

ALASKA LEGISLATURE COMMITTEE FILES, 1989-1990 8672
6552 SENATE RESOURCES

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1 “(E) The Chairman of the Advisory Council shall ap-
2 point a Director to carry out administrative duties. The Di-
3 rector may hire such staff and incur such reasonable expenses
4 on behalf of the Advisory Council as are authorized by the
5 Advisory Council and for which funds are available.

6 “(F) Employees of the Advisory Council shall not, by
7 reason of such employment, be considered to be employees of
8 the Federal Government for any purpose.

9 “(5) Industrial users, owners, and operators of the ter-
10 minal facilities shall cooperate fully with the Advisory Coun-
11 cil through frequent consultation and attendance at meetings
12 and by granting reasonable access to the Advisory Council to
13 all facilities and requested documents and information.

14 “(6) The Advisory Council may establish such technical
15 advisory committees as it deems necessary.

16 “(7) The Advisory Council shall prepare an annual
17 report on its activities and submit such report to the Task
18 Force established by subsection (a), the Governor of Alaska,
19 the Congress, and the public.

20 “(8) The Advisory Council shall cease to exist on the
21 date which is ten years after the date of enactment of this
22 Act.”.

101011.468

Proposed Senate language

S.L.C.

1 SEC. __. TERMINAL AND TANKER OVERSIGHT AND MONITORING.

2 (a) SHORT TITLE.—(1) This section may be cited as
3 the “Oil Terminal and Oil Tanker Environmental Over-
4 sight and Monitoring Act of 1989”.

5 (2) The Congress finds that—

6 (A) the March 24, 1989, grounding and rupture
7 of the fully loaded oil tanker, the *Exxon Valdez*,
8 spilled 11 million gallons of crude oil in Prince Wil-
9 liam Sound, an environmentally sensitive area;

10 (B) many people believe that complacency on
11 the part of the industry and government personnel
12 responsible for monitoring the operation of the
13 Valdez terminal and vessel traffic in Prince William
14 Sound was one of the contributing factors to the
15 *Exxon Valdez* oil spill;

16 (C) one way to combat this complacency is to
17 involve local citizens in the process of preparing,
18 adopting, and revising oil spill contingency plans;

19 (D) a mechanism should be established which
20 fosters the long-term partnership of industry, govern-
21 ment, and local communities in overseeing compli-
22 ance with environmental concerns in the operation of
23 crude oil terminals;

101011.468

S.L.C.

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1 (E) such a mechanism presently exists at the
2 Sullom Voe terminal in the Shetland Islands and this
3 terminal should serve as a model for others;

4 (F) because of the effective partnership that has
5 developed at Sullom Voe, Sullom Voe is considered
6 the safest terminal in Europe;

7 (G) the present system of regulation and over-
8 sight of crude oil terminals in the United States has
9 degenerated into a process of continual mistrust and
10 confrontation;

11 (H) only when local citizens are involved in the
12 process will the trust develop that is necessary to
13 change the present system from confrontation to con-
14 sensus;

15 (I) a pilot program patterned after Sullom Voe
16 should be established in Alaska to further refine the
17 concepts and relationships involved; and

18 (J) similar programs should eventually be estab-
19 lished in other major crude oil terminals in the
20 United States because the recent oil spills in Texas,
21 Delaware, and Rhode Island indicate that the safe
22 transportation of crude oil is a national problem.

23 (b) DEMONSTRATION PROGRAMS.—

24 (1) ESTABLISHMENT.—There are established two
25 Oil Terminal and Oil Tanker Environmental Over-

101011.468

S.L.C.

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1 sight and Monitoring Demonstration Programs (here-
2 inafter referred to as "Programs") to be carried out
3 in the State of Alaska.

4 (2) ADVISORY FUNCTION.—The function of these
5 Programs shall be advisory only.

6 (3) PURPOSE.—The Prince William Sound Pro-
7 gram shall be responsible for environmental monitor-
8 ing of the terminal facilities in Prince William Sound
9 and the crude oil tankers operating in Prince William
10 Sound. The Cook Inlet Program shall be responsible
11 for environmental monitoring of the terminal facili-
12 ties and crude oil tankers operating in Cook Inlet lo-
13 cated South of the latitude at Point Possession and
14 North of the latitude at Amatul Island, including off-
15 shore facilities in Cook Inlet.

16 (4) SUITS BARRED.—No program, association,
17 council, committee or other organization created by
18 this section may sue any person or entity, public or
19 private, concerning any matter arising under this sec-
20 tion.

21 (c) OIL TERMINAL FACILITIES AND OIL TANKER OPER-
22 ATIONS ASSOCIATION.—

23 (1) ESTABLISHMENT.—There is established an
24 Oil Terminal Facilities and Oil Tanker Operations
25 Association (hereinafter referred to as "Associa-

101011.468

S.L.C.

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1 tion") for each of the Programs established in sub-
2 section (b).

3 (2) MEMBERSHIP.—Each Association shall be
4 comprised of four individuals as follows:

5 (A) one individual shall be designated by
6 the owners and operators of the terminal facili-
7 ties and shall represent those owners and opera-
8 tors;

9 (B) one individual shall be designated by
10 the owners and operators of the crude oil tank-
11 ers calling at the terminal facilities and shall
12 represent those owners and operators;

13 (C) one individual shall be an employee of
14 the State of Alaska, shall be designated by the
15 Governor of the State of Alaska, and shall rep-
16 resent the State government; and

17 (D) one individual shall be an employee of
18 the Federal Government, shall be designated by
19 the President, and shall represent the Federal
20 Government.

21 (3) RESPONSIBILITIES.—Each Association shall
22 be responsible for reviewing policies relating to the
23 operation and maintenance of the oil terminal facili-
24 ties and crude oil tankers which affect or may affect
25 the environment in the vicinity of their respective

101011.468

S.L.C.

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1 terminals. Each Association shall provide a forum
2 among the owners and operators of the terminal fa-
3 cilities, the owners and operators of crude oil tankers
4 calling at those facilities, the United States, and the
5 State of Alaska to discuss and to propose the resolu-
6 tion of all permits, plans, and site-specific regula-
7 tions governing the activities and actions of the ter-
8 minal facilities which affect or may affect the envi-
9 ronment in the vicinity of the terminal facilities and
10 of crude oil tankers calling at those facilities.

11 (d) REGIONAL CITIZENS' ADVISORY COUNCILS.—

12 (1) MEMBERSHIP.—There is established a Re-
13 gional Citizens' Advisory Council (hereinafter re-
14 ferred to as "Council") for each of the programs es-
15 tablished by subsection (b).

16 (2) MEMBERSHIP.—Each Council shall be com-
17 posed of voting members and non-voting members,
18 as follows:

19 (A) VOTING MEMBERS.—Voting members
20 shall be Alaska residents and, except as provid-
21 ed in clause (iii) of this paragraph, shall be ap-
22 pointed by the Governor of the State of Alaska
23 from a list of nominees provided by each of the
24 following interests, with one representative ap-
25 pointed to represent each of the following inter-

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1 ests, taking into consideration the need for re-
2 gional balance on the Council—

3 (i) local commercial fishing industry
4 organizations, the members of which
5 depend on the fisheries resources of the
6 waters in the vicinity of the terminal facili-
7 ties;

8 (ii) aquaculture associations in the vi-
9 cinity of the terminal facilities;

10 (iii) Alaska Native Corporations and
11 other Alaska Native organizations the
12 members of which reside in the vicinity of
13 the terminal facilities;

14 (iv) environmental organizations the
15 members of which reside in the vicinity of
16 the terminal facilities;

17 (v) recreational organizations the
18 members of which reside in or use the vi-
19 cinity of the terminal facilities;

20 (vi) the Alaska State Chamber of
21 Commerce, to represent the locally based
22 tourist industry;

23 (vii)(I) for the Prince William Sound
24 terminal facilities Council, one representa-
25 tive selected by each of the following mu-

101011.468

S.L.C.

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1 municipalities: Cordova, Whittier, Seward,
2 Valdez, Kodiak, the Kodiak Island Bor-
3 ough, and the Kenai Peninsula Borough;

4 (II) for the Cook Inlet terminal facili-
5 ties Council, one representative selected by
6 each of the following municipalities:
7 Homer, Seldovia, Anchorage, Kenai, the
8 Kodiak Island Borough, and the Kenai Pe-
9 ninsula Borough.

10 (B) NON-VOTING MEMBERS.—One ex-offi-
11 cio, non-voting representative shall be designat-
12 ed by, and represent, each of the following—

- 13 (i) Environmental Protection Agency;
14 (ii) Coast Guard;
15 (iii) U.S. Forest Service;
16 (iv) Department of the Interior;
17 (v) Alaska Department of Environ-
18 mental Conservation;
19 (vi) Alaska Department of Fish and
20 Game;
21 (vii) Alaska Department of Natural
22 Resources; and
23 (viii) Division of Emergency Services,
24 Alaska Department of Community and Re-
25 gional Affairs.

101011.468

S.L.C.

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1 (3) TERMS.—

2 (A) THREE YEARS.—The voting members of
3 each Council shall be appointed for a term of
4 three years except as provided for in subpara-
5 graph (3)(B) of this paragraph.

6 (B) INITIAL APPOINTMENTS.—The terms of
7 the first appointments shall be—

8 (i) for the appointments by the Gover-
9 nor of the State of Alaska, one-third shall
10 serve for three years, one-third shall serve
11 for two years, and one-third shall serve for
12 one year; and

13 (ii) for the representatives of municipi-
14 palities required by subsection
15 (d)(2)(A)(vii), a drawing of lots among the
16 appointees shall determine that one-third of
17 that group serves for three years, one-third
18 serves for two years, and the remainder
19 serves for one year.

20 (4) SELF-GOVERNING.—Each Council shall elect
21 its own chairperson, select its own staff, and make
22 policies with regard to its internal operating proce-
23 dures. After the initial organizational meeting called
24 by the Secretary of Transportation under subsection

101011.468

S.I.C.

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1 (i) of this section, each Council shall be self-govern-
2 ing.

3 (5) DUAL MEMBERSHIP PROHIBITED.—No individ-
4 ual selected as a member of the Council shall serve
5 on the Association.

6 (6) DUTIES.—Each Council shall—

7 (A) provide advice and recommendations
8 to the Association on policies, permits, and site-
9 specific regulations relating to the operation and
10 maintenance of terminal facilities and crude oil
11 tankers which affect or may affect the environ-
12 ment in the vicinity of the terminal facilities;

13 (B) monitor through the committee estab-
14 lished under subsection (e) of this section, the
15 environmental impacts of the operation of the
16 terminal facilities and crude oil tankers;

17 (C) monitor those aspects of terminal fa-
18 cilities' and crude oil tankers' operations and
19 maintenance which affect or may affect the vi-
20 cinity of the terminal facilities;

21 (D) review through the committee estab-
22 lished under subsection (f), the adequacy of oil
23 spill prevention and contingency plans for the
24 terminal facilities and the adequacy of oil spill
25 prevention and contingency plans for crude oil

101011.468

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1 tankers, operating in Prince William Sound or
2 in Cook Inlet;

3 (E) recommend to the Association—

4 (i) standards and stipulations for per-
5 mits and site-specific regulations intended
6 to minimize the impact of the terminal fa-
7 cilities' and crude oil tankers' operations in
8 the vicinity of the terminal facilities;

9 (ii) modifications of terminal facility
10 operations and maintenance intended to
11 minimize the risk and mitigate the impact
12 of terminal facilities, operations in the vi-
13 cinity of the terminal facilities and to mini-
14 mize the risk of oil spills;

15 (iii) modifications of crude oil tanker
16 operations and maintenance in Prince Wil-
17 liam Sound and Cook Inlet intended to
18 minimize the risk and mitigate the impact
19 of oil spills; and

20 (iv) modifications to the oil spill pre-
21 vention and contingency plans for terminal
22 facilities and for crude oil tankers in Prince
23 William Sound and Cook Inlet intended to
24 enhance the ability to prevent and respond
25 to an oil spill; and

101011.468

S.L.C.

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1 (F) create additional committees of the
2 Council as necessary to carry out the above
3 functions, including a scientific and technical
4 advisory committee to the Prince William
5 Sound Council.

6 (7) NO ESTOPPEL.—No Council shall be held
7 liable under State or Federal law for costs or dam-
8 ages as a result of rendering advice under this sec-
9 tion. Nor shall any advice given by a voting member
10 of a Council, or program representative or agent, be
11 grounds for estopping the interests represented by
12 the voting Council members from seeking damages
13 or other appropriate relief in the event of a spill.

14 (8) SCIENTIFIC WORK.—In carrying out its moni-
15 toring functions, each Council shall review the scien-
16 tific work undertaken by or on behalf of the terminal
17 operators or crude oil tanker operators as a result of
18 a legal requirement to undertake that work. Each
19 Council shall also review the relevant scientific work
20 undertaken by or on behalf of any government entity
21 relating to the terminal facilities or crude oil tankers.
22 To the extent possible, to avoid unnecessary duplica-
23 tion, the Council shall coordinate its work with the
24 scientific work performed by or on behalf of the ter-
25 minal operators and with the scientific work per-

101011.468

S.L.C.

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1 formed by or on behalf of the operators of the crude
2 oil tankers.

3 (e) COMMITTEE FOR TERMINAL AND OIL TANKER OPER-
4 ATIONS AND ENVIRONMENTAL MONITORING.—

5 (1) MONITORING COMMITTEE.—Each Council
6 shall establish a standing Terminal and Oil Tanker
7 Operations and Environmental Monitoring Commit-
8 tee (hereinafter referred to as the "Monitoring Com-
9 mittee") to devise and manage a comprehensive pro-
10 gram of monitoring the environmental impacts of the
11 operations of terminal facilities and of crude oil
12 tankers while operating in Prince William Sound and
13 Cook Inlet. The membership of the Monitoring Com-
14 mittee shall be made up of members of the Council,
15 citizens, and recognized scientific experts selected by
16 the Council.

17 (2) DUTIES.—In fulfilling its responsibilities, the
18 Monitoring Committee shall—

19 (A) advise the Council on a monitoring
20 strategy that will permit early detection of envi-
21 ronmental impacts of terminal facility oper-
22 ations and crude oil tanker operations while in
23 Prince William Sound and Cook Inlet;

101011.468

S.L.C.

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1 (B) develop monitoring programs and
2 make recommendations to the Council on the
3 implementation of those programs;

4 (C) at its discretion, select and contract
5 with universities and other scientific institutions
6 to carry out specific monitoring projects author-
7 ized by the Council pursuant to an approved
8 monitoring strategy;

9 (D) complete any other tasks assigned by
10 the Council; and

11 (E) provide written reports to the Council
12 which interpret and assess the results of all
13 monitoring programs.

14 (f) COMMITTEE FOR OIL SPILL PREVENTION, SAFETY,
15 AND EMERGENCY RESPONSE.—

16 (1) TECHNICAL OIL SPILL COMMITTEE.—Each
17 Council shall establish a standing technical commit-
18 tee (hereinafter referred to as "Oil Spill Commit-
19 tee") to review and assess measures designed to pre-
20 vent oil spills and the planning and preparedness for
21 responding to, containing, cleaning up, and mitigat-
22 ing impacts of oil spills. The membership of the Oil
23 Spill Committee shall be made up of members of the
24 Council, citizens and recognized technical experts se-
25 lected by the Council.

101011.468

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1 (2) DUTIES.—In fulfilling its responsibilities, the
2 Oil Spill Committee shall—

3 (A) periodically review the respective oil
4 spill prevention and contingency plans for the
5 terminal facilities and for the crude oil tankers
6 while in Prince William Sound or Cook Inlet, in
7 light of new technological developments and
8 changed circumstances;

9 (B) monitor periodic drills and testing of
10 the oil spill contingency plans for the terminal
11 facilities and for crude oil tankers while in
12 Prince William Sound and Cook Inlet;

13 (C) study wind and water currents and
14 other environmental factors in the vicinity of
15 the terminal facilities which may affect the abil-
16 ity to prevent, respond to, contain, and clean up
17 an oil spill;

18 (D) identify highly sensitive areas which
19 may require specific protective measures in the
20 event of a spill in Prince William Sound or
21 Cook Inlet;

22 (E) monitor developments in oil spill pre-
23 vention, containment, response and cleanup
24 technology;

101011.468

S.L.C.

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1 (F) periodically review port organization,
2 operations, incidents, and the adequacy and
3 maintenance of vessel traffic service systems
4 designed to assure safe transit of crude oil tank-
5 ers pertinent to terminal operations;

6 (G) periodically review the standards for
7 tankers bound for, loading at, exiting from, or
8 otherwise using the terminal facilities;

9 (H) complete any other tasks assigned by
10 the Council; and

11 (I) provide written reports to the Council
12 outlining its findings and recommendations.

13 (g) AGENCY COOPERATION.—On and after the expira-
14 tion of the 180-day period following the date of enactment
15 of this section, each Federal department, agency, or other
16 instrumentality shall, with respect to all permits, site-spe-
17 cific regulations, and other matters governing the activities
18 and actions of the terminal facilities which affect or may
19 affect the vicinity of the terminal facilities, consult with
20 the appropriate Council prior to taking substantive action
21 with respect to the permit, site-specific regulation, or other
22 matter. This consultation shall be carried out with a view
23 to enabling the appropriate Association and Council to
24 review the permit, site-specific regulation, or other matter
25 and make appropriate recommendations. Prior consultation

101011468

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1 shall not be required if an authorized Federal agency repre-
2 sentative reasonably believes that an emergency exists re-
3 quiring action without delay.

4 (h) RECOMMENDATIONS OF THE COUNCIL.—In the event
5 that the Association does not adopt or significantly modi-
6 fies before adoption any recommendation of the Council
7 made pursuant to the authority granted to the Council in
8 subsection (d), the Association shall provide, in writing,
9 within five days of its decision, to the Council notice of its
10 decision and a written statement of reasons for its rejection
11 or significant modification of the recommendation.

12 (i) ADMINISTRATIVE ACTIONS.—Appointments, desig-
13 nations, and selections of individuals to serve as members
14 of the Associations and Councils under this section shall
15 be submitted to the Secretary of Transportation prior to the
16 expiration of the 120-day period following the date of the
17 enactment of this section. On or before the expiration of
18 the 180-day period following that date of enactment of this
19 section, the Secretary shall call an initial meeting of each
20 Association and Council for organizational purposes.

21 (j) LOCATION AND COMPENSATION.—

22 (1) LOCATION.—Each Association and Council
23 established by this section shall be located in the
24 State of Alaska.

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1 (2) COMPENSATION.—No member of an Association
 2 tion or Council shall be compensated for the mem-
 3 ber's services as a member of the Association or
 4 Council, but shall be allowed travel expenses, in-
 5 cluding per diem in lieu of subsistence, at a rate es-
 6 tablished by the Association or Council not to
 7 exceed the rates authorized for employees of agen-
 8 cies under sections 5702 and 5703 of title 5, United
 9 States Code. However, each Council may enter into
 10 contracts to provide compensation and expenses to
 11 members of the committees created under subsec-
 12 tions (d), (e), and (f) of this section.

13 (k) FUNDING.—

14 (1) REQUIREMENT.—Approval of the contingen-
 15 cy plans required of owners and operators of the
 16 Cook Inlet and Prince William Sound terminal facili-
 17 ties and crude oil tankers shall be effective only so
 18 long as the respective Association and Council for a
 19 facility are funded pursuant to paragraph (2) of this
 20 section.

21 (2) RESPONSIBILITY.—

22 (A) PRINCE WILLIAM SOUND.—The owners
 23 or operators of terminal facilities or crude oil
 24 tankers in Prince William Sound shall provide,
 25 for the establishment and operation of the en i-

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1 ronmental oversight and monitoring program in
2 Prince William Sound, \$2,000,000 annually, ad-
3 justed annually by the Anchorage Consumer
4 Price Index.

5 (B) OIL SPILL FUND.—Subject to appropria-
6 tions laws, the Secretary of the Treasury shall
7 make available from the Oil Spill Liability
8 Trust Fund to the Secretary of Transportation
9 such sums, in addition to those available pursu-
10 ant to subparagraph (A), as the Secretary of
11 Transportation deems necessary to operate the
12 Prince William Sound Program.

13 (3) COOK INLET PROGRAM.—

14 (A) Not to exceed \$1,500,000 from the Oil
15 Spill Liability Trust Fund shall be available to
16 the Secretary of Transportation, without fiscal
17 year limitation, to establish the Cook Inlet Pro-
18 gram provided for by this section.

19 (B) Subject to appropriations laws, the Sec-
20 retary of the Treasury shall make available from
21 the Oil Spill Liability Fund to the Secretary of
22 Transportation, such sums as the Secretary of
23 Transportation deems necessary to operate the
24 Cook Inlet Program established by this section.

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1 (C) The owners or operators of terminal fa-
2 cilities or crude oil tankers in Cook Inlet may
3 donate, and the Council may accept, funds for
4 establishment and operation of the Cook Inlet
5 environmental oversight and monitoring pro-
6 grams.

7 (I) REPORTS.—

8 (1) ASSOCIATIONS AND COUNCILS.—Prior to the
9 expiration of the 36-month period following the date
10 of the enactment of this section, each Association
11 and Council established by this section shall report
12 to the President and Congress concerning its activi-
13 ties under this section, together with its recommen-
14 dations.

15 (2) GAO.—Prior to the expiration of the 36-
16 month period following the date of the enactment of
17 this section, the General Accounting Office shall
18 report to the President and Congress as to the han-
19 dling of funds, including donated funds, by the enti-
20 ties carrying out the programs under this section, and
21 the effectiveness of the demonstration programs car-
22 ried out under this section, together with its recom-
23 mendations.

24 (m) DEFINITIONS.—As used in this section—

25 (1) "terminal facilities" means—

101-1468

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1 (A) in the case of the Prince William
 2 Sound Program, the entire oil terminal complex
 3 located in Valdez, Alaska, consisting of ap-
 4 proximately 1,000 acres including all buildings,
 5 docks (except docks owned by the City of
 6 Valdez if those docks are not used for loading
 7 of crude oil), pipes, piping, roads, ponds, tanks,
 8 crude oil tankers only while at the terminal
 9 dock, tanker escorts owned or operated by the
 10 operator of the terminal, vehicles, and other fa-
 11 cilities associated with and necessary for assist-
 12 ing tanker movement of crude oil or petroleum
 13 products into and out of the oil terminal com-
 14 plex; and

15 (B) in the case of the Cook Inlet program,
 16 the entire oil terminal complex including all
 17 buildings, docks, pipes, piping, roads, ponds,
 18 tanks, vessels, vehicles, crude oil tankers only
 19 while at the terminal dock, tanker escorts owned
 20 or operated by the operator of the terminal,
 21 emergency spill response vessels owned or op-
 22 erated by the operator of the terminal, and othe-
 23 facilities associated with, and necessary for, as-
 24 sisting tanker movement of crude oil or petro-

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1 um products into and out of the oil terminal
2 complex;

3 (2) "crude oil tanker" means a tanker (as that
4 term is defined under section 2102 of title 46, United
5 States Code)—

6 (A) in the case of the Prince William
7 Sound Program, calling at the terminal facilities
8 for the purpose of receiving and transporting oil
9 to refineries, operating north of Middleton
10 Island and bound for or exiting from Prince
11 William Sound; and

12 (B) in the case of the Cook Inlet Program,
13 calling at the terminal facilities for the purpose
14 of receiving and transporting oil to refineries
15 and operating in Cook Inlet and the Gulf of
16 Alaska north of Amatuli Island, including tank-
17 ers transiting to Cook Inlet from Prince William
18 Sound; and

19 (3) "vicinity of the terminal facilities" means
20 that geographical area surrounding the environment
21 of terminal facilities which is directly affected or
22 may be directly affected by the operation of the ter-
23 minal facilities.

24 (n) SAVINGS CLAUSE.—

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1 (1) REGULATORY AUTHORITY.—Nothing in this
2 section shall be construed as modifying, repealing,
3 superseding or preempting any municipal, State or
4 Federal law or regulation, or in any way affecting
5 litigation arising from oil spills or the rights and re-
6 sponsibilities of the United States or the State of
7 Alaska, or municipalities thereof, to preserve and
8 protect the environment through regulation of land,
9 air, and water uses, of safety, and of related develop-
10 ment. The monitoring provided for by this section
11 shall be designed to help assure compliance with ap-
12 plicable laws and regulations and shall only extend
13 to activities—

14 (A) that would affect or have the potential
15 to affect the vicinity of the terminal facilities
16 and the area of crude oil tanker operations in-
17 cluded in the Programs; and

18 (B) are subject to the United States or
19 State of Alaska, or municipality thereof, law,
20 regulation, or other legal requirement.

21 (2) RECOMMENDATIONS.—This subsection does
22 not intend to prevent the Association or Council
23 from recommending to appropriate authorities that
24 existing legal requirements should be modified or
25 that new legal requirements should be adopted.

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1 (O) ALTERNATIVE VOLUNTARY ADVISORY GROUP IN
2 LIEU OF COUNCIL.—The requirements of subsections (d),
3 (e), and (k) as they apply respectively to the Prince Wil-
4 liam Sound Program and the Cook Inlet Program, are
5 deemed to have been met so long as the following condi-
6 tions are met—

7 (1) PRINCE WILLIAM SOUND.—With respect to the
8 Prince William Sound Program, the Alyeska Pipeline
9 Service Company or any of its owner companies
10 enters into a contract with the Alyeska Citizens Ad-
11 visory Committee in existence on the date of enact-
12 ment of this section, or a successor organization, to
13 fund that Committee or organization on an annual
14 basis and the President annually certifies that Com-
15 mittee or organization meets the purposes, funding,
16 organizational requirements, and membership compo-
17 sition established by this section.

18 (2) COOK INLET.—With respect to the Cook
19 Inlet Program, the terminal facilities or the crude oil
20 tanker owners and operators enter into a contract
21 with a voluntary advisory organization whose mem-
22 bers represent the interests and citizens of Cook Inlet
23 in a way similar to the representation required by
24 subsection (d)(2)(A) to fund the voluntary organiza-
25 tion on an annual basis and the President annually

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1 certifies that that organization meets the purposes,
2 funding, organization requirements, and membership
3 composition established by this section.

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59

SENATE COMMITTEE REPORT

DATE: 4/25/90

FURTHER: Finance

DATE TURNED INTO OFFICE: 4/25/90

Resources

Committee considered

SJR 59

Relating to the discharge of ballast water by vessels entering the waters of Alaska.

and recommended:

replace with _____ CS _____
 or adopt _____ CS _____

same title
 new title
 technical title change (HB only)

attached amendment(s)
 _____ letter of intent adopted

do pass

do not pass

no recommendation

individual recommendations

further referral to _____

ATTACHES NEW FISCAL NOTE(S):
Dept/Date:

fiscal note(s) _____

zero fiscal note(s) _____

appropriation-no fiscal note

APPROVES PREVIOUS:
Dept/Date:

fiscal note(s) _____

zero fiscal note(s) OTG

Governor's bill w/fiscal note

SIGNING DO PASS:

OTHER RECOMMENDATIONS:

[Handwritten signatures]

SENATE AMENDMENT

1

BY: Harold Zaroff

TO: STR 59 SENATE BILL NO. 59
TO: _____ HOUSE BILL NO. _____

Page 2

Line 6 delete "115"

Line 9 - 11 delete all of (2)

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: SJR 59
PUBLISH DATE: 4/22/90

FISCAL NOTE

REQUEST: _____

REVISION DATE: _____
TITLE: Prohibit Discharge of
Ballast Water
SPONSOR: Zharoff
REQUESTOR: _____

AGENCY: NONE
BRU: _____
COMPONENTS: _____

EXPENDITURES/REVENUES: (THOUSANDS OF DOLLARS)

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
OPERATING						
PERS. SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND/BUILD.						
GRANTS/CLAIMS						
MISCELLANEOUS						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-
REVENUE	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING: (THOUSANDS OF DOLLARS)

GENERAL FUNDS						
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS:

PREPARED BY:  SENATE SPECIAL COMMITTEE ON OIL & GAS

DATE: 4/22/90

PHONE No.: 465-4993



SENATOR FRED F. ZHAROFF

ALASKA STATE LEGISLATURE

P. O. BOX 405, KODIAK, ALASKA 99615 (907) 486-5259

DURING SESSION:

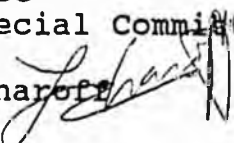
P. O. BOX V, JUNEAU, ALASKA 99811 • (907) 485-3473 • 485-3474

DISTRICT N

ALASKA PENINSULA • ALEUTIAN CHAIN • BRISTOL BAY • KODIAK ISLAND • LAKE CLARK/LAKE ILIAMNA • PRIBILOF ISLANDS • SHUMAGIN ISLANDS

MEMORANDUM

TO: Senator Drue Pearce
Chair - Senate Special Committee on Oil and Gas

FROM: Senator Fred F. Zharoff 

DATE: April 20, 1990

RE: Senate Joint Resolution 59 - "Relating to the discharge of ballast water by vessels entering the waters of Alaska."

I respectfully request that SJR 59 be scheduled for a hearing before the Senate Special Committee on Oil and Gas at the earliest opportunity.

SJR 59 is aimed at a national problem - the introduction of exotic species through ballast water. The problem has had especially serious repercussions in California and the Great Lakes region. So far -- to the best of our knowledge -- Alaska has been spared this problem, in which native species are overwhelmed and wiped out by the new species. The new species also have a tendency to cause major ecological disruptions.

SJR 59 calls on the U.S. Coast Guard to adopt regulations that would protect Alaska's ecosystem from the introduction of exotic species via ballast water.

SJR 59 is based on a resolution that was adopted late last year by the Pacific Series Legislative Task Force, made up of legislators from Alaska, California, Idaho, Oregon and Washington.

The following backup information is attached:

1. Letter and report regarding introduction of exotic species to the Sacramento-San Joaquin Estuary.
2. Summary of research paper on introduction of exotic species into the Great Lakes.
3. Information bulletin about zebra mussel problem in the Great Lakes.
4. Historical review of ballast water and the invasion of exotic species.

DEPARTMENT OF FISH AND GAME

1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-3531

①



1-1-79

Mr. Charles Fullerton
Director
National Marine Fisheries
Service, Southwest Region
300 S. Ferry St.
Terminal Island, CA 90731

Dear Mr. Fullerton:

In the last ten years the Sacramento-San Joaquin Estuary has been invaded by a number of exotic aquatic organisms. These include four species of copepods, a clam and an amphipod. The copepods originated in China and Japan and were brought in by ballast water of freighters or tankers. The origins of the clam and amphipod have not been determined but ballast water is the assumed mode of introduction as a wide variety of invertebrates and fish have been found to survive for weeks in ballast tanks.

All of the introductions have become abundant in the Estuary and some of them may be having adverse impacts on a native species of copepod that is an important food for larval striped bass.

The problem is not limited to the Sacramento-San Joaquin Estuary; the Great Lakes have been invaded by a fish, a cladoceran, a crab and an alga, all brought in by ballast water. The problem is undoubtedly world-wide: Japanese copepods have been found in Chilean fjords and a Chinese copepod has appeared in San Diego Bay. The problem is severe enough in the Great Lakes for the Great Lakes Fishery Commission to appeal to the U. S. Coast Guard, the State Department and the International Maritime Organization of the U.N. The Commission is asking for a regulation that will require ocean-going vessels entering the Great Lakes to first exchange their ballast water in the open ocean. The reasoning being that oceanic organisms are unlikely to survive in the fresh water of the Great Lakes. Alternate means of eliminating ballast water organisms are filtering and disinfection. However, filtering is not practical due to the small size of some of these organisms and disinfection is likely to result in the release of toxic substances to the environment.

The U. S. Coast Guard has the authority to adopt and enforce a regulation requiring exchange of ballast water at sea but their representatives have indicated to the Great Lakes Fishery Commission that it will take political and agency pressure to get such a regulation adopted.

Mr. Charles Fullerton

-2-

The Department plans to pursue the issue through the Western and International Associations of Fish and Wildlife Agencies. I believe it would be most helpful if you would pursue the issue through federal channels.

If you want more detailed information on introductions into the Sacramento-San Joaquin Estuary, Pete Chadwick can see that it is provided. His telephone number is: 209-466-4421.

Sincerely,

Pete Bontadelli
Director

File: D, DRF, Exfile, Bay-Delta, Chron

Chadwick/aec

The Problem of the Accidental Introduction of Exotic Aquatic Organisms to the Sacramento-San Joaquin Estuary

In 1978, a new species of planktonic copepod (a small relative of shrimp) appeared in the catches of the DFG's Bay-Delta Zooplankton Study. When sent to the Smithsonian Institution for identification, it turned out to be Sinocalanus doerrii, a species previously known only from Mainland China. In 1979, Sinocalanus became very abundant throughout the Delta and extended into Suisun Bay. In the same year another exotic copepod was discovered in the zooplankton catches. It also proved to be a Chinese species, Limnithona sinensis. A third copepod also appeared that year but turned out to be one that had been previously taken in 1964 by the DFG and not seen since. This copepod was later found to be numerous in South San Francisco Bay and was described as a new species, Oithona davisae. Japanese scientists later found it in Tokyo Bay and other locations in Japan where it had been known for some time but misidentified under another name.

The story continues. In 1987, specimens of Pseudodiaptomus, a copepod, were taken a few times by the DFG and were initially thought to be strays from San Francisco Bay. The next year, however, these animals became very abundant and a check of the literature showed that Pseudodiaptomus had never been caught in the Bay. The Smithsonian identified our specimens as P. forbesi, a species from the China coast.

In addition to copepods, in the last few years an amphipod, Lagunogammarus, and a clam, Potamocorbula, have entered the estuary from foreign parts, and in the last twenty to thirty years, a shrimp, Palaemon, and a fish, the yellowfin goby, have also come in and established populations.

The mode of introduction of the exotic species is ballast water of freighters and tankers. A variety of invertebrates and fish have been found to remain alive for weeks in such water while being transported across oceans. When discharged at a ship's destination the exotic organisms may find conditions unsuitable and die off or they may be dispersed by currents and never establish breeding populations. Sooner or later, however, conditions will be favorable and a new species will gain a foothold.

The impact of the new organisms on the plankton and fish of Suisun Bay and the Delta is difficult to ascertain but Sinocalanus may have been responsible for the precipitate decline of the native Diaptomus copepod in 1979, the year Sinocalanus became established. The native Eurytemora copepod, which is the most important food for larval striped bass, seems to have coexisted well with Sinocalanus, but in 1988, its abundance was as much as two orders of magnitude lower than in any previous year. This may be due to Pseudodiaptomus or to predation by an exotic clam, Potamocorbula, which consumed the early life stages of Eurytemora in a laboratory experiment and which became abundant for the first time in January 1988. Whether Pseudodiaptomus can replace Eurytemora as a food source for bass is still unknown.

Experiments have shown that copepods vary considerably in their vulnerability to larval bass predation.

We can expect more exotic organisms to enter the estuary as long as foreign-origin ballast water is emptied anywhere inside the Golden Gate. The effects of continued introductions is impossible to predict but the fishery leading to striped bass may already have been harmed irreparably by P. forbesi and Potamocorbula. To allow further introductions would be foolhardy.

The introduction problem is world-wide. Japanese copepods have been found in Chilean fjords. A Chinese copepod has appeared in San Diego Bay. The Great Lakes have been invaded by a fish, a crab, a cladoceran, and an alga.

The Great Lakes Fishery Commission (GLFC) has moved to end the dumping of foreign-origin ballast water in the Great Lakes. It has asked the U.S. and Canadian Coast Guards to require ships entering the Lakes to exchange their ballast water in the open ocean. Organisms from the high seas are unlikely to survive in the fresh water of the Great Lakes. The presiding officers of the Coast Guards of both nations are sympathetic to the idea and have the necessary power to enforce such a regulation but they have said that it will require political and agency pressure to move them. To apply the necessary pressure the GLFC will bring the matter up at a meeting in June 1989 of the United Nations International Maritime Organisation.

The GLFC has also explored alternatives to ballast exchange. These are filtration of ballast water, discharge of ballast water into holding tanks for treatment, and disinfection of ballast water in the ballast tanks of ships. These alternatives will be either ineffective as in the case of filtration, or more costly and likely to result in the discharge of toxic substances to the environment in the case of the other two alternatives.

2

THE INTRODUCTION OF EXOTIC ORGANISMS INTO THE GREAT LAKES
SINCE THE LATE 1800S

prepared by

Edward L. Mills
Department of Natural Resources
Cornell Biological Field Station
5114 Shackelton Point Road
Bridgeport, New York 13030
USA

and

Joseph H. Leach
Ontario Ministry of Natural Resources
Lake Erie Fisheries Station
R.R. #2
Wheatley, Ontario N0P 2P0
CANADA

SUMMARY

North American scientists have been concerned for many decades about risks associated with introduced aquatic organisms. Such introductions to aquatic systems can have undesirable effects and pose a threat to the integrity of valued resources. The Laurentian Great Lakes have been subjected to introductions of non-native species since the time of settlement by Europeans. Recently, the Great Lakes have been invaded by three exotic species and these organisms pose a serious threat to the long-term integrity and value of the Great Lakes resource.

The first comprehensive inventory of flora and fauna introduced into the Great Lakes is currently being prepared. Establishment of such a database is presently funded by the Great Lakes Fishery Commission-Introductions Task Group. The goal of the Introductions Task Group is to increase our knowledge regarding Great Lakes exotic species, their introduction, their modes of entry, and prospects for prevention and control. To date, a total of 69 organisms ranging from disease pathogens to fish have been identified as non-native to the Great Lakes. Of this total, the bulk of organisms belong to three taxonomic groups, namely benthos, algae, and fish (Figure 1).

Exotic species have gained entry into the Great Lakes through a variety of vectors including waterfowl, birds, infected fish, stocking, canals, bait, and ballast water of ships. In the current survey of non-native species introductions, ballast water has been identified as the major vector through which exotic organisms have entered the Great Lakes. So far, 27 out of 69 exotic organisms have been identified as entering the Great Lakes via ballast water (Figure 2). Organisms associated with ballast water or ship hauls having the greatest impact on the Great Lakes resource include zebra mussel, sea lamprey, ruffe, and the spiny water flea. Canals also have been important vectors through which organisms have entered the Great Lakes. For example, the Erie-St. Lawrence Canal system has been an important historical route through which exotic organisms have

entered the Great Lakes. It is quite possible that the sea lamprey and the alewife entered the Great Lakes through the Erie-Barge Canal system. The white perch expanded its range into the Great Lakes from the Hudson River and the Erie-Barge Canal system. Further, the Welland Canal which connects Lakes Ontario and Erie was the primary route through which the sea lamprey expanded to the upper Great Lakes. The sea lamprey, alewife, and white perch have all had significant impacts on native Great Lakes species.

Figure 1. Number of Exotic Species Introduced Into the Great Lakes by Taxonomic Group

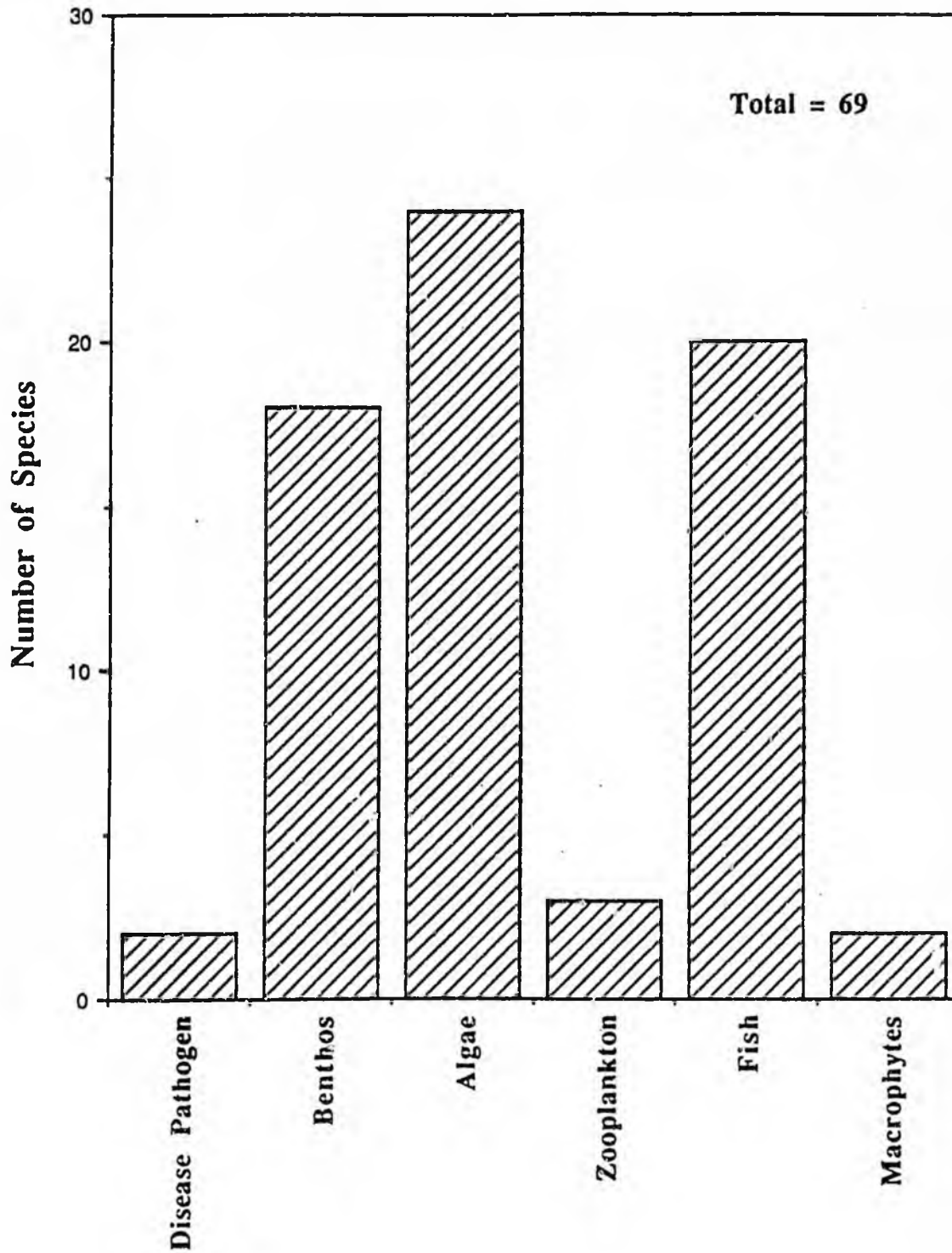
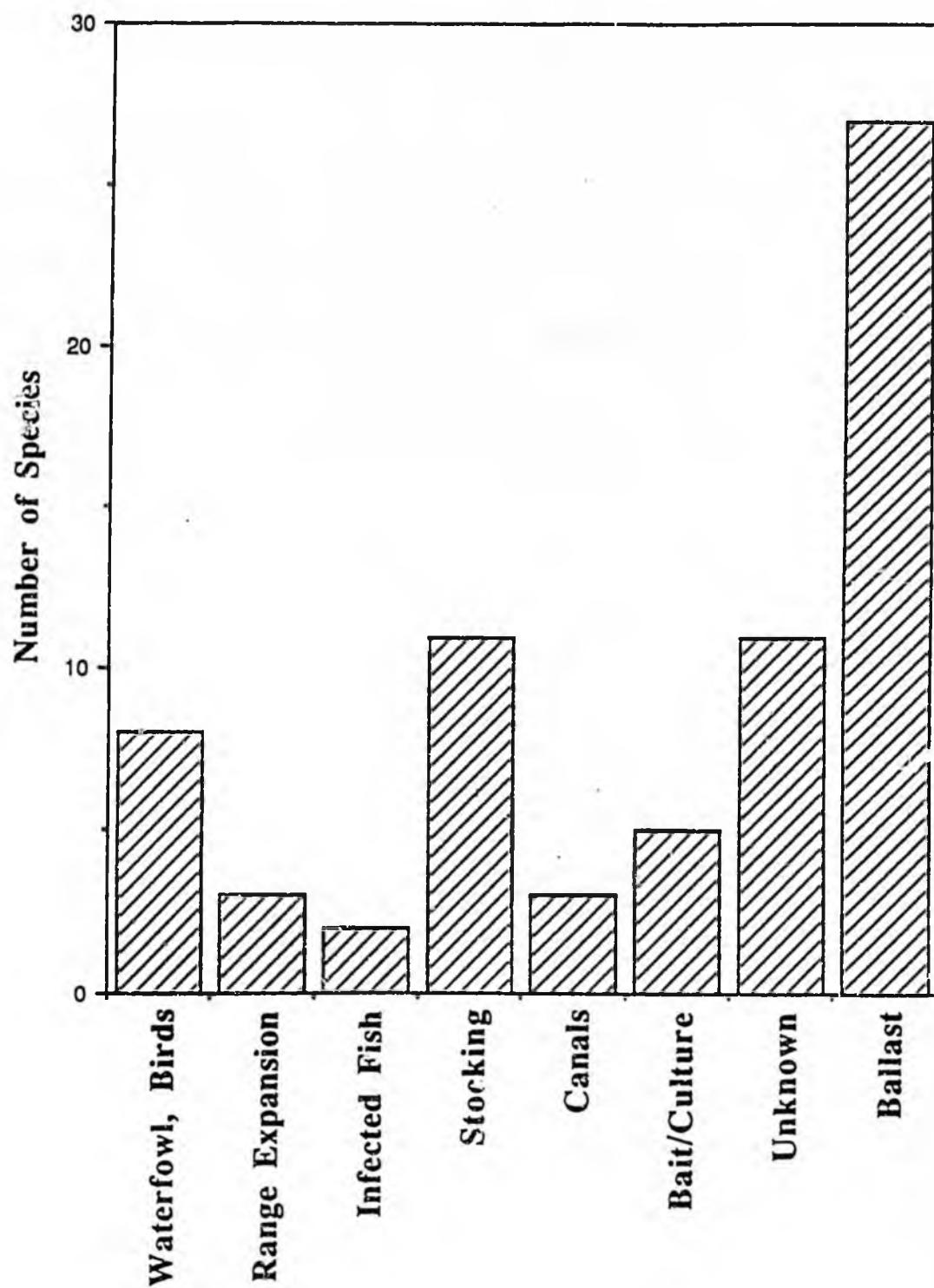
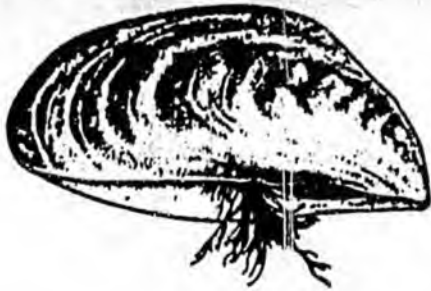


Figure 2. Entry Vectors of Exotic Species Introduced Into the Great Lakes Since the Late 1800s.





Monthly News Letter #45

February 1989

Water Resources Assessment Unit,
Southwestern Region, Ministry of the Environment

INTRODUCTION OF ZEBRA MUSSELS INTO THE GREAT LAKES:
TRUTH AND CONSEQUENCES.

Over the past two years, the predacious zooplankter "B.C." (*Bythotrephes cederstroemi*), the perch-like ruffe (*Gymnocephalus cernuus*) and the zebra mussel (*Dreissena polymorpha*) have all been sighted in the Great Lakes' ecosystem. These recent immigrants join the long list of exotic species that have entered the Great Lakes probably as a result of discharges of freshwater ballast from ocean-crossing ships; a practice allowed because of the lack of Federal regulations.

While each of these recently introduced species will disturb the ecological relationships among native biota, the zebra mussel (Figure 1) will probably be the first exotic species to impart a severe cost on the users of the lakes. Using its byssal apparatus to secrete horny threads, the zebra mussel can climb and firmly attach itself to any solid surface (e.g. rocks, piers, breakwalls, pipes, boats, fishing nets, mussel shells). As a consequence, they have already restricted the inflow of water to electrical generating and water treatment facilities by reducing the diameter of intake pipes. They are expected to reduce the catch of fish by fouling impounding gear, affect sailing activities by colonizing the hulls of boats, restrict swimming activities by forming large "mussel mats" in littoral areas, interfere with beach activities because of large numbers of shells washing up along shorelines, and reduce the aesthetics of water-front areas by encrusting anything in contact with the water.

Based on the size of the shells collected (maximum length of 30mm), the zebra mussel has probably been in the Great Lakes for 2-2.5 years. The occurrence of zebra mussel shells along beaches (arrows in Figure 2) and their reported occurrence in water treatment plants (solid circles in Figure 2) indicates that they currently are found in the central and western basins of Lake Erie, the Detroit River and Lake St. Clair. Their rapid dispersal has been facilitated by their high reproductive capacity, free-swimming larval (veliger) stage, and the ability of yearlings to disperse by drifting. By 1990, the zebra mussel will probably expand its range into the eastern basin of Lake Erie and the Niagara River. However, it is not confined to Great Lakes' habitats, and will probably begin to appear in inland reservoirs, lakes and rivers in the near future, transported by waterfowl and wildlife.

Ronald W. Griffiths



Figure 1: Zebra Mussel

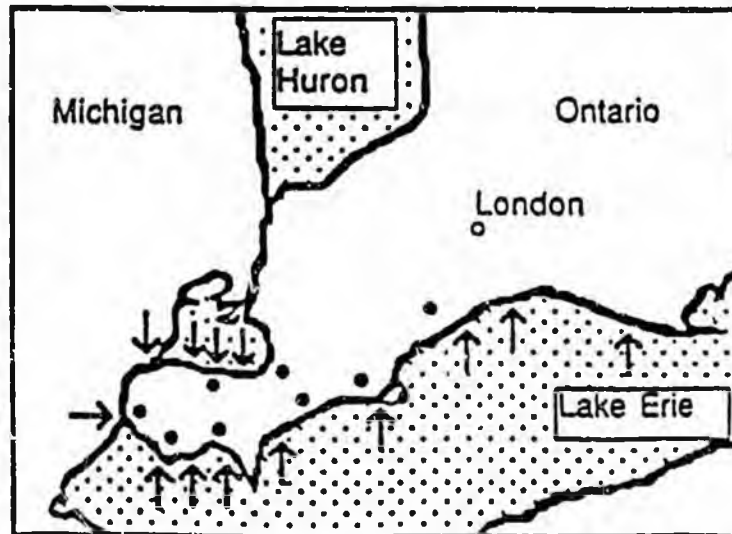


Figure 2: Occurrence of Zebra Mussels along the shoreline and in Water Treatment Plants

BALLAST WATER AND THE INVASION OF EXOTIC SPECIES
A Brief Historical Review: 1868 - 1990

James T. Carlton
Maritime Studies Program, Williams College - Mystic Seaport Museum
Mystic, Connecticut 06355

A Chronological Summary of the Some of the Events and Concerns
Relative to Ballast Water:

- 1868 Grantham (1868) describes the design of double-bottom tank systems for water ballast in iron ships
- 1880 Lloyd's Register begins in 1880 (but not before) noting types and capacities of water ballast tanks
- 1896 "Probably most cargo steamers in these days are fitted with some means of carrying water as ballast..." (Walton, 1896)
- 1900 Fulton and Grant (1900) suggest that the European shore crab Carcinus maenas was introduced to Australia by ballast water
- 1908 Ostenfeld (1908) suggests that the Asian diatom Odontella (Biddulphia) sinensis may have been introduced to the North Sea in 1903 by ballast water
- 1933 Peters describes the introduction of the mitten crab Eriocheir sinensis, sometime before 1912, from Korea or China to Germany
- 1968-
1978 Extensive literature discussions on the role of ballast water in exchanging marine organisms through the Panama Canal (reviewed by Carlton, 1985, p. 319)
- 1973 Medcof and Scribner (1975) provide first detailed report of living organisms in ballast water, based upon samples of a ship arriving from Japan to New South Wales, Australia
- 1973 "Resolution 18": "Research into the Effect of Discharge of Ballast Water Containing Bacteria of Epidemic Diseases" passed by the International Conference on Marine Pollution (including the International Convention for the Prevention of Pollution from Ships)
- 1976-
1977 CSIRO (Australia) biologists sample bulk cargo carriers coming from Japan to Western Australia (see Williams et al., 1988)
- 1980 Environment Canada commissions ballast water study at Montreal, to sample 55 merchant vessels in the summer and fall; published as Bio-Environmental Services (1981)

- 1980-
1982 Ballast water investigations commence at the Woods Hole Oceanographic Institution, Woods Hole, based upon experimental studies using oceanographic research vessels, and upon bulk bulk cargo traffic arriving at US ports (J. T. Carlton and colleagues)
- 1985 Publication of review monograph by Carlton (1985)
- 1986 Ballast water investigations commence in Coos Bay, Oregon, at the University of Oregon Institute of Marine Biology, based upon bulk cargo vessel traffic from Japan to Pacific Northwest (J. T. Carlton and colleagues)
[Sea Grant funded, 1987-1988, 1989-1991]
- 1987 Publication of monograph on introductions of non-indigenous marine organisms by ballast water and other vectors into Australia, by Hutchings, van der Velde, and Keable (1987)
- 1987 CSIRO (Australia) scientists re-commence sampling of bulk cargo vessels inbound from Japan (Dr. G. Hallegraeff, of CSIRO Division of Fisheries, Hobart)
- 1987 Revision of Water Quality Agreement between Canada and the United States assigns responsibility (under Annex 6) for studying the ballast water issue and possible solutions to the US and Canadian Coast Guards
- 1988 Publication of paper on ballast water as a mechanism of introduction of exotic species in Australia by Williams et al. (1988).
- 1988 Great Lakes Fishery Commission meeting in Toledo, Ohio, (May) considers issue and questions of ballast water release in the Great Lakes
- 1988 "Recommendation No. 1" of the International Council for the (June) Exploration of the Sea's "Working Group on Introductions and Transfers of Marine Organisms" formulated and sent to ICES for consideration at Plenary Session in October 1988
- 1988 Canada and U.S. raise the issue of Great Lakes introductions (Sept) via ballast water at the London meeting of the Marine Environment Protection Committee of the UN's International Maritime Organization (IMO).
- 1989
March Congressmen Davis and Hertel introduce a House of Representatives bill "to direct the Secretary of Transportation to report on methods available to control the influx of exotic species into the Great Lakes"

1989 [continued]

- May Canadian Coast Guard Voluntary Guidelines on ballast water exchange go into effect in Great Lakes (compliance begins in April)
- Aug Mandatory guidelines on ballast water exchange go into effect in Australia; suspended soon thereafter
- Aug "Resolution 89-10" passed by Pacific Fisheries Legislative Task Force, "Introduced Organisms from Ballast Water", urging US Coast Guard to prohibit non-exchanged ballast water release
- Sept American Fisheries Society's Introduced Fishes Section passes Resolution at Annual Meeting (Alaska) on control of ballast water discharges
- Oct New York Congressman Nowak introduces House of Representatives Bill 3403 "to require that vessels exchange their ballast water entering the Great Lakes" [legislation pending, February 1990]
- Oct Ballast Water Monitoring Workshop, sponsored by the Great Lakes Fishery Commission, at St. Catharines, Ontario
- Dec House of Representatives bill 2459 passes, calling for US Coast Guard to produce report on ballast water management strategies by June 1990 (Bill authored by Michigan Congressmen Robert Davis and Dennis Hertel)
- 1990
- Jan Senator F.F.Zharoff submits "Senate Joint Resolution No.59" to State of Alaska legislature "Relating to the discharge of ballast water by vessels entering the waters of Alaska" (and the organisms therein)
- Feb Voluntary guidelines on ballast water exchange go into effect in Australia (February 1)
- Feb Ballast Water Monitoring Workshop II, sponsored by the Great Lakes Fishery Commission, at Toronto, Ontario (8-9 February)
- Feb Exotic Species and the Shipping Industry Workshop, sponsored by the International Joint Commission and the Great Lakes Fishery Commission, at Toronto, Ontario (28 Feb, 1-2 March)

Alaska State Legislature



Senate

2957 SHELDON JACKSON STREET
ANCHORAGE, ALASKA 99508

While in Juneau
P.O. BOX V
JUNEAU, ALASKA 99811
(907) 465-3818

SENATOR
ARLISS STURGULEWSKI
Senate President Pro Tempore
Chairman, Senate Rules Committee

MEMORANDUM

April 24, 1990

TO: All Senators

FROM: Senator Arliss Sturgulewski *AS*

RE: Senate Bill 59

I respectfully request your support for Senate Bill 59.

It as been conclusively demonstrated that seatbelt use results in a savings of both lives and money. Study after study shows that persons injured in automobile accidents have less severe injuries and spend far less on health care if they were using a seatbelt at the time of the accident. It has been estimated that on a national basis, each 10 percent increase in safety-belt use results in 30,000 fewer serious and moderate injuries and a savings of \$800 million in direct costs to society.

Alaskans can be healthier and safer if strongly encouraged to use safety devices in motor vehicles. This proposed law is designed to encourage compliance by rather than punishment for those who don't wear safety belts. That is the reason behind making non-compliance a secondary offense.

Attached are a number of editorials from newspapers statewide encouraging us to pass this legislation. In addition, I have attached a sectional analysis, extracts of studies, and statistical information about accident and compliance rates.

The fiscal notes received for this bill are zero.

Sectional Analysis
Committee Substitute for Senate Bill 59 (Transportation)
20 February 1990

SECTION ONE:

Repeals & reenacts AS 28.05.095, adding a new (a) requiring a person 16 years of age or older to be restrained by a safety belt in a motor vehicle if either a passenger or the driver.

Subsection (b) is current language of prior (a) with the exception of line 22, after "is" [BETWEEN FOUR AND SIX] is deleted and "is four but not yet 16" is added.

Subsection (c) is current (b), except that

(2) new exception for mail or newspaper carriers.

(3) "child" is changed to "person". Section is old (2).

(4) "child is changed to person" and "or (b)" is added after (a).
Section is old (3).

Current (4) is exemption for rural areas. The bill removes that exemption.

Subsection (d) is the old subsection (c).

Subsection (e) is new. This section provides that a peace officer may not stop a motor vehicle to determine if the passenger or driver is wearing a safety device, nor may a peace officer issue a citation unless the peace officer has stopped the motor vehicle for another reason. This section makes the violation a secondary offense.

SECTION 2:

This is a technical changes - "child" is changed to "person" and "safety belt" is added.

SECTION 3:

Subsection (a) allows the court to fine a person who is not wearing a safety belt in a motor vehicle or who removes a safety belt from a motor vehicle so as to be exempted from the requirement to wear a safety belt. The \$15 may be waived by the court if \$15 is donated to the Emergency Medical Services entity in the area where the violation occurred.

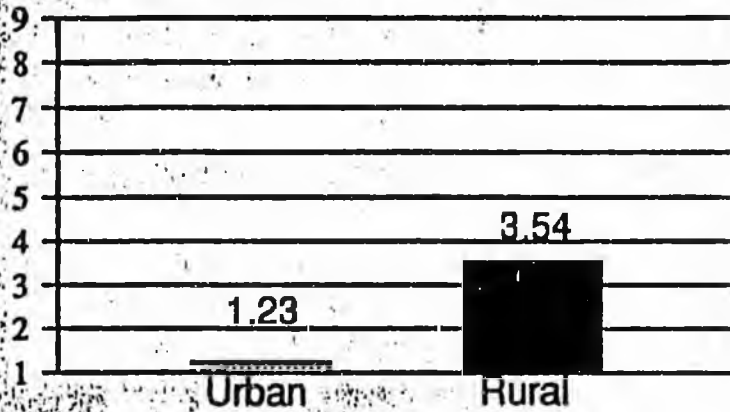
Subsection (b) adds the penalty for violating the requirement that a child be in a child safety device that was deleted from subsection (a). The state affairs committee substitute added language limiting the fine for this infraction to \$50.

SECTION 4:

This section directs the supreme court to adopt a mail-in bail procedure for payments of fines for violation of this statute.

ALASKA

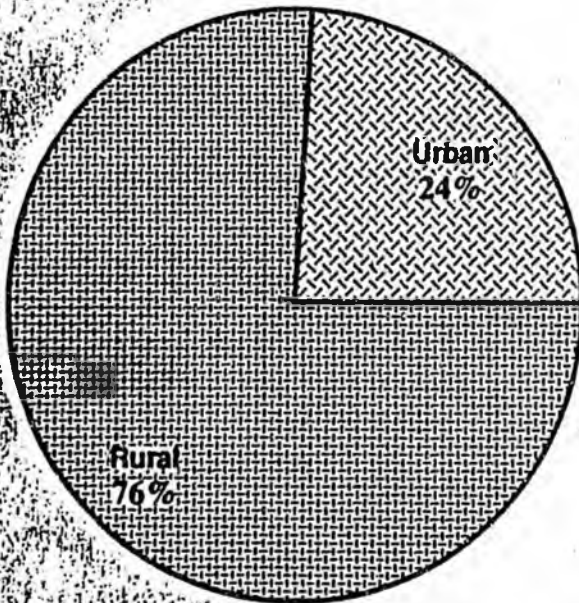
NUMBER OF DEATHS
PER 100 MILLION MILES DRIVEN



National Highway Traffic Safety Administration Statistics

ALASKA

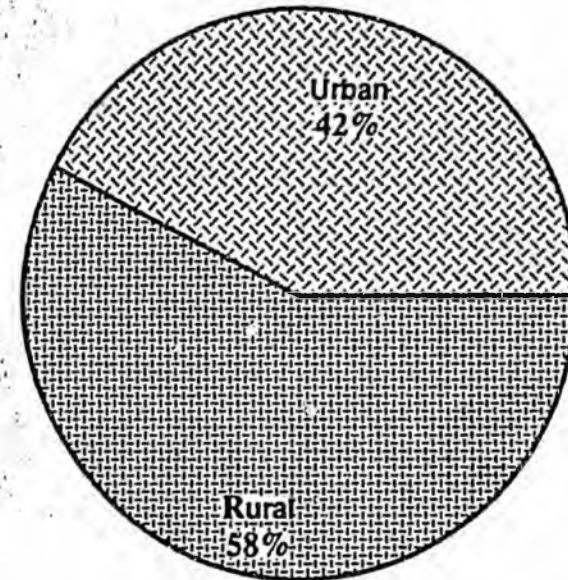
101 MOTOR VEHICLE
DEATHS IN 1986



National Highway Traffic Safety Administration Statistics

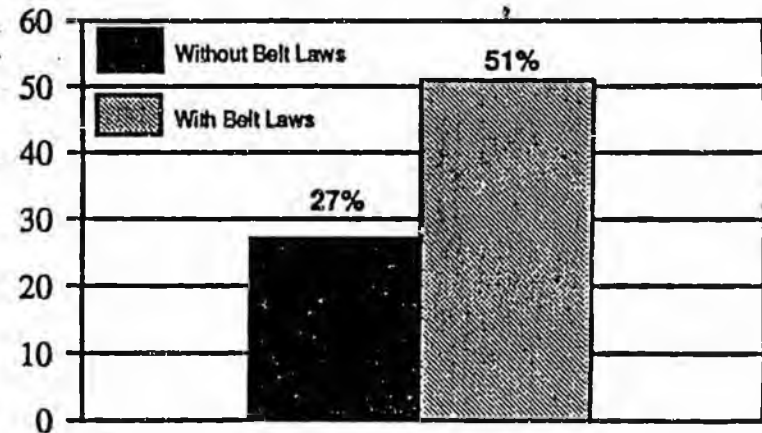
NATIONALLY

46,020 MOTOR VEHICLE
DEATHS IN 1986



National Highway Traffic Safety Administration Statistics

BELT-USE NATIONALLY



NHTSA 19 City Survey Conducted During First Half of 1987

ANCHORAGE DAILY NEWS
APRIL 9, 1990

Way overdue 4990 Kipman

Seat-belt legislation must not die this year

The arguments and counter-arguments are moldy. The debate is stale. Virtually everything that can be said about a mandatory seat-belt law has been uttered. It's time for lawmakers to vote -- and to pass a mandatory seat-belt bill.

The statistics don't lie: seat belts save lives. The 35 states (and the District of Columbia) that have approved safety belt legislation have a decrease in deaths and injuries. Seat-belt laws also are reducing the medical, legal, and other costs associated with motor accidents.

The proposed Alaska seat-belt law isn't onerous or intrusive. Law enforcement officials will issue citations only if they stop a motorist for another offense. The proposed fine of \$15 barely qualifies as a slap on the wrist. Nevertheless, this legislation establishes seat belt use as a state standard, an official expectation, which is important.

People buckle up when reminded that the law requires it. And people who buckle up live to drive again another day.

"SAFETY BELT USE" SUPPORT ORGANIZATIONS

APRIL 20, 1990

The list of organizational support continues to grow!!

Here is an updated listing of all resolution support groups and those issuing letters of support for the passage of a safety belt use law (SB59) in Alaska:

3M ALASKA AIR CARRIERS ASSOCIATION

AAA ALASKA

A. CLAIRE RENN, MD

ADVISORY BOARD ON DRUG ABUSE

AK ACADEMY OF PHYSICIAN ASSISTANTS

AK CH. AMERICAN SOCIETY OF SAFETY ENGINEERS

AK CHIEFS OF POLICE ASSOCIATION

AK COUNCIL ON PREVENTION OF DRUG & ALCOHOL ABUSE, INC.

AK DENTAL SOCIETY

AK SAFETY ADVISORY COUNCIL

AK HEALTH EDUCATION CONSORTIUM

AK LUNG ASSOCIATION

AK NURSES ASSOCIATION

AK PEACE OFFICERS ASSOCIATION

AK REGIONAL EMS COORDINATORS

AK STATE FIREFIGHTERS ASSOC/PORT OF VALDEZ CH

AK STATE MEDICAL ASSOCIATION

AK STATE MEDICAL ASSOC. AUXILLIARY

AK TREATMENT CENTER

ALPINE ASSOCIATES

ANCHORAGE GYMNASTICS

ANCHORAGE MEDICAL & SURGICAL CLINIC

ANCHORAGE OBSTETRICS & GYNECOLOGY

ANCHORAGE SAND & GRAVEL

ARCO ALASKA/SAFETY DIVISION

AVIS RENT-A-CAR

B & C SUPPLY

BLUE CROSS OF WASHINGTON & ALASKA

CHEVRON USA

CHUCK E. CHEESE, INC.

CLINTON LILLIBRIDGE, MD

CONSOLIDATED FREIGHTWAYS

CORROON & BLACK, INC

DAWSON SUBARU

DECLAN NOLAN, MD

DEHALI TRANSPORTATION dba PACIFIC MOVERS

EASTWIND, INC

ELIZABETH DESCHWEINITZ, MD

ERNEST MEINHARDT, MD

FBI NATIONAL ACADEMY ASSOCIATES

FEDERAL SAFETY & HEALTH COUNCIL

FIRESTONE STORES

GEORGE STRANSKY, MD

GOODYEAR TIRE & RUBBER CO

HAROLD'S RENT-A-TRUCK

HEALTH ASSOCIATION OF ALASKA

HEALTH CARE COALITION OF ALASKA

HEDLAND, FLEISCHER, FRIEDMAN, BRENNAN & COOKE

HIGHWAY USERS FEDERATION OF ALASKA

HUMANA HOSPITAL/EXECUTIVE COMMITTEE

JACKOVICH INDUSTRIAL & CONSTRUCTION SUPPLY

JAMES BERTELSON, MD

JEFF BRAND, MD

JOHN FROST, MD

JOHN SMITH, MD

JON LYON, MD

JOY-ROSSTON ZIMMERMAN, RNC, ANP

JUNEAU RETIRED TEACHERS ASSOCIATION

JUNIOR TOWNE

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PHILIP W. HASELTINE
Executive Director

FOR YOUR INFORMATION

April 4, 1990

CONGRESSIONAL RECORD — Extensions of Remarks

E 975

✓ SAFETY BELTS CAN SAVE LIVES
AND MONEY

HON. JOHN D. DINGELL
OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

Wednesday, April 4, 1990

Mr. DINGELL. Mr. Speaker, I rise today to make my colleagues aware of a recent announcement by the American Coalition for Traffic Safety (ACTS) that reports on an important development on our Nation's highway system: the last half of the 1980's was the safest period on America's roads since the early 1960's. Further—and perhaps more important—the mileage death rate, the key barometer of safety progress, reached an all-time low of 2.2 fatalities per 100 million miles of vehicle travel in 1988, according to the National Highway Traffic Safety Administration (NHTSA).

There are many reasons for this progress, but an important factor has to be the dramatic increase in safety belt use which was achieved in the mid to late 1980's through the enactment of State safety belt use laws and other activities to promote safety belt use.

In fact, NHTSA reports that from 1983 to 1988, an estimated 15,500 lives were saved by safety belts, with 10,500 of these due to belt use laws.

This is true progress, but more can and must be done to bring about greater use of safety belts so that highway fatalities can continue to be controlled. In this regard, I am pleased to see that a major campaign has been announced in my State of Michigan to encourage the business community to implement safety belt use programs for employees.

The business community has an important but sometimes unrecognized vested interest in increasing safety belt use. The Michigan Coalition for Safety Belt Use points out that automobile crashes are the leading cause of worker absenteeism and the No. 1 cause of on-the-job fatalities, and they also cost employers nationwide \$1.8 billion per year.

To generate more support for both use promotion in the business community in Michigan, the coalition is sponsoring workshops throughout the State in May and June. Gov. James Blanchard is the honorary chairman of this project. Secretary of State Richard Austin, a long-time safety belt use advocate, is the chairman. Keynote speakers at the workshops include labor and business leaders.

Mr. Speaker, I am most hopeful that this Michigan project will produce results in terms of increasing safety belt use and reducing traffic fatalities and injuries. The ACTS announcement shows the gains that have been made, but we need to do more, and the Michigan project is an example of the kind of work that can be done. I attach the following statistics for the benefit of my colleagues:

(Compiled by the Michigan Coalition for Safety Belt Use)

1. Traffic crashes rank as the number one killer of Americans ages 1-44.
2. The probability of being involved in a motor vehicle injury crash during a 75-year lifetime is higher than 86 percent.
3. For every dollar invested to encourage people to buckle up, there is a projected return of \$105.07 in economic savings. This return is more than can be gained by any other health-risk-factor intervention, such as encouraging people not to smoke.
4. Currently, 45.8 percent of front seat occupants in Michigan use their safety belts.
5. In Michigan, more than \$750 million is spent each year on medical costs due to the nonuse of safety belts.
6. An average of four people die on Michigan roadways each day due to auto crashes, while over 400 more are injured.
7. Nonuse of safety belts resulted in 548 premature deaths and the loss of 17,736 years of productive working life in Michigan during 1983.
8. In 1988, Michigan averaged 1,123 traffic crashes each day. More than 155,000 persons were injured, crippled, or maimed, and 1,704 people were killed in 1,522 fatal crashes.
9. Auto crashes are the leading cause of worker absenteeism.
10. Auto crashes cost the average employer nearly \$120,000 per employee death.
11. Serious injuries caused by auto crashes result in average medical payments of \$208,400.
12. More employees are injured or killed on the road than in the plant.



1. Report No. DOT HS 807 324		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Lives Saved by Seat Belts from 1983 through 1987				5. Report Date June 1988	
				6. Performing Organization Code	
				8. Performing Organization Report No.	
7. Author(s) Susan C. Partyka				10. Work Unit No. (TRAIS)	
9. Performing Organization Name and Address National Center for Statistics and Analysis 400 7th Street S.W. Washington, D.C. 20590				11. Contract or Grant No.	
				13. Type of Report and Period Covered NHTSA Technical Report 1983-1987	
12. Sponsoring Agency Name and Address Research and Development National Highway Traffic Safety Administration 400 7th Street S.W. Washington, D.C. 20590				14. Sponsoring Agency Code	
				15. Supplementary Notes	
16. Abstract Between 1983 and 1987, seat belts saved the lives of an estimated 10,938 travelers over four years old in the front seats of passenger vehicles (cars, pickups, vans, and utility vehicles). Belt use laws saved 6,907 of these lives (63 percent) by requiring seat belt use in states with belt use laws and encouraging seat belt use in states without belt use laws. Another 4,301 of the lives (37 percent) were saved by pre-law (1983) seat belt use levels.					
17. Key Words accident data, fatalities, seat belts, belt use laws			18. Distribution Statement Document is available to the public through the National Technical Information Service, Springfield, Virginia 22161		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 17	22. Price

Example:

The Cost of Non-Use of Safety Belts in Alaska

SOURCE: Alaska Treatment Center

A 27 year old woman who **chose** to not wear her safety belt, sustained a traumatic head injury and multiple injuries in August, 1985.

Her husband, also not wearing a safety belt, **was killed** in the accident.

She has **2 small children** and is **without family support**.

The State of Alaska provided approximately **\$90,000** worth of **inpatient medical care** for this client.

Outpatient rehabilitation services over a 13-month period cost the State another **\$51,710**.

In addition to State funded medical care, this client and her children also receive services from other State funded agencies, such as the **Homemaker Program, Daycare Programs, Aid to Families with Dependent Children, Food Stamps and Child Protective Services**.

Her prognosis for returning to work is extremely poor.

She plans on remaining in the State of Alaska and will continue to require State funding.



LEGISLATIVE UPDATE
April 14, 1989

=====

201 OUT OF 231 ALASKANS KILLED IN MOTOR
VEHICLE ACCIDENTS WERE IN 1985, 1986 &
1987 WERE NOT BUCKLED UP.

- Statistics from safety experts show that half of these deaths would have been avoided if Alaska had a safety belt use law in place.
(National Highways Users Federation, 1987)
- =====

■ TWO MORE STATES PASS SAFETY BELT USE LAWS!

✓ The 32nd state to pass a safety belt use law was Wyoming in March.

✓ North Dakota became the 33rd state when their safety belt bill was signed into law on April 11, 1989.

WILLIAM S. MORRIS III
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JUNEAU EMPIRE 5-3-89

A few minutes to save lives

In the rush to adjournment, important bills are always left in the dust. Maybe, just maybe, the safety bill won't be one of them this year. The bill, which the House passed earlier this session, has been languishing in the Senate ever since. Why has been more a matter of politics than anything else.

Legislators could not come up with a better, simpler or less expensive bill if they tried. As written, the safety belt bill says that Alaskans must wear their safety belts when in a car. If they are stopped by a police officer for another reason and are not wearing their safety belt, then

they will get a \$15 ticket.

Plain and simple.

That's all there is to it.

Some folks try to read

a lot of philosophical stuff

into this bill. They talk

about their individual rights to bounce themselves and their kids all over the road if they get into a car wreck.

This bill doesn't aim at philosophy. All it aims at is reminding Alaskans that they should wear their safety belts. If they don't and they get into an accident, the odds are vastly greater that they will be injured more seriously than if they had been wearing their belts.

¹⁹⁸⁵
¹⁹⁸⁶
^{and}
¹⁹⁸⁷ The fact is, of the 231 Alaskans who died in car wrecks in 1986 and 1987, 201 were not wearing their safety belts. If one of those lives could have been saved, this safety belt bill would have been well worth any inconvenience it may have caused.

We understand the Senate is extremely busy now, but it has had since February to pass this bill. With less than a week left in the session, it just seems to us that our senators could find a few minutes to save some lives.

ISSUE: Safety belt bill remains in state Senate

FORUM

Alaskans can live with proposed safety belt law

By FRANK BICKFORD

One thing alone can save 35 Alaskan lives a year, reduce the hardship and costs of over 600 injuries, save \$5 million worth of lost labor, and decrease economic losses associated with highway death and injury alone by

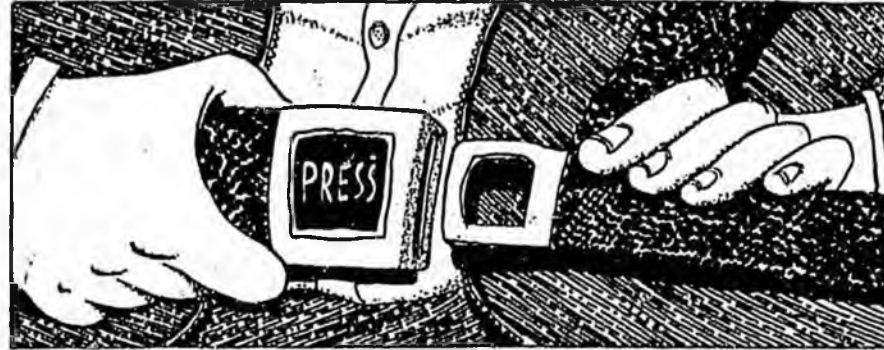


as much as \$13 million, according to estimates from The Alaska Highway Users Study. That one thing is wearing the safety belts already in our cars.

These facts are just four of the reasons Alaska needs a law requiring safety belt use. Although a major purpose of the Alaska Safety Belt Use Law would be to promote the safety of drivers and passengers using their safety belts, such a law would also promote the safety of other street and highway travelers, and promote the public welfare by reducing public expenditures.

In other words, if Alaska requires safety belts to be worn — everyone can benefit! Belt-use laws that have been passed in 31 states and D.C. motivate people to buckle up. Those states found that voluntary use is low. Legislating the use of safety belts saved significant numbers of lives and reduced costs.

Educational campaigns promoting safety belt use have been launched here and across the country. Use of safety belts increases temporarily during the campaign and then returns to a low percentage. The amount of



money spent is great and the residual impact slight.

Safety belt use laws and an aggressive educational campaign must be combined to achieve maximum use. In the absence of a law even with an educational campaign, less than 32 percent of the population will buckle up. However, a Hellenthal statewide poll last year showed that 81 percent of Alaskans would wear safety belts if required by law.

A safety belt use law is the incentive to establish the safety habit in those who otherwise wouldn't buckle up.

If a person is killed or injured, it affects more people than the victim. Persons are not allowed a "freedom to choose" to pay the health care costs of those who "choose" not to wear their safety belts.

The cost of needless fatalities and serious injuries are paid by all persons — not simply the victim. Taxes, insurance preal-

lignments and health care costs increase for us all. Unbelted occupants cause injuries to other occupants by becoming "unguided missiles." Thus, the "freedom to choose" to wear the belt does affect others directly.

The costs to society for medical care, rehabilitation, unemployment and welfare services supercede the "right" of people to seriously or fatally injure themselves or others by not buckling up. As a citizen and taxpayer, your rights are infringed upon by those who aren't responsible enough to buckle-up voluntarily; they leave you to pick up the tab for increased costs.

Other similar traffic-safety laws protect motorists and others, such as speed limits, drinking and driving and driver licensing. Safety belt use laws are consistent with these and other laws.

Ninety percent of those persons killed in motor vehicle accidents in Alaska during 1985, 1986, and 1987 were not wearing safety belts.

The proposed safety belt use law in Alaska is a secondary offense-requiring a motorist be stopped for another offense before a \$15 ticket (which may be donated to emergency medical services) can be issued for not using safety belts.

Secondary enforcement will not impose additional burdens on law enforcement officers responsible for citing motorists under this act. Safety belts reduce traffic fatalities, which are eight times as expensive to investigate as non-injury accidents. In fact, officers would have more time to concentrate on other traffic enforcement programs.

In the past three years Hellenthal Associates has conducted extensive statewide and local polls that show more than 80 percent of Alaskans supporting a safety belt use law.

In the past three years more than 80,000 Alaskans have signed letters of support for the proposed safety belt use law and over 100 businesses have passed supportive resolutions.

The Alaska State House in 1987 passed the safety belt use law with bipartisan support. The Senate in 1988 failed to act on the legislation but 1989 looks more favorable for passage. Supporters of the law include Speaker of the House, Sam Cottrell; Senate President Tim Kelly, and the Governor Steve Cowper.

The statistics, the public support, and editorial support of many newspapers and legislative support show that the proposed safety belt use law is one that Alaskans can live with.

□ Frank Bickford is executive director of the Alaska Safety Belt Use Coalition.

Anchorage Daily News



Winner, 1976 Pulitzer Prize Gold Medal for Public Service

Gerald F. Grilly Publisher
Howard Weaver Managing Editor

Michael Carey Editorial Page Editor

Katherine Fenning, Editor and Publisher 1971 to 1983
Lawrence Fenning, Editor and Publisher 1967 to 1971

Founded in 1946 by Norman C. Brown

A way to prevent needless deaths

This year, the legislature has a chance to help fight one of the most serious health problems in the state — and it can do so with very little money or effort.

The health problem is accidental injuries. They are the second leading cause of death for all Alaskans — and the leading cause among young Alaskans. Too many of these deaths come in motor vehicle accidents — some 231 over the past three years.

There's a simple way to cut this carnage on the state's highways: Require people to wear seat belts. Of those 231 victims, 201 were not belted in.

A bill to mandate seat belt use passed the state House last year but never made it to the Senate floor for a vote. This year, with new legislative leadership, prospects for a seat belt law look much better.

In the past, some people have resisted a seat belt law because they see it as an infringement on their personal freedom. Why they object is a mystery. The resulting "intrusion" into people's lives is on a par with a parking ticket — and has considerably more justification. When a parked car overstays its welcome, there's just one less parking space available. When car passengers fail to buckle up, they invite serious injury and death, and increase the costs we all pay for emergency services, insurance and health care.

Alaska's proposed seat belt law offers us all a gentle reminder to do what's good for everyone. The violation would be a secondary offense, meaning that drivers cannot be cited unless they are stopped for some other violation. The fine would be a mere \$15. If violators don't want to send their checks to the government, they can donate the \$15 to emergency medical services.

Seat belts save lives — but only if people wear them. A mandatory seat belt law is a reasonable way to get more people to buckle up.



Tuesday, January 17, 1989

Make it mandatory

The Legislature could do a simple thing that would save lives, reduce injuries and save money. It could pass a law making the use of safety belts in vehicles mandatory.

Many people don't like the idea of mandatory safety belt laws. The use of safety belts should be a personal choice, they say. The government has no business dictating personal choices.

It's a compelling argument, but not so compelling as the harm that is done by not wearing safety belts. According to a 1987 study, mandatory use of safety belts in Alaska would save 35 lives a year, reduce injuries to more than 600 persons, save \$5 million worth of lost labor and decrease other economic losses associated with highway death and injury by \$13 million. Not just the victims, but everyone pays the cost of not wearing safety belts in terms of increased taxes, insurance premiums and health care costs.

Thirty-one states and the District of Columbia have passed mandatory safety belt laws. In every state, use of safety belts has increased substantially.

Educational programs promoting safety belt use fail to provide the incentive to buckle up that a law requiring it does. We reluctantly move from a position of advocating voluntary compliances to urging the Legislature to make safety belts mandatory. They should, however, avoid some of the problems that Washington state encountered when they initially failed to provide for exemptions for certain types of delivery vehicles.

FAIRBANKS

Daily News - Miner

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President and Publisher

Elaine Atwood
Assistant Publisher

William J. Tobin
Vice-President, Editor-in-Chief

Editorials

You buckle up in Canada

IN THE for-what-it's-worth department, all the provinces of Canada now have laws making mandatory the use of seat belts by motorists.

Prince Edward Island was the last to join the national movement, putting its mandatory seat belt law into effect this past January.

British Columbia was an early member of the buckle-up brigade, enacting its mandatory law in October 1977. Alberta, among the Western provinces, joined the flock last July.

The reason, of course, is that seat belts save lives — even though their use is a habit that many motorists find hard to adopt.

Arguments that it infringes on personal rights to make it illegal to drive without seat belts are no more valid than saying that requiring a motorist to have a driver's license is an attack on one's liberties.

A bill to make it illegal to

drive in Alaska without seat belts snapped into place was killed in the last legislative session. It died in committee, despite indications that it would have passed given the chance to reach the floor.

ONCE AGAIN, the argument was that it's none of the state's business whether a person buckles up — and that without the requirement, independent Alaskans will do what's right and they don't need the state telling them what to do.

The same Alaskans, however, apparently have no reluctance to fasten their seat belts when they board an airplane — something that also is mandated by the long arm of the law.

And the fact remains that there is more danger of a fatal accident on the highway than there is in the air.

So what's the problem, anyway?

Robert B. Atwood
President and Publisher

Elaine Atwood
Assistant Publisher

William J. Tobin
Vice-President, Editor-in-Chief

Editorials

The Anchorage Times

May 3, 1988

Buckle up, and do it now

IN THESE closing days of the lawmaking session, it would be good if the ladies and gentlemen of the legislature would quit fiddling around with lives and buckle up — and make the rest of us do it, too.

None of us complain about wearing seat belts when in airplanes. We're required to do it there.

So what's the big deal about requiring us to do the same when we drive around town or on the highway?

More people are killed on the roads than in airplane crashes. And a lot of those who are weren't wearing safety belts.

For three years now the legislature has had before it bills to make it illegal for drivers and passengers to ride without safety belts fashioned. Each year the effort has died on the sword of individual rights and argu-

ments that the state shouldn't legislate against the risks a person is willing to take with his or her own life.

Baloney.

SEAT BELTS save lives when properly used. It's as simple as that.

And no big felony charge would be involved for those who don't, under this proposed legislation.

All that would be involved is a \$15 fine for offenders.

And even that can be donated to a good cause. At the option of the guilty driver, the fine would go to emergency medical service units — the ambulance drivers and crews who speed to the scene and try to keep alive those injured in accidents.

Enough talk is enough. Pass it and let's get on with adopting a simple new habit.

Anchorage Daily News



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Founded in 1946 by Norman C. Brown

A reasonable request

Have you ever stopped to think what happens in a high-speed car accident when you're not wearing a seat belt?

As the impact propels you from your seat, the first thing you hit is the steering wheel. As it crushes your chest, ribs break, tissue rips, and blood seeps inside your body. Next the windshield delivers a knockout blow to your head. The shattering glass slices your scalp and body as you are thrown from the car.

That grim scenario ought to be enough to persuade every automobile passenger to use seat belts. Unfortunately, it's not.

If the harm from not wearing seat belts were limited to the individual victim, wearing one might be strictly a personal decision. But the consequences of that choice inflict a toll on society too. Fellow citizens help pay the bills through higher costs for health care, insurance, and emergency services.

Given those costs, a coalition of health groups and safety-conscious citizens have proposed a bill to make seat belt use mandatory in Alaska. It's hardly a draconian measure. Passengers could be cited only if the car were stopped for other violations. The fine is a mere \$15, which could be donated to emergency medical services.

But the bill, which has already passed the House, is locked in the crypt known as the Senate State Affairs Committee. The bill is a prisoner of those who say Alaskans have the right to ruin their lives without state interference.

It's true the measure can be considered paternalistic, because it tries to force Alaskans to do what's good for them. But driving public roads is a privilege, not some sacred individual right. A mandatory seat belt law is a reasonable way for the state to make its highways safer and cut the cost of not-so-inevitable bloodshed.

JUNEAU EMPIRE

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5-4-88

Seatbelt bill should be passed

Lodged within the bowels of the Alaska Legislature is a bill that, plain and simple, would save lives. It is the seatbelt bill.

Opponents say any law requiring Alaskans to buckle their seatbelt is an infringement on their "civil liberties." They say that if they want to increase the likelihood of being injured or killed in an automobile accident by 15 to 25 percent, then that's their business.

Wrong. In fact, all of us pay the price of those individuals who cherish their "civil liberties" more than their lives. According to U.S. Secretary of Transportation Jim Burnley, seatbelt laws save more than the human suffering a serious traffic accident leaves in its wake.

"Belt laws are helping to reduce the staggering societal costs of motor vehicle crashes, currently estimated to be \$74 billion a year," he wrote in USA Today. That includes medical, municipal and state services, increased insurance expenses and other public expenditures.

The cost of not having a seatbelt law can be estimated in blood, too. If all 50 states had seatbelt laws, Secretary Burnley estimates 3,100 lives would have been saved last year alone. That is more than the population of Wrangell killed because of the lack of seatbelt laws.

What is this "threat" to our "civil liberties" that the Alaska Senate is protecting us from? The bill now bottled up in the Senate State Affairs Committee would make driving without wearing a seatbelt an secondary offense. That means you could not be stopped by a police officer solely for not wearing a seatbelt. But if you were stopped for another traffic offense and didn't have your seatbelt fastened, you would have to pay a \$15 fine or donate that amount to emergency medical services.

Pardon us, but that is hardly an infringement on anyone's civil liberties. All it would do is heighten public awareness of the need to wear seatbelts.

Thirty-two states and Washington, D.C., have seatbelt laws. Obviously, those lawmakers know that any law that saves so many lives makes good sense.

Hopefully, Alaska's lawmakers would agree - if they ever got a chance to vote on the bill.

What happens if Alaska's legislators don't pass a seatbelt law this year? More people will die, more people will be injured, and the next legislature will have to do what this one refused to.

Pass a seatbelt law.
Please.

ISSUE: Should
Alaska have a seat-
belt use law?

The Case for Safety Belt Use

*Flaw in law KJ education
mpat + Physician*

Safety belts have been required equipment for automobiles in the United States for 20 years. But it has been only recently that Americans have made extensive use of these effective devices. As recently as 1982, only 11% of American motorists were "buckling up." Today, 31 states and the District of Columbia have safety belt use laws on the books, and overall belt use is estimated to be at an all-time high of 46%.

See also pp 3593 and 3598.

The primary reason for this turnabout has been a refocusing of highway safety efforts, to concentrate more on drivers themselves rather than just on regulating manufacturers. Former Secretary of Transportation Elizabeth Dole settled a 15-year-long battle over air bags in 1984. Her solution: if states representing more than two thirds of the population enacted safety belt laws, manufacturers would not be required to install air bags or automatic safety belts. The auto industry has since lobbied intensively for safety belt laws in the state legislatures. The Department of Transportation and other groups, such as Traffic Safety Now and the American Coalition for Traffic Safety, have also waged a large-scale public information campaign promoting safety belt use.

The results are clear. Increased safety belt use has saved an estimated 11 000 lives since 1984, and tens of thousands of serious injuries have been prevented. The National Highway Traffic Safety Administration estimates that front-seat lap-shoulder belts are highly effective in protecting occupants in a crash, reducing the risk of death by 40% to 50% and the risk of moderate to serious injury by 45% to 55%.¹ These estimates were based on extensive data on crash and injury experience over the past decade.

Physicians and other professionals in the medical and public health fields can also play a key role in increasing safety belt usage. According to national health statistics, not only are motor vehicle crashes the leading cause of death among 5- to 34-year-olds, they account for the greatest number of productive years of life lost and are the most costly source of disability in the United States. Yet, a survey² of 209 Texas family physicians revealed that only 5% said they routinely ask their patients about safety belts. Fifty-eight percent neither advise nor discuss the risk, even when they are aware of nonuse. These physicians ranked nonuse of safety belts as less of a risk factor than smoking, obesity, excessive use of alcohol, high blood pressure, stress, lack of exercise, and a high-fat diet.

However, the American Academy of Family Physicians plans to introduce a continuing medical education course for physicians next year on how motor vehicle trauma can be reduced through patient education on the importance of using safety belts, child safety seats, and the extra protection provided by air bags. There is no doubt that increased safety belt education, especially among school-age children, will prove beneficial. Recent observations of 242 school-age children at a pediatric clinic dramatically demonstrated the influence of a physician's message to his or her young patients and parents on the importance of using safety belts.³ It was found that 38% of the young patients who received counseling were then observed wearing their belts, compared with 5% of those who

did not receive counseling.

Much more remains to be done to increase safety belt use across the country. Currently, surveys indicate that belt use in states with belt laws averages about 50%, but also varies widely from state to state, from 68% in Hawaii to only 27% in Tennessee.⁴ The most dramatic, sustained increases in safety belt use appear to have been in those communities where there is a combination of intensive law enforcement and public information and education. Not surprisingly, belt use is generally lower in states without belt laws, but those states also show substantial variance. And we know that many countries have attained very high safety belt use rates—such as 80% in Australia and parts of Canada and 95% in Great Britain and West Germany. We are therefore convinced that there are great opportunities for further increases in belt use all across America.

Our goal at the Department of Transportation and the goal of a wide spectrum of safety groups across America is to attain a national safety belt usage rate of 70% by 1990.

There has never been any question that safety belts and child safety seats are extremely effective in saving lives and reducing injuries. The problem has been convincing motorists to use them every time they get into their cars and trucks. When the National Transportation Safety Board reported in a 1986 study⁵ that use of rear-seat lap belts could cause injury in some crashes, some people mistakenly assumed that they were safer not wearing a belt at all. Nothing could be further from the truth. Our crash data conclusively show that lap-only safety belts are quite effective in reducing the risk of death and injury to occupants compared with wearing no belt at all. Furthermore, car manufacturers are now voluntarily taking the initiative to improve protection for rear-seat occupants even further by installing lap-shoulder belts as standard equipment in virtually all new cars by 1990.

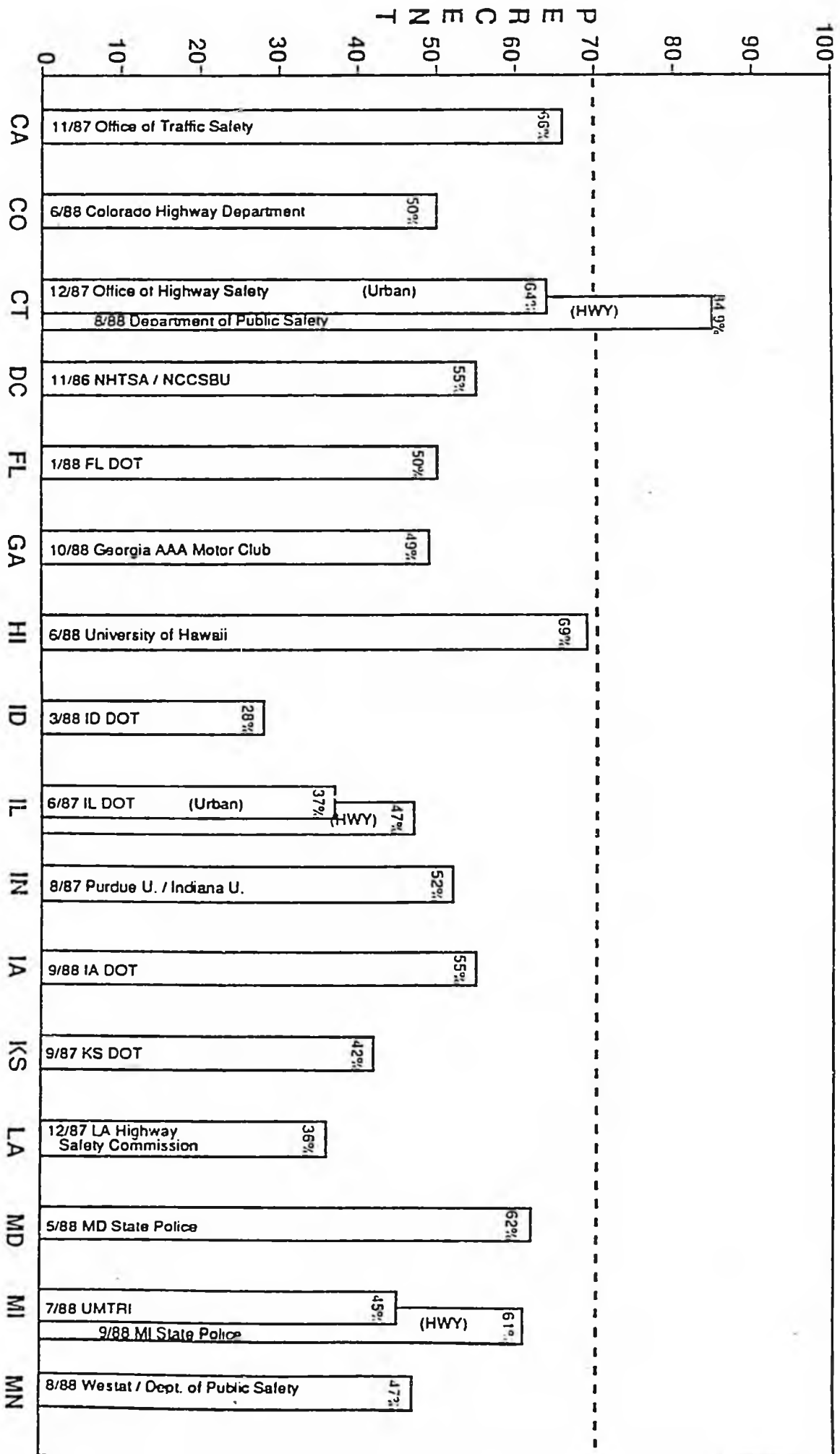
The outlook on safety belt use is encouraging. More and more Americans are buckling up for safety, and each year more lives are being saved on our highways. But more than half of America's motorists are still unprotected. There is still much work for all of us—in government, in the private sector, and for health professionals—in spreading the important life-saving message of safety belt use.

As administrator of the National Highway Traffic Safety Administration, I urge physicians and major health care providers, as part of their daily routine, to advise patients about the importance of safety belts and the use of child safety seats to prevent injuries from motor vehicle crashes.

Diane Steed
National Highway Traffic
Safety Administration
Washington, DC

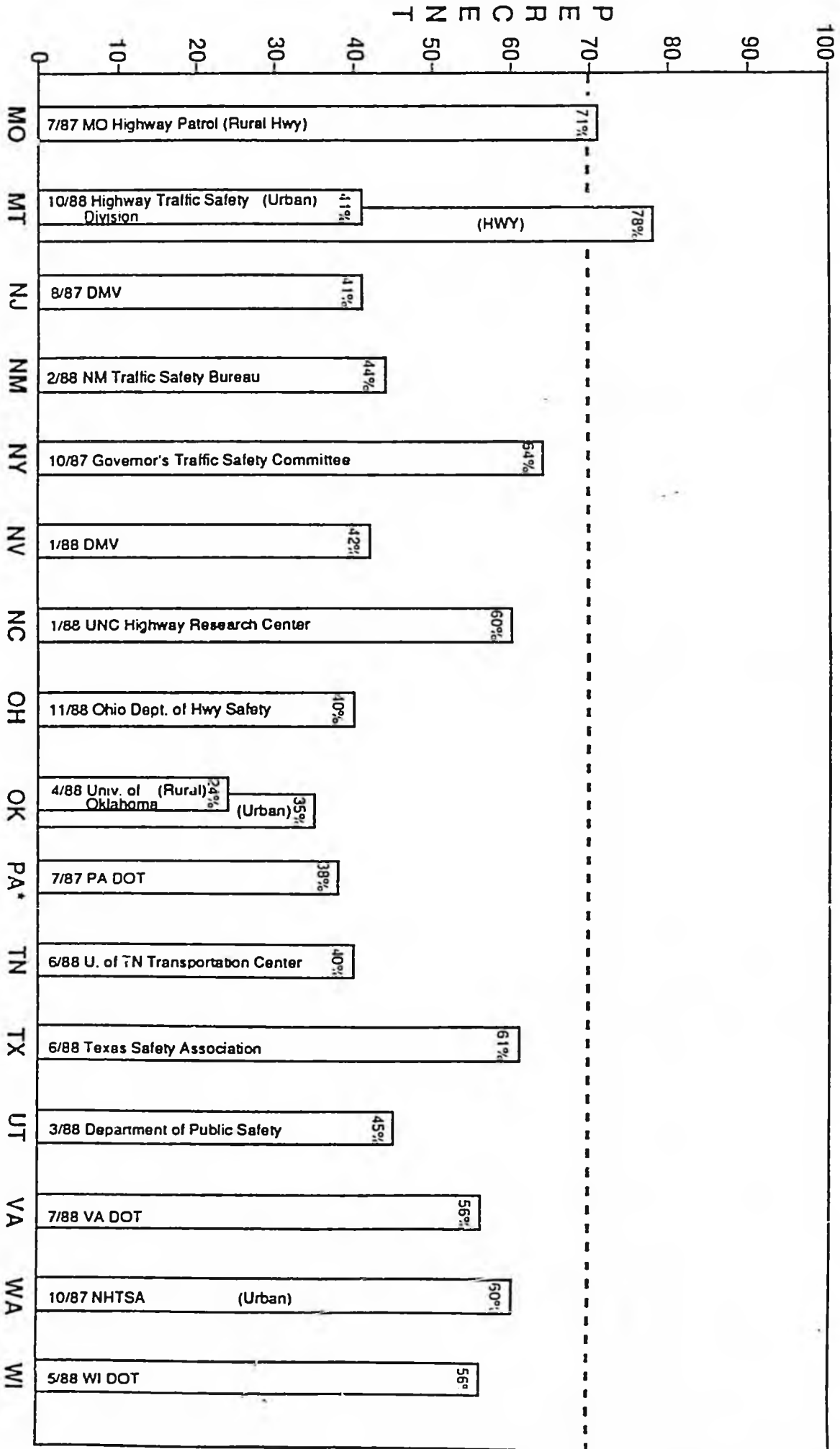
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4. Observed Safety Belt Use Statistics by State. National Highway Traffic Safety Administration, 1988, pp 1-3.
5. Effectiveness of Safety Belt Use Laws: A Multinational Examination, publication DOT HS 807 018. US Dept of Transportation, 1986, pp 20-24.

COMPLIANCE RATES IN POST-LAW STATES



COMPLIANCE RATES IN POST-LAW STATES

Page 2



Use rates prior to law taking effect

FACT SHEET:

UNIVERSITY OF MICHIGAN

"Effects Of Mandatory Safety Belt Use On Hospital Admissions"

August 1988

This study assessed the effects of Michigan's safety-belt-use law on more than 8,000 motor-vehicle injuries which resulted in hospitalizations at 14 area hospitals.

It was conducted by the University of Michigan School of Public Health from data collected through the Michigan Inpatient Database from January 1980 through October 1986. Major findings of this study include:

- The Michigan safety-belt-use law passed in July 1985 has resulted in a 19-percent reduction in hospitalizations due to automobile accidents.
- There were 20 percent fewer injuries to body extremities following the passage of Michigan's belt-use law.
- Hospitalizations lasting more than one week decreased nearly 25 percent after the law went into effect.
- After the state safety-belt-use law went into effect, minorities experienced 22 percent fewer injuries.
- A 32-percent decline in injuries occurred among patients using public-health insurance after passage of the state law.
- With regard to the contention that safety belts may cause injuries, researchers concluded "the benefits of restraints far exceed the risks associated with them."

* * *

S J R

62

SENATE COMMITTEE REPORT
FIRST COMMITTEE OF REFERRAL

DATE: 2/17/90 January 17, 1990

FURTHER: Finance

Date of 5-Day Notice: 3-1-90
(in accordance with Uniform Rule 23)

DATE TURNED INTO OFFICE: 3-5-90

Resources Committee considered SPONSOR SUBSTITUTE FOR SENATE JOINT RESOLUTION 62

Relating to the bycatch of herring in the Bering Sea groundfish trawl fisheries.

and recommended:

- replace with _____ CS SJR 62 (Res) same title
- attached amendment(s) new title
- _____ letter of intent adopted

do pass

do not pass

no recommendation

individual recommendations

further referral to _____

ATTACHES NEW FISCAL NOTE(S):

Department(s)/Date:

Department(s)/Date:

fiscal note(s) _____

zero fiscal note(s) ADFG

appropriation-no fiscal note

Governor's bill w/fiscal note

SIGNING DO/PASS:

Rick Halford
Steve Shank
[Signature]
[Signature]
[Signature]
[Signature]

OTHER RECOMMENDATIONS:

Fehrenkamp do Pass
Chair: Signature and Recommendation

FISCAL NOTE

REQUEST:

Revision Date: _____
 Title: Relating to the ovcatch of
herring in the Bering Sea
 Sponsor: pinkiev
 Requestor: Governor

Agency Affected: Fish and Game
 BRU: Commercial Fisheries
 Components: all

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES	0					
TRAVEL	0					
CONTRACTUAL	0					
SUPPLIES	0					
EQUIPMENT	0					
LAND & STRUCTURES	0					
GRANTS, CLAIMS	0					
MISCELLANEOUS	0					
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

No FY 90 impact

Prepared by: Robert C. Clachy Phone: 465-1210
 Division: Commercial Fisheries Date: 2/12/90
 Approved by Commissioner: [Signature] Date: 2/15/90
 Agency: _____

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)



STATE OF ALASKA
OFFICE OF THE GOVERNOR

BILL ANALYSIS

DEPARTMENT Fish and Game	DIVISION Commercial Fisheries	BILL NUMBER SS SJR 62	SPONSOR Binkley
SHORT TITLE OF BILL Relating to the bycatch of herring in the Bering Sea groundfish trawl fisheries			
DEPARTMENT POSITION Support			
PREPARED BY Fritz Funk	DATE 02/14/90	COMMISSIONER'S SIGNATURE <i>[Signature]</i>	DATE 2/15/90

SUMMARY

OTHER AGENCIES AFFECTED BY BILL None	CONSTITUENT GROUPS AFFECTED BY BILL All Bering Sea commercial herring fishermen Western Alaska subsistence fishermen
ORGANIZATIONAL SUPPORT FOR BILL Bering Sea Fishermens Association United Villages of Nelson Island Yukon Kuskokwim Fisheries Task Force	ORGANIZATIONAL OPPOSITION TO BILL

FISCAL IMPACT: NONE FISCAL NOTE ATTACHED

BACKGROUND/LEGISLATIVE INTENT
This resolution recognizes the reduced herring stocks in the eastern Bering Sea and the increased trawl bycatches in recent years and requests the North Pacific Fishery Management Council to address the problem as soon as possible. The Council is presently considering measures to limit the bycatch of herring in the Bering Sea for 1991 and will consider emergency action to limit the bycatch in 1990 at their April 15-19 meeting.

ANALYSIS OF BILL PROGRAM EFFECTS
None

AMENDMENTS PROPOSED
) Changes in CS SJR 62 (Res)
 have no fiscal impact.
 This fiscal note is
 appropriate.

PLEASE ATTACH A SEPARATE SHEET FOR ADDITIONAL COMMENTS OR ANALYSIS.

Revised 1/12/90

REVISED ESTIMATES OF THE BYCATCH OF HERRING IN 1989 BERING SEA TRAWL FISHERIES

by

Fritz Funk

Leslie Watson

and

Richard Berning

Regional Information Report¹ No. 5J90-01

Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau, Alaska

January 1990

¹ The Regional Information Report Series was established in 1988 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate needs for up-to-date information, reports in this series may contain preliminary data.

EXECUTIVE SUMMARY

Foreign fishing records and scale pattern analyses demonstrate that herring stocks that spawn in Bristol Bay migrate clockwise around Bristol Bay, arriving on the wintering grounds north and west of the Pribilofs in September. Herring stocks that spawn north of Bristol Bay appear to move more directly offshore after spawning. It is uncertain whether herring stocks from Kuskokwim Bay to Nelson Island move directly offshore or follow a clockwise migratory pattern like Bristol Bay stocks. Based on prior joint venture (JV) and foreign records, only 1989 Pacific cod and pollock trawl fisheries that occurred along the herring migration route had the potential to take significant amounts of herring. Yellowfin sole fisheries did not occur near herring spawning grounds during the herring spawning period in 1989.

Herring bycatch by JV fisheries in 1989 was estimated to be 2,588 tonnes. Most of the JV bycatch occurred in pollock fisheries in National Marine Fisheries Service (NMFS) reporting areas 521 and 522 (north and west of the Pribilofs) in the fall. The most comprehensive source of herring bycatch for domestic fisheries for 1989 was obtained by applying average 1983-88 foreign and JV observer bycatch rates by $1/2^\circ$ latitude by 1° longitude area by month to 1989 fish ticket catches by $1/2^\circ$ latitude by 1° longitude by month. Using this method, herring bycatch was estimated to be 1,170 tonnes for domestic Pacific cod fisheries, 3,921 tonnes for pollock bottom trawl fisheries and 386 tonnes for pollock midwater trawl fisheries. Although observer bycatch rates were computed based on the total catch, for ease of computation observer bycatch rates were applied only to the retained catch of the single target species in the fish ticket catch. Because of this, herring bycatch was underestimated by this method. The degree of underestimation was greater for bottom trawl data than for midwater trawl data, because there are usually more species in bottom trawl catches.

Landed discard reported on fish tickets and actual domestic observer catch reports for limited areas were also used to estimate herring bycatch in 1989 domestic trawl fisheries. These estimates were roughly comparable to the herring bycatch computed by applying 1983-88 average observer bycatch rates to the 1989 fish ticket catches. However, landed discard herring bycatch rates also underestimate herring bycatch when at-sea sorting occurs or when trawl cod-ends are released because they contain significant numbers of prohibited species. Total herring bycatch estimated for JV and domestic fisheries for 1989 ranged from 4,521-8,065 tonnes. Because several of the methods used underestimate herring bycatch rates, these estimates represent the lower bound of the actual 1989 herring bycatch.

Bering Sea herring stocks are declining and are projected to decline below threshold levels where commercial fisheries are allowed at Nelson Island and Nunivak Island in 1990. If no recruitment is observed in 1990, the Togiak stock will likely be below its threshold in 1991. Because herring stocks have declined while the bycatch of herring has increased, herring bycatch exploitation rates have increased from less than 2% in 1983 to 4%-7% in 1989, and are projected to increase further in 1990. When trawl herring bycatch is considered, the maximum allowable herring exploitation rates under the Alaska Board of Fisheries herring

Revised 1/12/90

harvest policy are being exceeded.

Subsistence utilization of herring resources is high in some communities of western Alaska, particularly at Nelson Island. If Bering Sea herring stocks continue to decline, subsistence availability of herring may be reduced and further declines in the resource could force reductions of subsistence harvests. Western Alaska communities experienced severe difficulties in harvesting herring for subsistence purposes during herring stock declines in the 1970s.

Fish ticket records of catch by 1/2° latitude by 1° longitude by date of landing allow relatively detailed distributions of fishing effort to be examined. Combining these fish ticket records with foreign and JV observer herring bycatch records in the same area and time strata could allow detailed examination of alternative herring bycatch control measures. Herring bycatch control measures were last examined when the draft Bering Sea herring fishery management plan was submitted by the NPFMC to the Secretary of Commerce in November 1983. Since that time, a considerable amount of new data has become available for herring bycatch analysis.

INTRODUCTION

Herring that spawn along the eastern shore of the Bering Sea migrate to wintering areas near the western edge of the Bering Sea continental shelf (Dudnik and Usol'tsev 1964, Romyantsev and Darda 1970, Wespestad and Barton 1979). During this annual migration, eastern Bering Sea herring pass through areas in which groundfish vessels are trawling. During the past decade, substantial incidental harvests of migrating herring were taken, first by foreign groundfish fleets, then by joint venture (JV) groundfish fleets, and more recently by domestic groundfish trawlers. Recent declines in the biomass of Bering Sea herring stocks have been accompanied by apparent increases in herring bycatch exploitation rates by groundfish trawl fisheries. This has prompted concern over the impact of trawl bycatches, particularly on the smaller discrete stocks of western Alaska. Several of these stocks are already below threshold levels for commercial harvests, and the important Togiak stock is projected to be below its threshold in 1991.

During the 1980s, observer coverage aboard foreign and JV fisheries was generally high enough to allow reliable reporting of herring bycatch. Because observer coverage of the domestic fleet through 1989 was minimal, herring bycatch estimates for domestic fisheries must be derived primarily from other sources. This document reports the available estimates of herring bycatch from 1989 domestic and JV trawl fisheries and reviews the available information about the distribution and stock status of herring in the eastern Bering Sea. Additional sources of bycatch data are examined from those reported in Funk and Watson (1989).

DISTRIBUTION OF HERRING IN THE BERING SEA

Information about the distribution of herring in the Bering Sea between spawning seasons is available from records of earlier foreign high seas directed herring fisheries and from scale pattern analysis studies conducted along the Alaska Peninsula. Soviet research vessels discovered large concentrations of Pacific herring overwintering northwest of the Pribilof Islands (Figure 1) between 1957-60, and Soviet commercial trawl vessels began to target herring in this area early in 1961 (Shaboneev 1968, Romyantsev and Darda 1970). The Soviet fishery continued to concentrate in this area until the mid-1970s (Figure 2), with the heaviest fishing occurring during February. Japanese trawl vessels fished in the same area beginning in the mid-1960s (Figure 3). Japanese gill net vessels followed herring schools during late winter and spring and fished adjacent to the spawning grounds. Summaries of records compiled from the foreign fishery indicate that herring leave the wintering grounds in March or early April and begin to move eastward (Figure 4). Some of the herring from the northwest Pribilof wintering area move northeast to spawn along Kuskokwim Bay, Nunivak Island and possibly into Norton Sound, while others travel southeast to spawn in Bristol Bay and along the Alaska Peninsula. Herring spawning in Bristol Bay are thought to travel in a clockwise direction and inhabit areas adjacent to the Alaska Peninsula during the summer months before departing for the Pribilof

overwintering area in September (Figure 5). During the Soviet investigations, herring appeared in the overwintering area in September, and by October formed relatively tight aggregations (Rumyantsev and Darda 1970).

Stock identification studies using scale pattern analysis were conducted from 1982-85 by Rowell (1986), Walker and Schnepf (1982), Rogers et al. (1984), and Rogers and Schnepf (1985) to determine the origins of herring captured in the food/bait fishery that occurs in July and August near Dutch Harbor on Unalaska Island. These studies established that it would be difficult to distinguish differences among Security Cove, Goodnews Bay, and Togiak spawning stocks using scale pattern analysis. However these stocks were readily distinguishable from Nelson Island, Nunivak Island, Cape Romanzof, and Norton Sound spawning stocks using scale pattern analysis. Rogers and Schnepf (1985) performed the most comprehensive of the scale pattern studies and found that Togiak-spawning herring were by far the dominant stock in the Dutch Harbor food/bait fishery. The occurrence of substantial numbers of Togiak-spawning herring near Dutch Harbor in July and August strongly supports the clockwise annual migration around Bristol Bay hypothesized from foreign fishing records (Figures 4 and 5). Rogers and Schnepf (1985) also found some evidence that Nelson Island spawning herring occur in the Dutch Harbor catch, indicating that Kuskokwim Bay herring stocks may also follow a clockwise migrational pattern around Bristol Bay.

The Alaska Department of Fish and Game, in cooperation with the National Marine Fisheries Service conducted a more intensive herring scale pattern analysis study in the Bering Sea during the summer of 1989. Reference standards were collected from all commercially exploited eastern Bering Sea herring spawning stocks during the spring 1989 spawning season, with sample sizes substantially larger than in the earlier scale pattern studies. Samples of herring of unknown origins were collected from the Port Moller Pacific cod trawl fishery, the Unimak Pass pollock trawl fishery, and from the Dutch Harbor food and bait herring purse seine fishery. Results from this study will be available in February 1989 and should provide additional information about herring migratory patterns.

STATUS OF EASTERN BERING SEA HERRING STOCKS

Bering Sea herring stocks were once far more productive than at present. Shaboneev (1968) estimated that in 1962-63 the biomass of Bering Sea herring stocks exceeded 2 million metric tons. The reported foreign directed herring harvests in the Bering Sea exceeded 100,000 metric tons in 1969 and 1970 (NPFMC 1983). The large foreign harvests during the 1960s appear to have damaged the herring resource, as catches and catch per unit effort declined substantially in the early 1970s. Western Alaska residents also experienced extreme difficulty in harvesting herring for subsistence needs during the early 1970s, necessitating emergency supplies of food to be air-lifted into communities with high dependence on herring (Pete 1989). Although herring stocks appeared to be rebuilding in the Bering Sea following the recruitment of the strong 1977-78 year classes, the lack of recruitment since that time has resulted in further declines of the Bering Sea herring stocks.

The abundance of eastern Bering Sea herring stocks from Togiak to Norton Sound has been declining in recent years (Figure 6), and is projected to decline further (Funk and Savikko *in press*). The total harvest from these stocks for 1990 is forecast to be only 12,449 tonnes, down substantially from the 24,202 tonnes harvested in 1989 (Table 1). The important Togiak stock is projected to decline in 1990 to 56,020 tonnes (Rowell and Brannian 1989). Without substantial recruitment in 1990, the Togiak stock may decline below the 31,752 tonne threshold which would result in no commercial fishery being allowed in 1991. Stocks at Nelson Island and Nunivak Island are projected to be below their thresholds for 1990 (Hamner 1989). Unless substantial recruitment is observed prior to spawning, no commercial fishery will be allowed on these stocks in 1990. The Nelson Island herring stock also supports an important and substantial subsistence harvest (Pete 1989). Earlier herring shortages, coincident with foreign overexploitation of Bering Sea herring resources, caused considerable hardship among Nelson Island residents (Pete 1989). The 1977 and 1978 year classes, which were very strong in all eastern Bering Sea herring populations, are now senescing rapidly. The remaining fish from these cohorts will be age 12 and 13 in 1990 and are experiencing relatively high rates of natural mortality. No substantial year classes have recruited to eastern Bering Sea herring stocks to replace the 1977 and 1978 year classes.

EASTERN BERING SEA GROUND FISH FISHERIES IN 1989

The 1989 harvest of groundfish in the eastern Bering Sea/Aleutians area through early December totalled 1,572,721 tonnes (Table 2). Based on the previous patterns of bycatch observed in foreign and JV fisheries, only pollock and cod fisheries had a potential for significant herring bycatch in 1989. In earlier years herring bycatch was also a concern in yellowfin sole JV fisheries which occurred adjacent to herring spawning grounds in Bristol Bay during the herring spawning period. In 1989, fishing for yellowfin sole did not occur between April and August.

Joint venture groundfish harvests in the Bering Sea were reduced in 1989 as the harvests by the competing domestic trawl fleet increased dramatically over 1988. JV groundfish harvest estimates by NMFS through early December totalled only 514,710 tonnes for the Bering Sea/Aleutian Islands FMP area. Through August, JV fisheries had been allocated only 602,000 tonnes of the 2,000,000 tonne total allowable catch (TAC), whereas in 1988 JV fisheries had been allocated almost 1,300,000 tonnes. JV harvests will likely be much further reduced in 1990.

Summaries of fish ticket harvests by $1/2^\circ$ latitude by 1° longitude statistical area indicate that the largest concentration of domestic pollock fishing effort occurs in the "horseshoe" area just north of Unimak pass, where the 100 fathom depth contour creates a "U" shape (Figure 7). Substantial pollock fishing effort is also spread out to the northwest along the continental shelf edge as far north as St. Matthew Island. Fish ticket harvests by $1/2^\circ$ latitude by 1° longitude were smoothed by distance weighted least squares for plotting in Figure 7, to better reveal spatial patterns and to more appropriately reflect imprecision in the location of catch reporting. Unsmoothed data were used to compute bycatch

rates. The highest pollock catches in the 1989 domestic pollock fishery occurred in July, August, and September (Figure 8), when herring were transiting the shelf edge enroute to their wintering grounds north and west of the Pribilofs. Some pollock fishing by domestic vessels occurred in the area of the herring wintering grounds, north and west of the Pribilofs. A large JV pollock fishery also occurred in this area from September through November, coincident with the arrival of herring on the wintering grounds. Fish ticket records indicate that 58% of the domestic pollock harvest was taken by midwater trawl gear, with almost all of the remaining harvest taken by bottom trawl gear.

The 115,551 tonne domestic Pacific cod catch came primarily along the Alaska Peninsula just north and east of Unimak Pass (Figure 9). Under special regulations, a small domestic Pacific cod bottom trawl fishery has been allowed in the normally closed area just offshore of Port Moller. This fishery harvested only 5,604 tonnes of cod in 1989. Fish ticket records indicate that almost all the Pacific cod was caught using bottom trawl gear.

1989 JOINT VENTURE FISHERY HERRING BYCATCH ESTIMATES

The NMFS observer program gathers data on prohibited species catches from a significant proportion of the tows made by the JV fleet. NMFS observers estimated that 2,588 tonnes of herring were captured in the 527,862 tonnes of groundfish harvested in all 1989 JV fisheries, for an overall bycatch rate of 0.49% by weight (Table 3).

Very few herring were taken during yellowfin sole JV fisheries in 1989. The JV yellowfin sole fishery harvested 200,594 tonnes of which only 0.1 tonne was herring. Most of the yellowfin sole harvest occurred in February and March in the central and southeastern portion of Bristol Bay. No JV effort for yellowfin sole was reported from area NMFS reporting area 514 (Figure 10) near the Togiak spawning grounds during the spring herring spawning period. In 1987 and 1988, JV fisheries in this area during the herring spawning period had prompted concern over the potential for large herring bycatches.

Preliminary data are available showing herring bycatch by month for 1989 JV fisheries targetting pollock and "other species" (primarily Pacific cod). These data indicate that most of the herring bycatch occurred in September and October in areas 521 and 522 (Table 4), northwest of the Pribilof Islands.

Although the overall 1989 JV bycatch rate was relatively high, the amount of herring bycatch by the JV fleet was slightly less than in recent years. Herring bycatches by foreign and JV fleets have ranged from 1,000-4,000 tonnes (Table 5) since directed foreign fishing was prohibited in the late 1970s (Wespestad 1986, Nelson 1988). The JV bycatch of herring will probably be further reduced in 1990 as the JV groundfish allocation is likely to be reduced.

DOMESTIC TRAWL FISHERY HERRING BYCATCH ESTIMATES

During 1989, observer coverage of the domestic groundfish fleet was limited and was sufficient to directly estimate bycatch only in certain areas. Additional estimates of herring bycatch were derived from discard reported on Alaska Department of Fish and Game (ADF&G) fish tickets, and by applying foreign and JV bycatch rates from similar areas and months to the 1989 domestic groundfish harvest.

Area 521-522 Pollock Fishery, September-October, using 1989 JV Bycatch Rates

Domestic pollock vessels were fishing areas north and west of the Pribilofs during September and October (Figure 11), when JV pollock fisheries were occurring in the same area. The combined domestic pollock and cod harvest from areas 521-522 during September and October totalled 42,985 tonnes (Table 6). Applying the JV bycatch rates by month and NMFS reporting area (Table 4) to these harvests results in an estimated herring bycatch of 996 tonnes (Table 6).

Landed Herring Bycatch Estimates from Unimak Pass Area Fish Tickets

A previous report (Watson 1988) summarized herring bycatch based on 1988 fish tickets. In May 1988, Bering Sea pollock processors and vessels were asked to monitor and report on their fish tickets any herring that were landed along with pollock catches. For 1989, processors and fishing vessel operators were again asked to report this information. This year's estimates differ from the 1988 study in three ways:

- (1) the 1989 study area was expanded (north and west) as herring bycatch was reported from a larger area than in 1988 (Figure 12),
- (2) calculated herring bycatch rates were applied to pollock harvested by both midwater and bottom trawl gear as herring were reported on both gear types in 1989 (vs midwater trawl only in 1988), and
- (3) fish tickets were screened by processor because some processors appeared to report herring bycatch more reliably than others.

The domestic catch of pollock in areas covered by the Bering Sea/Aleutians Fishery Management Plan (FMP) has increased annually since 1978 to a record high 591,901 mt in 1989 (PMFC 1989). Approximately 56% of the total 1989 Bering Sea pollock catch was been harvested from the Unimak Pass area in 1989. During 1989, 17 vessels which fished the Unimak Pass area reported herring bycatch on at least one fish ticket. Based on the prior year's experience, vessels which routinely fished the Unimak Pass area would have a very high probability of capturing herring on at least one trip. This initial screening removed vessels which always sorted their catch at sea or never complied with the landed discard reporting request. Data from the resulting sample of 17 vessels included both

shore-based and floating processor sectors.

The Unimak Pass study area was defined based on the ADF&G statistical areas from which the sample of 17 boats reported herring bycatch (Figure 12). Data gathered from the sample of 17 vessels represented 53% of the pollock harvested from the study area between July and October. During the months examined, these vessels made 237 landings of pollock. During July, 73 percent of the fish tickets listed a bycatch of herring, while the percentage of fish tickets reporting herring declined to 48 percent in August, 51 percent in September, and 47 percent in October.

The overall frequency distribution of the herring bycatch rates by landing ranged from 0% to 19% (Figure 13). However, there was a significant variation in the bycatch rates reported by processor. The data from one processor (Figure 14), indicated that less than 17% of the landings had no herring, while other processors were reporting that greater than 50% of the landings had no herring. Because the reporting program was voluntary and some processors were thought to have instructed their vessels to sort at sea if at all possible, the bycatch data from the processor that reported only 17% of landings with no herring was felt to be a more reliable estimate of the actual landed discard bycatch rate.

Estimates of the herring bycatch rate for the Unimak Pass area were calculated by month in two ways. The first method was to assume that the frequency distribution of Figure 13 was correct, and that there were no differences in reporting among processors. Using this method, the landed herring bycatch rate averaged 0.44% from July through October in the Unimak Pass area sample (Table 7). If the monthly bycatch rates were applied to the larger area encompassing NMFS reporting areas 511, 513, 515, and 517, the total estimated herring bycatch using this method was 1,058 tonnes. Because the distribution of harvest by month from these areas was different than in the Unimak Pass area, the average bycatch rate for the larger areas was 0.42%.

The second method assumes that frequency distribution of the landed discard herring bycatch rate for the processor shown in Figure 14 was correct. Using this method, the landed discard herring bycatch rate averaged 0.46% from July through October (Table 7). Applying these monthly bycatch rates to reporting areas 511, 513, 515, and 517, the total estimated herring bycatch would be 834 tonnes. The average bycatch rate for these reporting areas was 0.33%. This rate is lower than the rate for just the Unimak Pass area because herring bycatch rates from the reliable processor were relatively low in September and October, while more harvest occurred in the larger areas later in the year than in just the Unimak Pass area. The sample size for landings for the reliable processor during September and October was small, and could account for the fact that herring bycatch rates were lower for this processor than for all processors during September and October.

Both estimates of herring bycatch are presumed to be conservative because there were probably at-sea discards of herring that were not recorded, particularly when entire codends were dumped due to considerable herring bycatch. Compared to the 1988 data, the bycatch zone appears to be expanding, perhaps as a result of better reporting by industry. Several other areas were identified as having significant herring bycatch (Pribilof Islands and St. Matthew Island) but there

was not enough reported landed discard data for a similar analysis.

Domestic Observer Herring Bycatch Estimates

Port Moller

Federal regulations allow a Pacific cod bottom trawl fishery in the inshore portion of area 512 (Figure 10), which has been designated the area of the "Port Moller Pacific cod fishery". Vessels fishing in this area were required to participate in a data-gathering program which sought to enumerate the catch of all species captured through an observer program. During 1989 observers spent a total of 62.4 days on the fishing grounds in the Port Moller area. The total 1989 herring bycatch in the Port Moller cod fishery was 103 tonnes accompanying a total harvest of 5,604 tonnes, for a bycatch rate of 1.84% (Table 8).

The 1989 fishery started in early June and closed when the red king crab prohibited species catch limit was reached on July 14. Although detailed records of the 1989 fishery are not yet available, the timing of the fishery was similar to the 1988 fishery which started in late May and ended on July 7th. During 1988, the largest herring bycatches occurred in late June (Hare 1988). Hare (1988) noted that herring bycatches during 1988 in the Port Moller area were extremely variable, and that the overall herring bycatch rate of 5.72% in the 1988 fishery was attributed primarily to a single large haul of herring. The 1988 fishery in area 512 occurred in almost all areas that were open to trawling, except for shallow inshore areas (Figure 15). Although there were reports that several cod-ends containing mostly herring were released, no bycatch estimates from released cod-ends are available.

Other Areas

Observer coverage of the domestic trawl fleet in 1989 was much less thorough than prior coverage of JV and foreign fleets. Several sources of funding were used to support limited domestic trawl observer coverage during 1989. NMFS planned to achieve 20% to 35% observer coverage of the domestic trawl fishing effort through the Marine Mammal Protection Act (MMPA) observer program and a NMFS/fishing industry matching funds observer program. Modifications to the MMPA implemented on July 21, 1989 allowed NMFS to place observers on classes of fishing vessels which were determined to incidentally capture marine mammals. These observers also routinely sampled the groundfish catch and enumerated prohibited species. As of late September observers had sampled aboard 10 catcher/processor vessels and 5 trawlers delivering their catch to processing plants in Dutch Harbor. Observer reports classify "target" species as follows:

1. Pollock midwater trawl fisheries: if the weight of the pollock composes 95% or more of the week's catch.
2. Pollock bottom trawl fisheries: if the weight of the pollock and Pacific cod combined composes more than 50% of the catch and the weight of cod is less than 5%.

3. "Other" bottom trawl fisheries: if the weight of the pollock and cod combined composes more than 50% of the catch and the weight of cod is greater than or equal to 5% of the catch; or if the fishery does not fit into any of the other categories.

The Pacific herring bycatch rate reported by observers in these fisheries ranged from <0.01% to 1.09% (Table 9). The highest bycatch rate was recorded by observers in area 511 "other" bottom trawl fisheries. Because of the relatively low level of sampling coverage, these bycatch estimates were not applied to the total catch.

Estimates from Average JV/Foreign Observer Bycatch Estimates, 1983-88

Recent NMFS JV and foreign observer estimates of herring bycatch rates by month and $1/2^\circ$ latitude by 1° longitude provide another method of estimating bycatch rates in the domestic fishery. Foreign and JV observer herring bycatch estimates for "midwater trawls targetting on pollock" (> 95% pollock in the harvest) were applied to the fish ticket reported catches for midwater trawl gear. Observer bycatch estimates for "bottom trawls targetting on pollock" (pollock and cod > 50% of the total catch and cod < 5% of the catch) were applied to the fish ticket reported pollock catches for bottom trawl gear. Foreign and JV observer herring bycatch estimates for "other bottom trawls" were applied to the Pacific cod harvest.

Observer estimates of herring bycatch rate for each $1/2^\circ$ latitude by 1° longitude area and month were averaged over the 1983-1988 period separately for pollock midwater trawl target data, pollock bottom trawl data, and "other bottom trawl" targetted data. Because the ratio of herring to pollock biomass change over the 1983-88 period, bycatch rates were adjusted for differences in relative abundance when pollock fishery bycatch rates were computed. The ratio of eastern Bering Sea herring to pollock biomass was standardized so that the ratio for 1989 was 1.0 (Table 10). Herring bycatch rates were multiplied by this standardized ratio before averaging over years. Observed herring bycatch rates for vessels targetting on cod were not adjusted for differences in relative stock size over the 1983-88 period. The resulting data provide fairly complete coverage of the $1/2^\circ$ latitude by 1° longitude areas in the Bering Sea. For example, for the month of July, bycatch rates in pollock-targetted JV and foreign fisheries were high in the horseshoe area, similar to the 1989 landed discard reports from fish tickets, but also surprisingly high in the area southeast of St. Matthew Island and southwest of Nunivak Island (Figure 16). The high herring bycatch rates in this area in July may indicate the movement of Norton Sound and western Alaskan stocks directly offshore to the wintering grounds.

Observer bycatch rates for $1/2^\circ$ latitude by 1° longitude area squares are computed as the ratio of the weight of herring to the total weight of all species in the catch. However for fish ticket data, only the total catch of the target species was readily available. Therefore the herring bycatch is underestimated when observer bycatch rates are applied to fish ticket data, to the extent that the total catch is much greater than the catch of just the target species. For

Revised 1/12/90

pollock midwater trawls the underestimation is relatively minor, but for cod and pollock bottom trawls the underestimation could be substantial.

Foreign and JV observer bycatch data were not available for all month and area combinations fished by the domestic trawl fleet. For areas with substantial catches (> 0.05% of the 1989 total harvest) but with no corresponding observer data, the herring bycatch rates for areas immediately surrounding the missing area were averaged. For areas that had no corresponding observer data but had relatively small amounts of catch (< 0.05% of the 1989 total harvest), annual average herring bycatch rates for all areas which had matching observer data were used.

For Pacific cod, 92% (72,823 tonnes) of the fish ticket catch occurred in 1/2° latitude by 1° longitude areas for which corresponding observer data were available. The total estimated herring bycatch from these areas was 1,086 tonnes, for an annual estimated bycatch rate of 1.49% (Table 11). One percent of the catch occurred in areas that had more than 500 tons of catch, but could not be assigned a corresponding average observer herring bycatch rate from the same 1/2° latitude by 1° longitude area in the same month. Bycatch rates for these catches were assigned the average bycatch rate of the immediately surrounding areas with nonmissing observer data in the same month. The total estimated herring catch in this category was 1 tonne, for an annual estimated herring bycatch rate of 0.16%. Seven percent of the catch occurred in areas that had less than 500 tons of catch and could not be assigned a corresponding average observer herring bycatch rate. Bycatch rates for these areas were assigned the average bycatch rate for all areas with corresponding observer bycatches of 1.49%, for an estimated herring bycatch of 83 tonnes. The total estimated herring bycatch in 1989 domestic Pacific cod fisheries using these methods was 1,170 tonnes.

For pollock caught with bottom trawl gear, 82% (302,401 tonnes) of the fish ticket catch occurred in 1/2° latitude by 1° longitude area for which corresponding observer data were available. The total estimated herring bycatch from these areas was 3,368 tonnes, for an annual estimated bycatch rate of 1.11% (Table 11). Twelve percent of the catch data occurred in areas that had more than 2,000 tons of catch, but could not be assigned a corresponding average observer herring bycatch rate from exactly same 1/2° latitude by 1° longitude area in the same month. Bycatch rates for these catches were assigned the average bycatch rate of the immediately surrounding areas with nonmissing observer data. The total estimated herring catch in these areas was 295 tonnes, for an annual estimated herring bycatch rate of 0.66%. Six percent of the catch occurred in areas that had less than 2,000 tons of catch and could not be assigned a corresponding average observer herring bycatch rate. Bycatch rates for these areas were assigned the average bycatch rate for all areas with corresponding observer bycatches of 1.11%, for an estimated herring bycatch of 258 tonnes. The total estimated herring bycatch in 1989 domestic pollock bottom trawl fisheries using these methods was 3,921 tonnes.

For pollock caught with midwater trawl gear, 97% (499,805 tonnes) of the fish ticket catch occurred in 1/2° latitude by 1° longitude areas in months for which

corresponding observer data were available. The total estimated herring bycatch from these areas was 385 tonnes, for an annual estimated bycatch rate of 0.08% (Table 11). One percent of the catch occurred in areas that had more than 3,000 tons of catch, but could not be assigned a corresponding average observer herring bycatch rate from exactly same 1/2° latitude by 1° longitude area in the same month. Bycatch rates for these catches were assigned the average bycatch rate of the immediately surrounding areas with nonmissing observer data. The estimated bycatch rate in these areas was zero. Two percent of the catch occurred in areas that had less than 3,000 tons of catch and could not be assigned a corresponding average observer herring bycatch rate. Bycatch rates for these areas were assigned the average bycatch rate for all areas with corresponding observer bycatches of 0.08%, for an estimated herring bycatch of 8 tonnes. An additional 728 tonnes of midwater trawl pollock catch could not be assigned to a 1/2° latitude by 1° longitude area. The average bycatch rate for matched areas was applied to this catch, resulting in an additional 1 tonne herring bycatch estimate. The total estimated herring bycatch in 1989 domestic pollock midwater trawl fisheries using these methods was 386 tonnes.

Midwater trawl and bottom trawl gear may not be completely separable in the fish ticket database. Incorrect reporting of gear codes occurs, as do multiple gear types for catch reported on individual fish tickets. In addition, the domestic fleet is reported to be increasingly proficient at fishing midwater trawl gear close to the bottom, and bottom trawl gear is occasionally fished off the bottom. For comparison, a similar analysis using pooled midwater trawl and bottom trawl fish ticket catch, and pooled pollock midwater trawl and pollock bottom trawl observer bycatch rates was performed. Using data pooled for both gear types, the 1989 herring bycatch in the domestic pollock fishery for both gears was estimated to be only 4% greater than the bycatch estimated for the analysis with each gear type separately.

TOTAL 1989 HERRING BYCATCH

Bycatch estimates from the various sources for 1989 groundfish trawl fisheries are summarized in Table 12. Herring bycatch in the domestic pollock fishery from reported landed discard rates and 1989 JV rates for areas 521 and 522 is estimated to total at least 1,830-2,034 tonnes. Although the bycatch reported on fish tickets may underestimate the actual bycatch because of unreported at-sea discards, the relatively large fish ticket sample size provides a reliable estimate of the lower bound of the herring bycatch rate. Estimates of the herring bycatch in domestic pollock fisheries computed by applying 1983-88 average JV and foreign bycatch rates totalled 2,154 tonnes.

The 103 tonne herring bycatch from the Port Moller cod fishery should be a reasonably reliable estimate for that fishery, given the relatively high proportion of observed tows in the area. This estimate would not include the bycatch from cod-ends that were released prior to observer sampling. The proportion of the harvest observed by NMFS observers in areas other than Port

Moller was relatively small, given the numbers of vessels and short time period observed. Because of the small observer sample size in 1989, bycatch estimates from observers aboard domestic fishing vessels in areas other than Port Moller are not likely to be highly reliable.

The total herring bycatch computed by applying 1983-88 average JV and foreign observer bycatch rates to the 1989 domestic harvest and by using the 1985 observer reports of JV herring bycatch totals 8,065 tonnes (Table 12). This figure is considerably greater than the 4,521-4,725 tonne range computed by applying the 1989 JV bycatch rate in area 521-522 pollock fisheries to domestic harvests in those areas and the bycatch computed from landed discard rates in remaining areas.

1983-1989 HERRING BYCATCH EXPLOITATION RATES

Total herring bycatch from all sources increased slightly from 1983-86 when only foreign and JV fleets took significant amounts of catch (Table 5) to 1989 (Table 12). Domestic groundfish harvests became substantial in 1987 and 1988; no herring bycatch estimates are available for these years, although an estimate using $1/2^\circ$ latitude by 1° longitude average observer bycatch rates could be performed. Herring bycatch exploitation rates were computed as the ratio of the estimated herring bycatch to the estimated stock size in August. Most herring bycatch was estimated to occur in August, based on the foreign-JV observer-based analysis. May herring spawning biomass estimates were projected to August assuming an instantaneous natural mortality rate of 0.45. Herring bycatch exploitation rates increased from less than 2% in 1983 to 4%-7% in 1989 (Figure 17). If the 1989 bycatch is compared to the projected 1990 herring stock size, bycatch exploitation rates would be 7%-12%.

These exploitation rates apply to the total biomass of herring spawning in the eastern Bering Sea. However, trawl bycatch removals may not be distributed equally across each discrete herring spawning stock. A stock identification study designed to test the hypothesis that herring travel in discrete schools by stock was performed by ADF&G and NMFS during the summer of 1989. Results of this study will be available in February 1990. If herring do aggregate by discrete stock during the annual migration, it is possible that bycatch exploitation rates could vary substantially from stock to stock. Several of the eastern Bering Sea stocks, particularly those at Nelson and Nunivak Islands are reduced in size and could be easily adversely affected by trawling effort in localized areas.

DISCUSSION

Areas of potential high herring bycatch occur along the late summer herring migration routes and on the herring wintering grounds in the central Bering Sea. Bristol Bay and Kuskokwim Bay herring occur along the Alaska Peninsula and are intercepted by the horseshoe area pollock fishery in July, August and September. Another area of high herring bycatch occurs southwest of Nunivak Island in July and August, likely involving stocks between Norton Sound and Kuskokwim Bay. As demonstrated by the high 1989 JV herring bycatches in NMFS reporting areas 521-522, concentrations of herring are still found north and west of the Pribilofs during the winter months.

The draft fishery management plan (FMP) for Bering Sea herring submitted by the North Pacific Fisheries Management Council (NPFMC) to the Secretary of Commerce in November 1983 (NPFMC 1983) contained a number of options for "herring savings areas" with measures to avoid substantial trawl bycatches of herring. Most of these areas were centered around the central Bering Sea herring wintering area. Aggregations of herring on the wintering grounds north and west of the Pribilof Islands were targeted by foreign fleets during the 1960s and 1970s. After the prohibition of targeted herring fishing by foreign vessels, federal foreign fishing regulations established a special herring zone northwest of the Pribilof Islands, bounded by latitudes 58°0' to 59°30' and longitudes 172° to 175°. Foreign fishing was allowed in the herring zone, but between September 1 and April 30 special detailed weekly reporting of catch and effort data was required of all vessels fishing in the zone. Little fishing effort occurred in the zone after the imposition of the reporting requirements, apparently due to the increased record keeping and reporting requirements (J. Smoker, National Marine Fisheries Service, Juneau, personal communication).

Further analyses of herring bycatches by time and area are possible than are documented in this report. The relatively small 1/2° latitude by 1° longitude strata available for both fish ticket catches and for JV, foreign, and domestic observer data allow for detailed analyses that could be used to indicate relatively precise time periods and areas where concentrations of herring are likely to be encountered. These data are considerably more recent than the data used to develop the herring bycatch control measures of the 1983 draft herring FMP (NPFMC 1983).

More detailed analysis of these bycatch data may reveal other features of herring migration. For example, the high herring bycatch rates southwest of Nunivak Island in July likely indicate the movement of Norton Sound, Cape Romanzof and other western Alaskan stocks directly offshore. While it has been clearly demonstrated that Togiak stocks migrate clockwise around Bristol Bay, the direction of movement for Kuskokwim Bay, Nelson Island, and Nunivak Island stocks is less clear. The scale pattern analyses of Rogers and Schnepf (1985) indicated that Nelson Island stocks might be present in July at Dutch Harbor, but the evidence was inconclusive. It is possible that these stocks move directly offshore and are represented in the high herring bycatch rates southwest of Nunivak Island in July.

No estimates of the amount of herring captured in trawl cod-ends and released

is available, although there were reports of such events occurring in the 1989 fishery. For this reason, the 4,521-8,065 tonne range of herring bycatch estimates computed for the domestic trawl fleet likely represents a lower bound of the actual harvest. Herring mortality in trawl gear is likely to be very high, even if cod-ends are opened immediately after the trawl is raised. Herring bycatch computed by applying JV and foreign herring bycatch rates to fish ticket catch data also underestimated herring bycatch. JV and foreign observer herring bycatch rates are computed as the ratio of the weight of herring to the total catch weight. For ease of computation, observer bycatch rates were applied only to the retained catch of the single target species in the fish ticket catch. The degree of underestimation is greater for bottom trawl data than for midwater trawl data.

Inshore herring fisheries are managed under an Alaska Board of Fisheries harvest policy that sets maximum exploitation rates at 20%. In some areas, the maximum commercial exploitation rate is set at 1% to allow for a historic subsistence utilization. If herring stock sizes decline, the Board has directed ADF&G to reduce the exploitation rate. When herring stock sizes decline below established thresholds in each area, commercial fisheries are closed. The Board of Fisheries has allowed mixed stock herring food and bait fisheries in some areas, but has directed that total exploitation rates not exceed 20%. Based on the stock identification analysis that showed that Togiak stocks were by far the dominant stock in the Dutch Harbor food and bait herring fishery, the Board of Fisheries assigned the Dutch Harbor harvest to the Togiak stock. The Board took action in November 1989 to reduce the Dutch Harbor food and bait herring harvest to no more than 7% of the allowable harvest at Togiak, with combined harvest in food and bait and sac roe fisheries not to exceed 20% of the Togiak stock. The Board further directed ADF&G to close the Dutch Harbor food and bait fishery if subsistence harvests of other stocks from Togiak to Norton Sound were threatened. Because the trawl bycatch exploitation rate has been small and domestic trawl bycatch was unknown, the Board has not previously incorporated trawl bycatch into their Bering Sea herring harvest policy. With the recent evidence that the trawl bycatch exploitation rate is significant, herring stocks are currently being overfished under the Board's harvest policy.