questions

Consensus Reports

About 250 authoritative reports are produced by expert committees each year. The process brings together scientists with diverse backgrounds and points of view who work together to review available scientific evidence, reach consensus, and issue a report with their findings and recommendations in an environment removed from political, special interest, and agency influence. A rigorous peer review and other checks and balances applied at every step of the study process ensure the integrity of the reports. Reports are in three general categories:

- **Regulatory analyses** are designed to help guide regulatory and policy decisions. For example, *Arsenic in Drinking Water: 2001 Update* (2001) provided the basis of the Environmental Protection Agency's decision to reduce the maximum allowable concentration of arsenic in drinking water from 50 to 10 parts per billion, making the nation's drinking water safer.
- **Program reviews** evaluate current or proposed government programs. For example, *The Science of Instream Flows: A Review of the Texas Instream Flow Program* (2005) reviews the state's program for ensuring adequate amounts of water in times of high demand and low supply.
- **General assistance** reports answer specific questions on diverse topics. The California Department of Food and Agriculture recently sought advice to combat an insect-borne disease that was afflicting grapes grown in California. The state is revising its research programs and strategies on the basis of recommendations in *California Agricultural Research Priorities: Pierce's Disease* (2004).



General Assistance

OYSTER OPTIONS IN THE CHESAPEAKE BAY

Decades of heavy fishing, environmental pressures, and deadly disease have nearly wiped out native oysters in the Chesapeake Bay and a once-thriving oyster industry. Because oysters feed on algae, their disappearance is thought to play a role in the general decline of water quality in the Chesapeake Bay.

At the request of the states and federal partner agencies, the National Academies identified potential risks and benefits of introducing the Asian-origin Suminoe oyster to supplement or replace the disease-plagued native species. Opponents fear that the nonnative could become an invasive species, with potentially devastating impacts on the ecology and economic vitality of the region.

Nonnative Oysters in the Chesapeake Bay (2004) recommends aquaculture of nonreproductive Suminoe oysters as the most prudent option until completion of research to investigate the potential impacts of introducing this nonnative oyster species. The report also proposes stricter regulations to reduce the risk of unintentional introductions of nonnative species.

WATERSHED SOLUTIONS IN NEW YORK

The state of New York has always enjoyed high quality water from the Catskills Mountain watershed, which provides about 90% of the drinking water for New York City. Unfortunately, increased housing developments and septic systems and the impacts of agriculture caused water quality to deteriorate. By the late 1990s, New York City water managers had two choices: build a water-filtration system at an estimated cost of up to \$6 billion or take steps to protect its major watershed.

To help weigh the scientific and technical aspects of its dilemma, the state turned to the National Academies. On the basis of recommendations in *Watershed Management for Potable Water Supply: Assessing the New York City Strategy*, stakeholders decided against building the filtration system and instead began taking recommended steps to protect the watershed at a total projected investment of about \$1 to \$1.5 billion.

Working with the National Academies

The National Academies are equipped with administrative tools to work with state and local governments to find answers to key scientific questions. Blanket authorization has been granted for federal sole-source contracts. Research grant, cooperative agreement, and contract proposals can be rapidly prepared. Costs vary with the type and scope of the activity. The National Academies have implemented mechanisms to reduce costs and are continuing to review policies and procedures to identify other changes to make the process as efficient as possible.

FOR UPDATES:

Sign up on the Earth & Life Studies website at <http://dels.nas.edu> to get e-mail updates on reports, events, projects, and news in your fields of interest. National Academies reports are available online in a searchable format at <http://www.nap.edu>.

Contact the Division on Earth & Life Studies:

Division on Earth & Life Studies
The National Academies
500 Fifth Street, NW
Washington, DC 20001

E-mail: dels@nas.edu
Phone: 202-334-3600
Fax: 202-334-3362

Warren R. Muir, Ph.D., Executive Director

PROGRAM AREA DIRECTORS

Board on Agriculture and Natural Resources (BANR)
Robin Schoen, 202-334-3062, rschoen@nas.edu

Board on Atmospheric Sciences and Climate (BASC)
Chris Elfring, 202-334-3426, celfring@nas.edu

Board on Life Sciences (BLS)
Fran Sharples, 202-334-2187, fsharples@nas.edu

Board on Earth Sciences and Resources (BESR)
Anthony de Souza, 202-334-2744, adesouza@nas.edu

Board on Environmental Studies and Toxicology (BEST)
James Reisa, 202-334-3060, jreisa@nas.edu

Global Change and Sustainability
Gregory Symmes, 202-334-3607, gsymmes@nas.edu

Board on Chemical Sciences and Technology (BCST)
Dorothy Zolanz, 202-334-2156, dzolanz@nas.edu

Institute for Laboratory Animal Research (ILAR)
Joanne Zurlo, 202-334-2486, jjurlo@nas.edu

Disasters Roundtable (DR)
William Anderson, 202-334-1523, wanderson@nas.edu

Nuclear and Radiation Studies Board (NRSB)
Kevin Crowley, 202-334-3066, kcrowley@nas.edu

Ocean Studies Board (OSB)
Susan Roberts, 202-334-2714, sroberts@nas.edu

Polar Research Board (PRB)
Chris Elfring, 202-334-3426, celfring@nas.edu

Radiation Effects Research Foundation (RERF)
Burton Bennett, Chairman,
Hiroshima and Nagasaki, Japan
011-81-82-261-3131, bennett@rerf.jp

Water Science and Technology Board (WSTB)
Stephen Parker, 202-334-3422, sdparker@nas.edu

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

The nation turns to the National Academies—National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council—for independent, objective advice on issues that affect people's lives worldwide.
www.national-academies.org

SELECTED EARTH & LIFE STUDIES REPORTS FROM 2004 TO 2007

<http://dels.nas.edu>

AGRICULTURE AND NATURAL RESOURCES

Agriculture, Fishing, and Forestry Research at NIOSH* (2007)
Nutrient Requirements of Horses: Sixth Revised Edition (2007)
Status Pollinators in North America* (2006)
Nutrient Requirements of Small Ruminants (2006)
Nutrient Requirements of Dogs and Cats* (2006)
Mineral Tolerance of Animals: Second Revised Edition (2005)
Critical Needs for Research in Veterinary Science* (2005)
Animal Health at the Crossroads: Preventing, Detecting, and Diagnosing Animal Diseases* (2005)
Animal Care and Management at the National Zoo: Final Report* (2005)
California Agricultural Research Priorities: Pierce's Disease* (2004)
Safety of Genetically Engineered Foods: Approaches to Assessing Unintended Health Effects* (2004)
Animal Care and Management at the National Zoo: Interim Report* (2004)
Biological Confinement of Genetically Engineered Organisms (2004)

ATMOSPHERIC SCIENCES AND CLIMATE

Analysis of Global Change Assessments: Lessons Learned * (2007)
Earth Observations from Space: The First 50 Years of Scientific Achievements * (2007)
Environmental Data Management at NOAA: Archiving, Stewardship, and Access * (2007)
Review of the U.S. Climate Change Science Program's Synthesis and Assessment Products
Strategic Guidance for National Science Foundations Support of the Atmospheric Sciences (2006)
NOAA's Role in Space-Based Precipitation Estimation and Application (2006)
Completing the Forecast: Characterizing and Communicating Uncertainty for Better Decisions
Using Weather and Climate Forecasts* (2006)
Surface Temperature Reconstructions for the Past 2,000 Years* (2006)
Preliminary Principles and Guidelines on Archiving Environmental and Geospatial Data on
NOAA: Interim Report (2006)
Review of NOAA's Plan for the Scientific Data Stewardship Program (2005)
Thinking Strategically: The Appropriate Use of Metrics for the Climate Change Program* (2005)
Review of the US Climate Change Science Program's Synthesis and Assessment Product on
Temperature Trends in the Lower Atmosphere (2005)
Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties* (2004)
Review of the U.S. CLIVAR Project Office (2004)
Flash Flood Forecasting Over Complex Terrain: With an Assessment of the Sulphur Mountain

*Indicates the availability of a supplemental brief or other communication product designed to aid public understanding of the report.

NEXRAD in Southern California* (2004)
Implementing Climate and Global Change Research: A Review of the Final U.S. Climate Change Science Program Strategic Plan (2004)
Where the Weather Meets the Road: A Research Agenda for Improving Road Weather Services* (2004)

CHEMICAL SCIENCES AND TECHNOLOGY

Benchmarking the Competitiveness of the United States in Mechanical Engineering Basic Research * (2007)
The Future of U.S. Chemistry: Benchmarks and Challenges * (2007)
International Benchmarking of U.S. Chemical Engineering Research Competitiveness * (2007)
Protecting Building Occupants and Operations from Biological and Chemical Airborne Threats: A Framework for Decision Making * (2007)
Soldier Protective Clothing and Equipment: Feasibility of Chemical Testing Using a Fully Articulated Robotic Mannequin * (2007)
Measuring Respirator Use in the Workplace (2006)
Visualizing Chemistry: The Progress and Promise of Advanced Chemical Imaging* (2006)
Terrorism and the Chemical Infrastructure: Protecting People and Minimizing Risk* (2006)
Are Chemical Journals Too Expensive and Inaccessible?* (2005)
Review of Testing and Evaluation Methodology for Biological Point Detectors: Final Report (2005)
Existing and Potential Standoff Explosives Detection Techniques (2004)
Forensic Analysis: Weighing Bullet Lead Evidence* (2004)

DISASTERS MANAGEMENT

Facing Hazards and Disasters: Understanding Human Dimensions (2006)

EARTH SCIENCES AND RESOURCES

Assessment of the NASA Applied Sciences Program (2007)
Minerals, Critical Minerals, and the U.S. Economy * (2007)
Assessment of the Performance of Engineered Waste Containment Barriers * (2007)
Coal: Research and Development to Support National Energy Policy * (2007)
Earth Materials and Health: Research Priorities for Earth Science and Public Health * (2007)
Elevation Data for Floodplain Mapping * (2007)
Mining Safety and Health Research at NIOSH * (2007)
National Land Parcel Data: A Vision for the Future * (2007)
A Research Agenda for Geographic Information Science at the United States Geological Survey (2007)
Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management * (2007)
Tools and Methods for Estimating Populations at Risk from Natural Disasters and Complex Humanitarian Crises * (2007)
Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management* (2006)
Beyond Mapping: Meeting National Needs Through Enhancing Geographic Information Science (2006)
Geological and Geotechnical Engineering in the New Millennium (2006)
Managing Coal Combustion Residues in Mines (2006)
Priorities for GEOINT Research at the National Geospatial-Intelligence Agency (2006)
Geological and Geotechnical Engineering in the New Millennium: Opportunities for Research and Technological Innovation (2005)

Radiofrequency Energy* (2006)
Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites (2006)
Improving the Regulation and Management of Low-Activity Radioactive Wastes* (2006)
Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States* (2006)
Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR II Phase 2* (2005)
Assessment of Scientific Information for the Radiation Exposure Screening and Education Program (2005)
Safety & Security of Commercial Spent Nuclear Fuel Storage (2005)
Improving the Characterization and Treatment of Radioactive Wastes for the Department of Energy's Accelerated Site Cleanup Program (2005)
Risk and Decisions about Disposition of Transuranic and High-Level Radioactive Waste (2005)
An Assessment of Potential Health Effects from Exposure to PAVE PAWS Low-Level Phased-Array Radiofrequency Energy* (2005)
Improving the Characterization Program for Contact-Handled Transuranic Waste Bound for the Waste Isolation Pilot Plant* (2005)
Assuring the Safety of the Pentagon Mail: Letter Report (2004)

OCEAN STUDIES

Increasing Capacity for Stewardship of Oceans and Coasts: A Priority for the 21st Century * (2007)
A Review of the Ocean Research Priorities Plan and Implementation Strategy (2007)
A Review of the Draft Ocean Research Priorities Plan: Charting the Course for Ocean Science in the United States* (2006)
Mitigating Shore Erosion Along Sheltered Coasts* (2006)
Evaluation of the Sea Grant Program Review Process (2006)
Review of Recreational Fisheries Survey Methods* (2006)
Dynamic Changes in Marine Ecosystems: Fishing, Food Webs, and Future Options (2006)
Drawing Louisiana's New Map: Addressing Land Loss in Coastal Louisiana* (2005)
Understanding Oil Dispersants: Efficacy and Effects (2005)
Final Comments on the Science Plan for the North Pacific Research Board (2005)
Marine Mammal Populations and Ocean Noise (2004)
Charting the Future of Methane Hydrate Research in the United States (2004)
Improving the Use of the "Best Scientific Information Available" Standard in Fisheries Management (2004)
River Basins and Coastal Systems Planning Within the U.S. Army Corps of Engineers (2004)
A Geospatial Framework for the Coastal Zone: National Needs for Coastal Mapping and Charting* (2004)
Elements of a Science Plan for the North Pacific Research Board (2004)

POLAR RESEARCH

Exploration of Antarctic Subglacial Aquatic Environments: Environmental and Scientific Stewardship * (2007)
Polar Icebreaker Roles and Future Needs: Final Report (2006)
Toward an Integrated Arctic Observing Network* (2006)
Final Comments on the Science Plan for the North Pacific Research Board (2005)
A Vision for the International Polar Year 2007-2008* (2004)
Planning for the International Polar Year 2007-2008 (2004)

Contaminants (2004)

Iodotrifluoromethane: Toxicity Review (2004)

Developing a Research and Restoration Plan for Arctic-Yukon-Kuskokwim Salmon (2004)

Eleventh Interim Report of the Subcommittee on Acute Exposure Guideline Levels (2004)

Endangered and Threatened Species of the Platte River (2004)

Research Priorities for Airborne Particulate Matter: IV. Continuing Research Progress (2004)

Spacecraft Water Exposure Guidelines for Selected Contaminants: Volume 1 (2004)

Air Quality Management in the United States* (2004)

Acute Exposure Guideline Levels for Selected Airborne Chemicals: Volume 4 (2004)

Atlantic Salmon in Maine (2004)

LABORATORY ANIMAL RESEARCH

Recognition and Alleviation of Distress in Laboratory Animals * (2007)

Guidelines for the Humane Transportation of Research Animals (2006)

Science, Medicine and Animals* (2004)

LIFE SCIENCES

The Role of Theory in Advancing 21st Century Biology: Catalyzing Transformative Research * (2007)

Protecting Building Occupants and Operations from Biological and Chemical Airborne Threats: A Framework for Decision Making * (2007)

An Astrobiology Strategy for the Exploration of Mars (2007)

The New Science of Metagenomics: Revealing the Secrets of Our Microbial Planet * (2007)

2007 Amendments to the National Academies' Guidelines for Human Embryonic Stem Cell Research

Human Biomonitoring for Environmental Toxicants (2006)

Overcoming Challenges to Develop Interventions Against Aerosolized Bioterrorism Agents (2006)

Exploring the Role of Antiviral Drugs in the Eradication of Polio* (2006)

Review of the Department of Energy's Genomics: GTL Program (2006)

Reopening Public Facilities After a Biological Attack: A Decision-Making Framework (2005)

A Review of Biomedical Proposals to the State of Ohio (2005)

Guidelines for Human Embryonic Stem Cell Research (2005)

Bridges to Independence – Fostering the Independence of New Investigators in Biomedical Research (2005)

Seeking Security: Pathogens, Open Access, and Genome Databases (2004)

Discovery of Antivirals Against Smallpox (2004)

Review of a Proposal to the Ohio Eminent Scholars Program (2004)

Indicators for Waterborne Pathogens (2004)

NUCLEAR AND RADIATION STUDIES

Advancing Nuclear Medicine Through Innovation * (2007)

Plans and Practices for Groundwater Protection at the Los Alamos National Laboratory (2007)

Review of the Worker and Public Health Activities Program Administered by the Department of Energy and the Department of Health and Human Services (2007)

Assessment of Potential Health Effects from Exposures to PAVE PAWS Low-Level Phased-array

Learning to Think Spatially: GIS as a Support System in the K-12 Curriculum* (2005)
Improved Seismic Monitoring – Improved Decision-Making: Assessing the Value of Reduced Uncertainty (2005)
The Geological Record of Ecological Dynamics: Understanding the Biotic Effects of Future Environmental Change (2005)
Review of NASA's Solid-Earth Science Strategy (2004)
Licensing Geographic Data and Services (2004)
Government Data Centers: Meeting Increasing Demands (2004)
Partnerships for Reducing Landslide Risk: Assessment of the National Landslide Hazards Mitigation Strategy (2004)

ENVIRONMENTAL STUDIES AND TOXICOLOGY

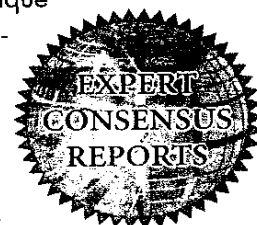
Applications of Toxicogenomic Technologies to Predictive Toxicology and Risk Assessment * (2007)
Combined Exposures to Hydrogen Cyanide and Carbon Monoxide in Army Operations: Initial Report (2007)
Acute Exposure Guidelines Levels for Selected Airborne Chemicals, Volume 6 (2007)
Emergency and Continuous Exposure Guidance Levels for Selected Submarine Contaminants: Volume 2 (2007)
Environmental Impacts of Wind-Energy Projects * (2007)
Health Effects of Beryllium Exposure: A Literature Review (2007)
Hydrology, Ecology, and Fishes of the Klamath River Basin * (2007)
Models in Environmental Regulatory Decision Making (2007)
Review of the Worker and Public Health Activities Program Administered by the Department of Energy and the Department of Health and Human Services (2007)
Scientific Review of the Proposed Risk Assessment Bulletin from the Office of Management and Budget (2007)
Sediment Dredging at Superfund Megsites: Assessing the Effectiveness * (2007)
Toxicity Testing in the Twenty-first Century: A Vision and a Strategy * (2007)
Spacecraft Water Exposure Guidelines for Selected Contaminants, Volume 2 (2006)
Acute Exposure Guideline Levels for Selected Airborne Chemicals, Volume 5 (2006)
Health Risks from Dioxins: Evaluation of the EPA Reassessment* (2006)
Changes in New Source Review Programs for Stationary Sources of Air Pollutants (2006)
Assessing Human Health Risks of Trichloroethylene: Key Scientific Issues* (2006)
12th Interim Report on Spacecraft Exposure Guidelines (2006)
Fourteenth Interim Report of the Committee on Acute Exposure Guideline Levels (2006)
Review of the Draft Research and Restoration Plan for Arctic-Yukon-Kuskokwim (Western Alaska) Salmon (2006)
Fluoride in Drinking Water: A Scientific Review of EPA's Standards* (2006)
State and Federal Standards for Mobile Source Emissions* (2006)
Assessing the Ecological Impact of Paved Roads (2005)
Review of the Department of Defense Research Program on Low-Level Exposures to Chemical Warfare Agents (2005)
Superfund and Mining Megsites: Lessons from the Coeur d'Alene River Basin* (2005)
Health Implications of Perchlorate Ingestion* (2005)
Communicating Toxicogenomics Information to Nonexperts (2004)
Emergency and Continuous Exposure Guidance Levels for Selected Submarine

WATER SCIENCE AND TECHNOLOGY

Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability * (2007)
Improving the Nation's Water Security: Opportunities for Research (2007)
Integrating Multiscale Observations of U.S. Waters * (2007)
Mississippi River Water Quality and the Clean Water Act: Progress, Challenges, and Opportunities * (2007)
Prospects for Managed Underground Storage of Recoverable Water * (2007)
Water Implication of Biofuels Production in the United States * (2007)
River Science at the U.S. Geological Survey (2006)
Water Quality Improvement in South Pennsylvania (2006)
Third Report from the Committee on New Orleans Regional Hurricane Protection Projects (2006)
Progress Restoring the Everglades: The First Biennial Review (2006)
Drinking Water Distribution Systems: Assessing and Reducing Risks (2006)
Structural Performance of the New Orleans Hurricane Protection System During Hurricane Katrina (2006)
CLEANER and NSF's Environmental Observatories (2006)
Toward a New Advanced Hydrologic Prediction Service (AHPS) for the Future (2006)
Structural Performance of the New Orleans Hurricane Protection System During Hurricane Katrina (2006)
Review of the Lake Ontario St. Lawrence River Studies (2005)
Water Resources Planning for the Upper Mississippi River and Illinois Waterway* (2005)
Public Water Distribution Systems: Assessing and Reducing Risks (2005)
The Science of Instream Flows: A Review of the Texas Instream Flow Program (2005)
Re-Engineering Water Storage in the Everglades: Risks and Opportunities (2005)
Regional Cooperation for Water Quality Improvement in Southwestern Pennsylvania* (2005)
Contaminants in the Subsurface: Source Zone Assessment and Remediation (2004)
Review of the U.S. Army Corps of Engineers Restructured Upper Mississippi River-Illinois Waterway Feasibility Study: Second Report* (2004)
Valuing Ecosystem Services: Toward Better Environmental Decision-Making* (2004)
Confronting the Nation's Water Problems: The Role of Research* (2004)
U.S. Army Corps of Engineers Water Resources Planning: A New Opportunity for Service (2004)
Adaptive Management for Water Resources Project Planning (2004)
Assessing the National Streamflow Information Program (2004)
Managing the Columbia River: Instream Flows, Water Withdrawals, and Salmon Survival (2004)
Groundwater Fluxes Across Interfaces (2004)

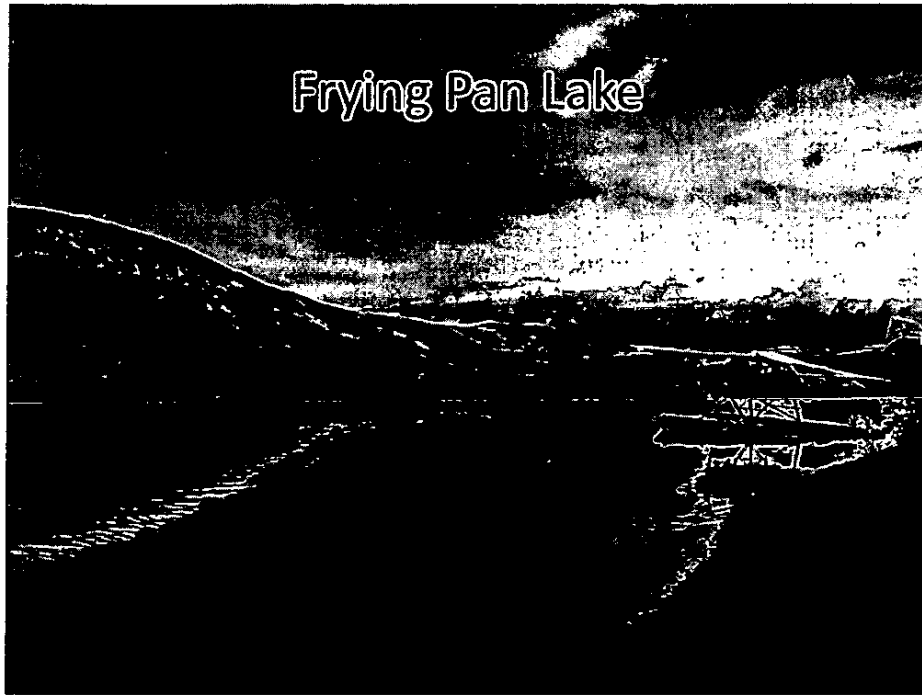
ABOUT EARTH & LIFE STUDIES REPORTS FROM THE NATIONAL ACADEMIES

The National Academies, through its National Research Council reports, provides a unique public service by working outside the framework of government to ensure independent, expert advice on matters of science, technology, and medicine. The National Research Council convenes committees of the nation's top scientists, engineers, and other experts—all of whom volunteer their time to study specific concerns. The Division on Earth & Life Studies produces about 70 reports per year on such topics as environmental health, climate change, biodiversity, air and water quality, oceans, radiation health and radioactive wastes, life sciences, disasters, chemistry and chemical engineering, agriculture, natural resources, and ecosystem restoration.



For more information, visit <http://dels.nas.edu> or contact us at dels@nas.edu or 202-334-3600.

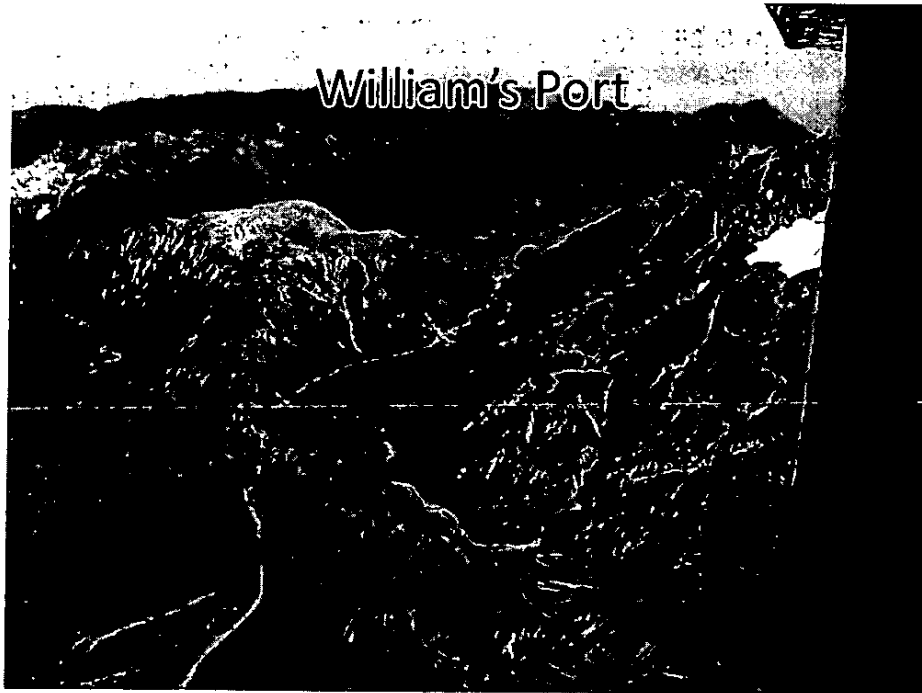
THE NATIONAL ACADEMIES™
Advisers to the Nation on Science, Engineering, and Medicine



Frying Pan Lake



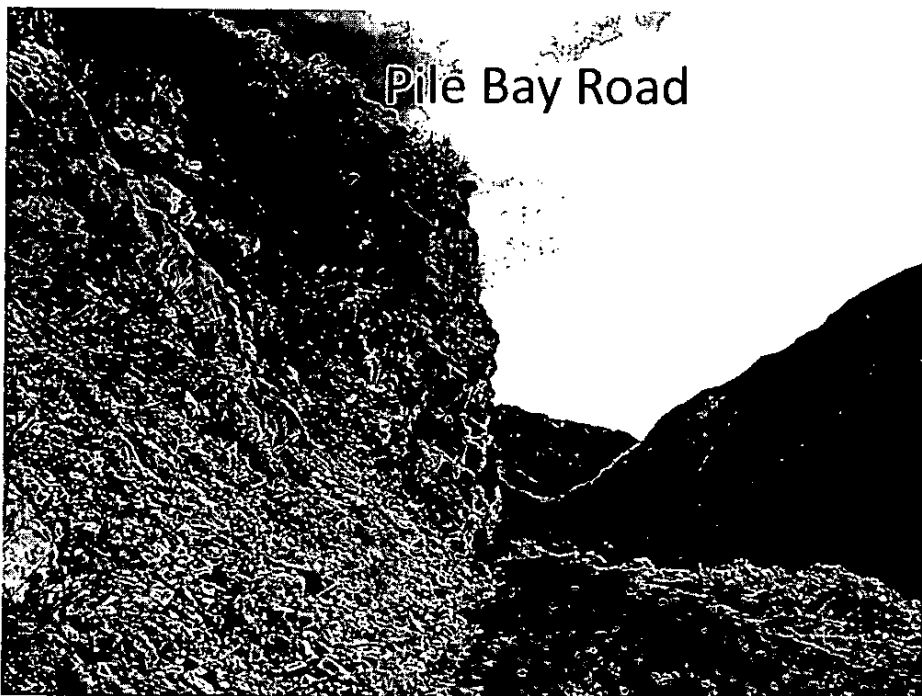
Lake Iliamna



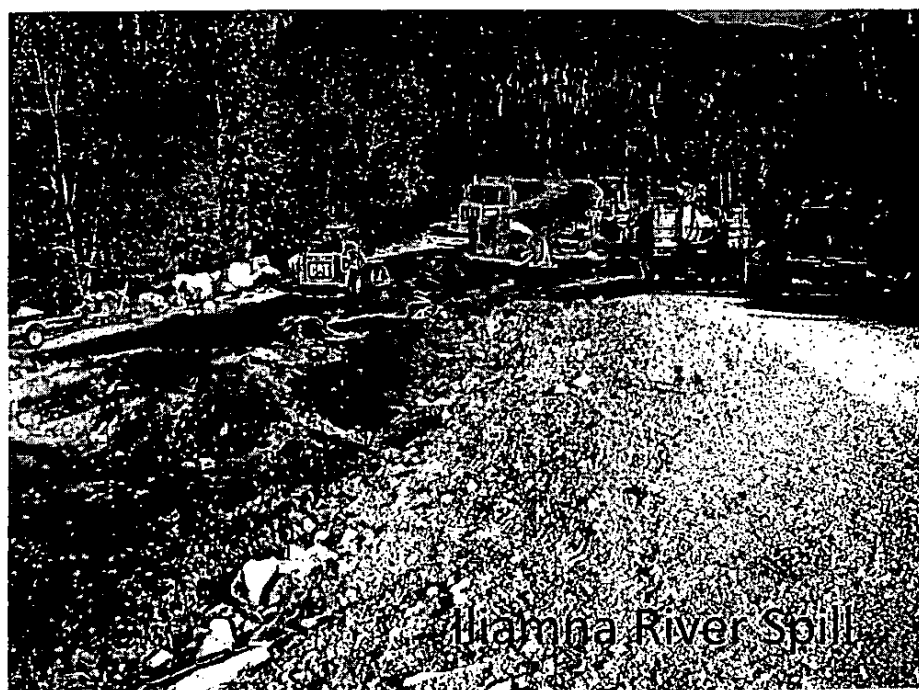
William's Port

1

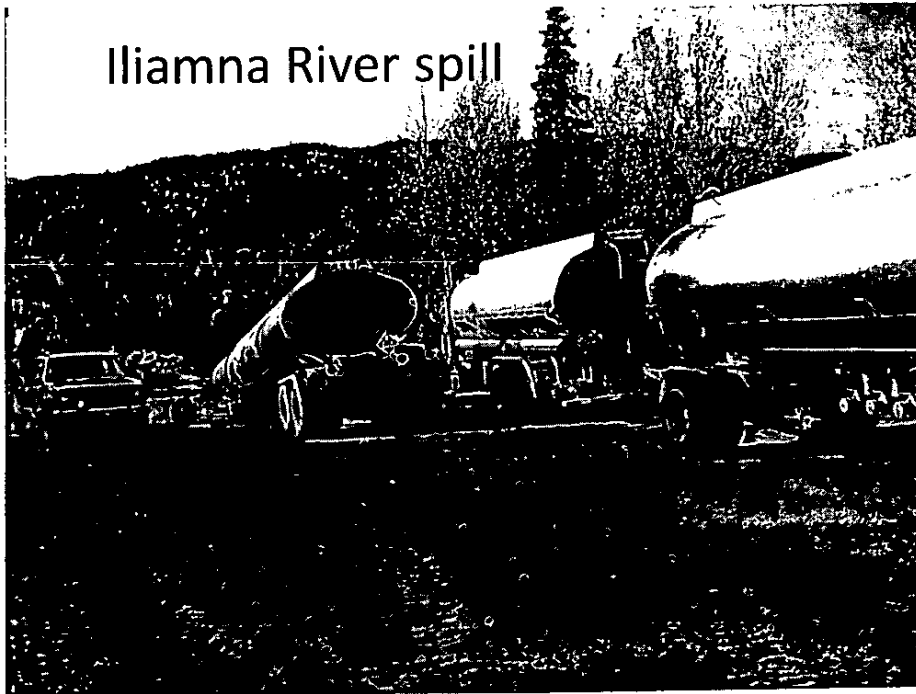
3/18/2010



Pile Bay Road



Iliamna River spill



10,780,000 tons Recoverable Ore Pebble Mine

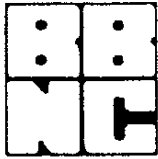
9,000,000 tons
Greens Creek Mine

27,000,000 tons
Hemlock Mine

359,000,000 tons
Ft Knox Mine

160,000,000 tons
Red Dog Mine

10,000,000 tons
Pege Mine



Bristol Bay Native Corporation

Enriching Our Native Way of Life

111 W. 16th Avenue, Suite 400 / Anchorage, Alaska 99501-5109 / (907) 278-3602 / fax (907) 276-3925

March 18, 2010

Representative Bryce Edgmon
Chair House Fisheries Committee
State Capitol, Room 416
Anchorage, AK 99801

Re: BOF Request for Large Mine Permitting Review

Dear Representative Edgmon:

On behalf of the Bristol Bay Native Corporation (BBNC) board of directors, I am writing in support of the Alaska Board of Fisheries request that the Legislature conduct a comprehensive evaluation of the State's large-scale mine permitting process. As a representative of over 8,500 shareholders with ties to the Bristol Bay region as well as 3 million acres of Bristol Bay land holdings that could potentially be affected by the Pebble Mine Development project we have an obligation to speak to this issue. BBNC is entrusted with preserving and enhancing our Native way of life, including but not limited to subsistence and commercial fishing.

To restate our formal position on resource development: although BBNC has passed a resolution specifically opposing the development of the Pebble Mine, we do not oppose responsible resource development in locations and manners that do not threaten the world class fish resources of Bristol Bay. We believe the potential benefits of the Pebble project are outweighed by the magnitude of the development as well as the unquantifiable risks associated.

A comprehensive review of the large mine permitting process should give Bristol Bay and Alaska residents, as well as the Legislature, comfort in knowing the process can properly scrutinize mining development of this magnitude. Currently, many Alaskans are questioning the systems in place as past administrations have "tinkered" with permitting oversight, causing uncertainty or at a minimum, confusion over what protections are now in place.

With your permission, BBNC would request this correspondence be included as public record for the Joint House Fisheries/Senate Resources Committee hearing scheduled for Friday, March 19th at 3:30pm.

Thank you for your consideration of this formal request to submit this statement of our support of the Board of Fisheries request to the Alaska State Legislature.

Sincerely,

Jason Metrokin
President/CEO

Cc: House Fisheries Committee
Senate Resources Committee
BBNC Board of Directors