By Jenkin Lloyd Jones Times, 7/31/71 - p 5

'The More The Merrier' Is An Outdated Adage

"IF YOU QUOTE me, I'll deny it, but I don't want any more people to come to this town."

Two years ago this remark was made to me by the chamber of commerce president in a celebrated Florida resort city.

I was shocked. It was so un - chamber - of - commercey. Indeed, it was contradictory, for I had just been examining some beautiful colored brochures put out by his organization, enticing retired persons to "the good life."

"That's the trouble," he added. " 'The good life' is slipping away. The beach drive is bumper - to - bumper. The seafront has become a mecca for misbehaving collegians. A mile inland our wonderful ocean breezes are half carbon monoxide and when the bridges over the waterway are raised traffic backs up two miles. Some of us are a little frightened at our success in attracting people."

MUCH HAS happened in the succeeding two years. The chamber president's confidential whisper has now become a very loud cry. Considering Florida's 37 per cent population increase in the past 10 years, Gov. Reubin Askew is calling for "selective growth." State Senate President Jerry Thomas states, bluntly, that "Florida no longer desires to be known as the fastest growing state."

There is now an organization in Arizona demanding zero growth. The Colorado River, alas, is not the Amazon. And the clear desert air is beginning to show faint traces of the garbage of civilization.

Southern California is becoming a tragedy. Ten years ago citizens of Pomona could count on the sunlit slopes of Old Baldy smiling at them in the morning. Today they are usually shrouded and the noxious cloud rolls up Cajon Pass and sometimes washes even to San Gorgonio.

LAST MONTH Delaware Gov. Russell W. Peterson signed a law banning any new chemical plants, oil refineries, steel and paper mills and other heavy industries from the Delaware coast. The governor, a former Du Pont executive, is by no means anti-industry. It is simply that in little Delaware people-country and factory-country are becoming a matter of either-or.

All this is contrary to the great American tradition of the - more - the - merrier, and the - bigger - the - better. It was a tradition born in an empty land in which merchants, preachers, saloonkeepers and dance hall girls apprehensively counted the wagons moving out and joyfully tallied the wagons moving in.

WE WILL NOT get zero growth in much of America. You have to put the new people somewhere. In the world's most mobile land, citizens who can live anywhere will gravitate toward pleasant places and eventually threaten them with ruin.

Young Americans, for all their petulance, oversimplification and demands for instant satisfaction, discern the outlines of the great truth. The Establishment has been overwhelmed by some problems it might have foreseen.

The preventable pollution. The lack of parks and playgrounds. The mindless development of suburbia with miles of houses, jammed as tightly as the traffic will bear, laying flat the forests, gouging out the glades. The demand is overdue for oases, quiet places, breathing space.

STILL THERE IS progress. For the well-heeled, there are now whole communities being built around clubhouses, golf courses, swimming pools and riding trails. For the middle class, bright new towns are on the drawing boards where kids can walk to school and ride their bikes in safety. We are spending billions in clearing open spaces in the old center cities.

Someday soon we will have to face up to the problem of irresponsibility among the poor. It has not been polite to mention it, other than to blame niggardly taxpayers for not spending more.

But Europe is full of very old houses that are neat as pins. And America is beginning to see brand-new housing developments filled with rats. Some slums are self-generated. Some people-problems are portable and cannot be cured by relocation. We have much to learn about human engineering.

BUT IT IS good news that the old bigger - and - better, more - the - merrier illusions are fading. We're all going to have plenty of people.

Now, for the quality of life.

Kachemak Bay

Jcn

STATE OF ALASKA

WILLIAM A. EGAN, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER / POUCH M — JUNEAU 99801

March 15, 1974

Honorable Clem V. Tillion
Alaska State House
Juneau, Alaska 99801

Dear Clem:

You have asked if a one- or two-year moratorium on exploratory oil drilling in the outer portion of State lands in Kachemak Bay is desirable. A moratorium has been urged on the grounds that there is need for additional information on the possible effect of oil and gas development on the very important shellfish industry in Kachemak Bay. In my judgment, an exploration well is necessary before an adequate assessment of the problems can be made.

As you are aware, biologists now have considerably more information on the shellfish life-cycle, spawning, and rearing areas in Kachemak Bay than is true of most of the other productive waters of Alaska. However, the Department of Fish and Game most certainly could profitably use additional investigative efforts to effect a better relationship between the development of oil or gas and the preservation, if not enhancement, of the Kachemak Bay fishery. However, I am absolutely convinced that the proposed moratorium would have little or no value in this respect. On the contrary, exploratory drilling at an early date would make the biologists' studies much more useful.

Consider that:

(1) There may not be either oil or gas in the structure--and the whole controversy will evaporate.

(2) There might be a gas, rather than an oil field, in which case the parameters would differ widely from those that would apply to an oil-shellfish study.

(3) If oil should be found, the drill logs would permit a revaluation of the seismic work, preparation of a reasonably definite outline of the producible area, and the acceptable locations of platforms and drill holes necessary for development. Thus the specific area that might conflict with the fishery could receive intensive study, rather than the wide area that would have to be studied during a moratorium on exploratory drilling. Final location and time of construction of a platform could be determined after further study of the fishery and ocean currents and at least two years would be available for those studies since steel shortages

and heavy backlogs in design and fabrication orders will prevent early completion of a production platform. Presently, there is an eighteen-month delay in filling orders for well tubing and casing.

(4) The statistical risk of a significant oil spill during exploratory drilling is extremely small since the "target" is deep--at least 8 to 10 times as deep as the oil-bearing horizon that caused the famous Santa Barbara oil spill. And, according to the California Department of Fish and Game, the very messy Santa Barbara oil spill did not kill any fish. In fact, intensive studies of the Santa Barbara oil spill by the Allan Hancock Foundation of the University of Southern California, under the direction of Dr. Dale Straughan, failed to show any permanent damage to aquatic life and only temporary damage to low-order marine life in the littoral zone.

(5) In Cook Inlet, strong tidal currents, turbulent water, and the presence of petroleum-oxidizing bacteria in a concentration ratio of about 1000 organisms per liter of sea water break up and destroy oil spills. The University of Alaska, Institute of Marine Science, after studying the waters in the oil-producing area of Upper Cook Inlet, concluded that "Evaporation effectively removes components smaller than about C_{12} (the more toxic fractions in crude oil) within eight hours" and "Accumulated petroleum hydrocarbons in the range C_{10}-C_{25} were below the limit of detection (i.e., 0.02 parts per billion)."

(6) Boat traffic in Kachemak Bay, and its problems with crab pots and fishing boats, would be increased only slightly--not nearly as much as by the projected increase in pleasure craft.

I think we must compare the very minimal risk involved in exploratory drilling in Kachemak Bay with the risk involved in not drilling.

Again consider:

(1) All Alaskans, from all parts of the State, share in the benefits derived from oil and gas production. Although I am certain no Alaskan would endorse an action that would threaten the livelihood of another Alaskan, it is highly probable that he would resent a loss of possibly important State income where no definable threat to that income can be shown to exist.

(2) The shellfish harvest in the areas of oil and gas production offshore from Louisiana, where there are about 1000 producing platforms extending from the bayous to distances many miles from shore has increased <u>six-fold</u> from what it was prior to oil and gas development. Sport fishing in the area has had a comparable increase.

(3) The national petroleum shortage is real--affecting not only motor fuels but also causing shortfalls in plastics, fertilizers, and petrochemicals. Alaska, so far, has been spared from severe fuel shortages, but we may yet face unpleasant cuts in allocations and, along with all others, pay high prices for petroleum fuels. The Federal Government, to avert a deepening of the energy crisis and to reduce dependency on uncertain highly expensive foreign supplies, is urging greatly increased exploration for domestic petroleum reserves and is using its fuel allocation authority to expedite petroleum development. If Alaska delays development of its petroleum reserves, without good reason, it may happen that Alaska will suffer from reduced Federal allocations of petroleum fuels. Certainly, the arguments of Governor Egan that have been successful so far will be weakened.

(4) The Cook Inlet oil fields have passed their productive peak and have begun a decline of about 10% per year. These fields are extremely important to the railbelt area and they furnish crude to Alaska's only refineries. Although Prudhoe Bay will make Alaska "oil rich" in 1978, it is important to the railbelt economy that Cook Inlet production be maintained.

Very truly yours,

Charles F. Herbert

Charles F. Herbert
Commissioner

HB-328

TANANA - YUKON CHAPTER
Alaska Conservation Society

Box 80071
College, Alaska 99701

Mar 9, 1974

Rep. Clem Tillion
Chrmn. House Judiciary Comm.
Alaska State House of Representatives

Dear Mr. Tillion:

We have been urging all our local legislators to strongly support H. 328 to establish a Department of Transportation. It is recently come to my attention that this bill has been sent to your committee for consideration.

On behalf of our chapter membership I wish to urge you to support this important legislation. We believe that you will agree that such a bill is long overdue. The trnasportation requirements of our state are diverse and complex and we need an agency with a strong plannning authority to deal with these matters and to recieve public input.

We do recommend that Sec. 44.42.040 (b) be strengthened with regard to the provision for public hearings by this change (p. 3, line 4):

".... the commissioner <u>shall</u>:"

We believe that the public hearing process is particularly important in transportation planning, especially for rural Alaskans. These people are so frequently out of touch with the administrators whose decisions so profoundly affect their lives.

Yours sincerely

Peter C. Lent

Peter C. Lent
Chap Pres.

cc: Rep. Randolph

Coast Mortgage Company
Alaska Office
711 "H" Street, Suite 100
Anchorage, Alaska 99501
(907) 279-0665

HB-497

March 6, 1974

Representative C .V. Tillion
State House
Juneau, Alaska 99801

Re: CS House Bill No. 497
"An Act relating to interest rates charged in the state; and providing for an effective date."

Dear Representative Tillion,

This bill as introduced is more acceptable than the present Act, except the provision for the date establishing the rate. The present Act provides for four percentage points over the annual rate charged by the 12th Federal Reserve District for one to four family dwellings and commercial loans, while the other real estate loans may be at four and one half percent over the Federal Reserve discount rate. The Act also allows the rate to be set on the basis of that rate which existed on the first day of the month preceding the quarterly month end. This at least gave us the ability to predict up to 120 days what the interest rate statute would provide as a maximum without being usurious. Under the new bill we would have this reduced at approximately 95 days. This has created a very serious problem even at 120 days much less the 95 day period. The feature of the bill that seems to be realistic and helpful is the elimination of a usury statute with regards to sums borrowed in excess of $1(,000.00. Certainly this would be most beneficial to the small businessman who has the problem of acquiring capital funds for development of his business enterprise.

The tying of the interest rate to the Federal Reserve discount rate, or as it's stated, "the annual rate charged member banks by the 12th Federal Reserve District," is questionable because it may or may not have any relationship whatsoever to do with actual market rates of interest and is used as a tool for monetary control by the Federal Reserve System. It is entirely possible that the rate might be reduced to a very noncompetitive posture using this criteria, but of greater concern to us in the mortgage lending field is the inability to commit for delivery of loans in the future based upon this statute. If we are to acquire funds to insure monies available for home buyers, particularly for those in planned unit developments, townhouses, and condominiums, we have no assurety that we will be able to use said commitments because the interest rate maximum may change substantially

In summation, it is my humble opinion that if this legislation is to pass then the only fair and equitable treatment that can be afforded other types of financial institutions would be to allow all such organizations the right to form and operate stock controlled commercial banks, savings and loan associations, and trust companies under corporate ownership if deemed appropriate, either domestic or foreign.

Very truly yours,

Charles E. Homan
SRA Box 1745 F
Anchorage, Alaska 99507

HB-560

March 6, 1974

Representative C. V. Tillion
State House
Juneau, Alaska 99801

Re: House Bill No. 560
"An Act relating to wholly owned subsidiaries of financial institutions."

Dear Representative Tillion:

The proposed legislation which would provide for means whereby a mutual savings bank would be operating a commercial bank or turst company under its cover seems to me to be an out-and-out case of favoritism and politically inspired. The most obvious concern is that it establishes a special privilege for one class of financial institution over all others. If this type of legislation is to be passed, it seems that the fair and equitable program would be to allow corporate ownership of all types of state and national banks, savings and loan associations, and trust companies qualifying as financial institutions. There seems to be little reason for allowing one particular form of financial institutions such a preferred status, particularly when that institution is so constituted as to have absolute continuity of management by the original incorporators and no means to change the management or direction of the organization unless it actually falls into receivership. The mutual savings bank already enjoys a preferred status that is not afforded private stock controlled corporations. Giving additional power to a small group of men seems inappropriate when, in fact, our purpose should be to increase competition and to decrease the influence of any one group.

Also, the bill allows more than prudent investment activities by a mutual savings bank when it can invest 100% of its entire surplus and undivided profits in corporate stocks. This is an unwarranted risk for the depositors in that organization if the incorporators and directors are allowed to move in this direction, they could place the depositors position in great jeopardy in my opinion.

within the period of the commitment. Fortunately, we have only suffered minor losses from purchasing commitments in this area at the present time, but it would be entirely feasible that we could lose an entire commitment fee of two or three percent of the commitment amount which ususally runs two to four million dollars, or you could be talking about a loss of commitment fees as much as $120,000 because you are unable to predict the future statutory maximum rate that can be charged in the State of Alaska. The direct result has been that last year our home buyers suffered losses amounting into thousands of dollars that could have been accrued if we would have provided forward commitments at low interest rates when they were available but were not so inclined to purchase without assurety of being able to deliver under them. This is the effect of the legislation on the consuming public, instead of being a benefit or a protection it has resulted in being a substantial cost to these individuals wanting to buy homes or refinance their dwelling. In the home loan field we know that competition sets the rate because there is a tremendous attitude of competition and the national market rates are very effective here in Anchorage, Alaska.

The bill that was originally proposed which would establish a flat maximum statutory rate of 12 percent interest was much more beneficial to both the consumer and the lender because it gave us a fixed sum from which to operate. Today we are again faced with the possibility of buying forward commitments for home buyers and spending substantial sums because it appears that economically this would be to the benefit of both the company and our future mortgagors, but we will not risk company monies when there is no assurety that interest rates would be at a figure that would allow us to close under those commitments. It is with this thought in mind that I submit to you that the present usury act has been ineffective in helping mortgagors in the State of Alaska, except to the extent that it raised the rates high enough to allow us to continue to provide housing for our populous.

As to commercial credits, of course, the $100,000 elimination of a maximum usury statute is of tremendous benefit, particularly to the smaller borrower who is trying to develop his business and we must highly support and recommend that particular aspect of the bill. Over the past months I have seen many small loans turned down simply because our usury statute was not of a nature as to permit a more speculative loan to be made and allow that customer the opportunity to compete and develop a new enterprise or expand an existing one in the local area.

Very truly yours,

COAST MORTGAGE COMPANY

Charles E. Homan
Vice President

CEH:ams

drugs
AND DRUG ABUSE EDUCATION NEWSLETTER

Scope Publications, Inc., 1132 Nat'l Press Bldg., Wash., D.C. (202) 347-9288

Vol. 3 No. 12 | Washington, D.C. | December 1972

DRUG LAWS, ENFORCEMENT, NATIONAL GOALS SCORED BY CONSUMERS UNION; LEGALIZED POT, HEROIN MAINTENANCE URGED.

Consumers Union, a private consumer advisory and evaluation organization, has urged repeal of all federal and state laws prohibiting marijuana use, possession and sale, and has called for an end to the nation's "goal of stamping out illicit drug use."

The Consumers Union (CU) report, published as a 623 page book, contended that if society and the federal government had attempted in 1937 to "reduce" marijuana use rather than stop it immediately, they might have succeeded.

"Instead, one of the greatest drug explosions in history — marijuana eruption of the 1960s — was triggered.

"Attempts to stamp out illicit drug use tend to increase both drug use and drug damage. Here LSD is a prime example," CU said. ". . . efforts to stamp out one drug shift users to another — from marijuana to LSD and heroin, from heroin to alcohol."

In November, a report to the Department of Health, Education and Welfare made a similar recommendation about drug education. The report, by MACRO

(Continued on p. 2)

IN THIS ISSUE

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Representative Clem Tillion
House of Representatives
Juneau, Alaska 99801

Dear Mr. Tillion:

I see in the local paper that you have supported Mr. Ferguson in his attempts to make some sense of legislation concerning drug use. I commend you for your stand.

This recent report of a new study done by the CONSUMERS UNION may be of interest to you and all legislators. It sounds both valid and informative. I have asked that a copy be Airmailed to the State Library so that it can be available for study in a week or two.

I hope to see the day when young people will no longer be jailed for the same kind of activity adults engage in every day.

An Alaskan citizen,

Mrs. Hering

Millicent B. Hering
Mrs. Don Hering
1041 Pedro St.
Fairbanks 99701

cc: Ferguson
Hillstrand

HB-164 or HB-142

LAW OFFICES OF
FAULKNER, BANFIELD, DOOGAN, GROSS & HOLMES
SUITE 201, 311 FRANKLIN STREET
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NORMAN C. BANFIELD
FRANK M. DOOGAN
AVRUM M. GROSS
MICHAEL M. HOLMES

SANFORD SAGALKIN
RANDALL J. WEDDLE
WILLIAM B. ROZELL
JAN VAN DORT

January 30, 1973

Mr. Richard Randolph
Chairman, Commerce Committee
House of Representatives
Juneau, AK 99801

COPY

Re: House Bill No. 142 - Antitrust Bill

Dear Mr. Chairman:

As a representative of American Mutual Insurance Alliance, I am interested in House Bill No. 164, which would provide an antitrust law for the State of Alaska.

House Bill No. 142, appears to be identical to House Bill No. 164, which was introduced in 1971. Both the present House Bill No. 142 and prior House Bill No. 164, did not contain an exemption for the insurance industry when they were introduced. I am enclosing a copy of a letter, which Mr. Banfield wrote to Jalmar M. Kerttula, the Chairman of the House Commerce Committee, on March 12, 1971, describing the impact of House Bill No. 164 on the insurance industry and explaining why this industry should be exempt from the bill's provisions.

The House Commerce Committee recognized the problems that House Bill No. 164 would create for the insurance industry and therefore, prepared a substitute bill which contained the following exemption:

> Persons engaged in the business of insurance, to the extent they are regulated under AS 21, are exempt from the provisions of this chapter.

I would appreciate the opportunity to discuss the subject with your committee when the bill comes up for consideration. Will you please let me know when work sessions or committee hearings will be held on House Bill No. 142?

Very truly yours,

FAULKNER, BANFIELD, DOOGAN, GROSS & HOLMES

By

Jan Van Dort

JVD/bw
Enclosure
cc: Charles A. Brown
Kenneth H. Nails
Clem V. Tillion

SB-298

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WILLIAM R. ROZELL
JAN VAN DORT
LAWRENCE T. FEENEY

January 31, 1974

Representative Clem V. Tillion
Chairman, House Judiciary Committee
Legislature, State of Alaska
Juneau, Alaska 99801

Dear Representative Tillion:

During the course of this session, I anticipate that several bills will be introduced to amend the recent criminal rules adopted by the Alaska Supreme Court. For instance, I have already seen Senate Bill 298 which is an effort to amend certain of the discovery procedures now applicable in criminal cases. I anticipate there will be additional legislation covering other portions of the rules.

I served as chairman of the committee which drafted the criminal rules which were ultimately adopted by the Supreme Court. The committee which consisted of representatives of the District Attorney's office, Public Defender's staff, Superior Court, District Court, and representatives of the private Bar held extensive meetings throughout the State in preparing the rules. After the rules were completed, they were circulated to every attorney and law enforcement agency in the State. Comments were received, analyzed and many times incorporated into the rules. The committee then met with the Supreme Court and explained the formulation of the various rules and after substantial discussion and analysis on its own, the court adopted a somewhat amended form of the rules.

I would very much appreciate it if at such times as bills which seek to amend the rules are heard in your committee, you would inform me of that fact so that I might appear befor the committee and at least explain to the committee the purpose of the rule as it now stands. It may be that many of the suggestions proposed by various legislators were previously proposed to the committee, and there may be some reasons why those suggestions were not incorporated that may not be readily apparent. I would at least appreciate the opportunity to testify on the various bills before committee action. I might also add that Judge Carlson of the Superior Court here in Juneau was the committee's reporter throughout all of its deliberations, and is at least as well qualified as I am to testify concerning various proposals for amendment. Another member of the committee from Juneau was private attorney Gail Fraties, who as you may know was district attorney here for several years. There are in short several people in this community who actively participated in the development of the rules and who are fully cognizant of their content and significance. I am sure all of us would be willing to cooperate with the committee in any way we can in analyzing various proposals for amendment.

I can assure you that an enormous number of man hours and effort went into compiling these rules. Like any other document, it is not perfect and can probably be improved on a continuing basis. I, and I am sure the other members of the committee who drafted these rules would very much appreciate the opportunity to be a part of any process which does seek to improve them.

Thanking you in advance for your courtesies, I am

Very truly yours,

Avrum M. Gross

AMG/bjs

cc: Judge Victor Carlson
Mr. Gail Fraties

Jud. Committee SB 97

STATE OF ALASKA

WILLIAM A. EGAN, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

OFFICE OF THE COMMISSIONER / POUCH N — STATE CAPITOL
JUNEAU 99801

March 29, 1973

The Honorable Tom Fink
Speaker of the House
Alaska State House of Representatives
Pouch V
Juneau, Alaska 99801

Dear Mr. Speaker:

AS 28.15.070 EXAMINATION OF APPLICANTS was amended by House Bill No. 45 which was passed during the Second Session of the Seventh Legislature. Certain provisions of the new law set forth the requirement for the issuance, by this Department, of a classified driver license after July 1, 1973, to qualified applicants. The new law provided that appropriate regulations be adopted and promulgated by the Department of Public Safety but "before any such regulations are enforced, the same shall be submitted to and approved by the Legislature."

Since the passage of this legislation we have found the issue of regulations concerning classifications and administration of the examining program to be a particularly sensitive one and feel that it is particularly important that this Department have the benefit of input by affected groups prior to submission of even an initial draft of regulations. Quite frankly, we have found ourselves in a time crush concerning these requirements and, accordingly, beg the indulgence of this Legislature to permit submission of these regulations during the Second Session of the Eighth Legislature. In the interim, we will have had sufficient opportunity to formulate a program, policies and procedures under this new law which, I believe, will withstand the closest scrutiny of your membership.

The standard photo license will continue to be issued during the balance of 1973.

Very truly yours,

E W Chapple Jr

Emery W. Chapple, Jr.
Commissioner

STATE OF ALASKA

WILLIAM A. EGAN, GOVERNOR

DEPT. OF HEALTH AND SOCIAL SERVICES

DIVISION OF MENTAL HEALTH   POUCH H — JUNEAU 99801

POSITION PAPER
ON
HOUSE BILL 323

The Act would repeal AS 11.60.080 - 11.60.090.

The Act would make it legal to sell, exchange or give cigarettes, cigars or tobacco to a person under 18 years of age.

The Act would allow easier access to any age child of cigarettes, cigars and tobacco.

Considering the Surgeon General's opinion that cigarette smoking is dangerous to your health, it would be tantamount to allowing our children free access to a dangerous substance.

The Division of Mental Health is opposed to this Bill. We can see no possible good to be gained except remotely as a convenience to some parents who would like to send their children to the store to buy them a pack of cigarettes. One possible agrument for this Bill is that cigarettes are usually available to juvenile's in their home or in vending machines making the existing law difficult to enforce. We would be more inclined to the position to tighten the distribution of cigarettes to exclude vending machines in keeping with the national campaign to discourage cigarette smoking.

Approved By: [illegible signature] Date: [illegible]
Division of Mental Health

Approved By: Frederick McGinnis Date: March 19, 1973

93d Congress
1st Session

HR 4884
A BILL

February 27, 1973 Mr. Waldie

TO ENCOURAGE EARLIER RETIREMENT BY PERMITTING FEDERAL EMPLOYEES TO PURCHASE INTO THE CIVIL SERVICE RETIREMENT SYSTEM BENEFITS UNDUPLICATED IN ANY OTHER RETIREMENT SYSTEM BASED ON EMPLOYMENT IN FEDERAL PROGRAMS OPERATED BY STATE AND LOCAL GOVERNMENTS UNDER FEDERAL FUNDING AND SUPERVISION.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That section 8332 of title 5, United States Code, is amended by adding at the end thereof the following new subsection:

(L) Subject to sections 8334 (c) and 8339 (b) of this title, an employee or Member shall be allowed credit for any period of service performed by him (unless the employee or Member was certified as being eligible for relief) in the employment of a State, a political subdivision thereof, or an instrumentality of either, primarily in the carrying out of any program authorized by Act of Congress to be conducted in accordance with standards prescribed by Federal law and all or part of which is financed directly or indirectly by Federal funds if--

(1) the head of the Executive agency, or his designee, administering the program or assuming the function or program makes a certification to the Civil Service Commission, in accordance with such rules and regulations as may be prescribed by the Commission, concerning the service under this subsection, or such service is otherwise established to the satisfaction of the Commission:

(2) the employee or Member has at least 5 years of allowable service, under this Act exclusive of service allowed under this subsection;

(3) any such period of service has not and will not be used in obtaining an annuity under any other retirement system, including Social Security; and

(4) the employee retires--at whichever is later--within one year of enactment of subsection (L), or within one year of reaching the age and years of service requirements set forth in section 8336, unless the employee dies or is otherwise separated from the service prior to meeting the provisions of this subsection (4); and

(5) the employee or Member shall have deposited with interest at 4 percentum per annum thereafter, compounded on December 31 of each year, to the credit of the civil service retirement and disability fund a sum equal to the aggregate of the amounts that would have been deducted from his basic salary, pay, or compensation during the period he had been subject to this Act, provided that in determining the amount of such deposit, the term "period of separation from the service" as used in section 8334(c) shall be construed to include a period of service credited under this subsection (L); and provided further that the employee or Member may either make the full deposit within 30 days from the approval of his application for retirement credit under this subsection (L), or make the deposit by twelve equal monthly payments withheld from his annuity as it accrues, each payment comprising one-twelvth of the deposit and interest computed at the rate of 3 percentum per annum. For purposes of this subsection, "State" means the several States and Puerto Rico.

Sec. 2. The annuity of any person who shall have performed service of the type described in subsection (L) of section 8332 of title 5 United States Code, as added by the first section of this Act, and who before the date of enactment of this Act shall have been retired on annuity under the provisions of sub-chapter III of chapter 83 of such title, or prior provision of law, shall, upon application filed by any such person within one year after the date of enactment of this Act and in accordance with the provisions of such subsection (L), be adjusted effective as of the first day of the month following the date of enactment of this Act, so that the amount of such annuity will be the same as if such subsection (L) had been in effect at the time of such person's retirement. Similarly, the annuity of a person qualifying under the deferred annuity provisions of section 8338 and performing service described in subsection (L) shall, upon application filed by such person within one year after qualifying under section 8338, be adjusted effective as of the first day of the month in which he qualifies for the annuity.

SJR 33

Computer in Washington

Radar
SHR 4106

HB 164

March 12, 1971

The Honorable Jalmar M. Kerttula
Chairman, Commerce Committee
House of Representatives
Juneau, Alaska 99801

Dear Mr. Chairman:

Re: H.B. No. 164, Anti-Trust Bill

I previously wrote to you on February 23, as a representative of American Mutual Insurance Alliance, stating I would investigate the impact which H.B. No. 164 would have on the insurance industry in Alaska and report to you.

Congress has the right to regulate the insurance industry by reason of the fact that it is engaged in interstate commerce. In 1945, it passed the McCarran-Ferguson Act (15 USCA 1011,et seq), which provides that the business of insurance shall be subject to the laws of the several states which relate to the regulation and taxation of the industry. It also provided that the Sherman Anti-Trust Act, the Clayton Act, the Federal Trade Commission Act and the Robinson-Patman Anti-Discrimination Act would not apply to the business of insurance until June 30, 1948, and after that date said Acts shall be applicable to the business of insurance "to the extent that such business is not regulated by state law." Therefore, the states have the right to regulate monopolies and combinations in restraint of trade in the insurance industry. Many states have anti-trust statutes such as proposed by H.B. 164, but New York is the only state which did not exempt the insurance industry. However when New York did enact such a law on January 1, 1970, it specifically exempted the setting of rates through rating bureaus. The reason various states other than New York have not attempted such regulation is that the Insurance Departments have complete control over discrimination, unfair trade practices, etc., under the Insurance Code. The Insurance Departments, therefore, have control insofar as they care to exercise it, but they recognize that rating bureaus are an absolute necessity. There are other practices in the industry which might be said to be combinations in restraint of trade, such as formulating and adhering to standard insurance policies, the content of which are, in turn, under the control of the State Commissioners. The State Commissioners have their own association to which the industry goes for guidance with the result that the standard fire insurance policy is used everywhere and any deviations from it can be used only with the approval of the State Director of Insurance. You can understand what a chaotic situation would be created, especially for the consumers, if you had 200 different types of insurance policies in Alaska and how difficult it would be for the Director to regulate the industry.

The reason the companies use rating bureaus to recommend how much they should charge and the State Commissioners use the same bureaus to ascertain what they hould allow to be charged, is because the loss experience of all the companies in an area especially under standard policies, is more reliable for rate making than individual loss experience. Therefore, our Director is a subscriber to and pays to support the various bureaus which specialize in rate making for particular purposes. These must be continued, but H.B. No.164 would prohibit such use of, rating bureaus.

From the foregoing, I think it is evident that the industry should be exempt from H.B. No. 164 since it is completely regulated in the same respects by the Insurance Code. If the state should decide to do like New York and prohibit monopolies and regulate the insurance industry under a bill of this type, then it is necessary to work out some specific exemptions such as has been done in New York. Whereas New York is the state in which most of the big companies are incorporated and it is the insurance center of the Western Hemisphere, Alaska is at the opposite end of the spectrum and is in no position to competently regulate the insurance industry except through its Director of Insurance. Therefore, unless the industry is exempt from the provisions of this bill there is a need for specific amendments which can be patterned after the recent New York law. I am furnishing to your staff and particularly Mr. Rhode, a copy of a report made by Mr. Edwin M. Zimmerman, of Washington, D.C., who talked on "Insurance Underwriting Under Antitrust" at a meeting of the 1970 Mutual Insurance Technical Conference at Philadelphia, last November. It will give him some idea of the complexity of the subject of trying to regulate insurance companies under limited exemptions such as are contained in the New York Act.

Yours very truly,

N. C. Banfield

N. C. Banfield

c.c. Mr. Charles A. Brown
Mr. Kenneth H. Nails
Mr. F. O. Eastaugh
Mr. W. W. Fritz

NCB:k

KENAI UTILITY SERVICE CORPORATION
A BLUE FLAME COMPANY
BENCO BUILDING P.O. BOX 614
KENAI, ALASKA 99611
(907) 283-7932

HB-12

February 11, 1974

The Honorable Clem Tillion
Alaska State House of Representatives
Pouch V
Juneau, Alaska 99801

Dear Clem:

In reviewing correspondence from the Alaska Chapter of the Associated General Contractors of America it appears that the Committee Substitute for House Bill No. 12 offered February 20, 1973, is still alive (but probably not well) in some committee in Juneau. This bill relates to "liability for damage to underground utilities".

This is a fair and much needed piece of legislation. It presumes only to penalize those who carelessly damage utility properites by failing to confirm the location of those properties. The lessening of such damage will be a significant factor in holding down utility rates to the public. We have tried for three years to encourage the passage of this measure by the legislature. It is high time that this bill is passed and we solicit your assistance in bringing it out of committee and to a vote.

Sincerely yours,

KENAI UTILITY SERVICE CORPORATION

Oscar L. Thomas, Vice-President

OLT:ilw

PROSPECT HEIGHTS ASSOCIATION, INC.
AN ALASKA NON-PROFIT CORPORATION
SUITE 1, 825 WEST EIGHTH AVENUE
ANCHORAGE, ALASKA 99501
(907) 279-2411

March 20, 1973

HCR 70

To: All State Legislators and Senators

Gentlemen:

We note with interest the transmittal to the Legislature by the Governor of a resolution for changes in the boundaries of Chugach State Park. This resolution is House Concurrent Resolution 70.

The Resolution speaks of:

Conflects of land ownership, jurisdiction or authority which are unreconcilable or unmanageable other than that at an unreasonable cost or expense to the state; . . . . "

and sounds as if pursuant to A. S. 41.20.220. That statue in its entirety reads as follows:

Sec. 41.20.220. Designation of management responsibility. The state lands and waters described in §210 of this chapter as the Chugach State Park are assigned to the Department of Natural Resources for control, development and maintenance, except that the Department of Highways is responsible for the repair and maintenance of all existing public roads within the park. The control of highway access and roadside structures within the Chugack State Park is the responsibility of the Department of Natural Resouces. The Department of Fish and Game shall cooperate with the Department of Natural Resou s to provide for those purposes under §210 of this apter relevant to the duties of the Department of F and Game. If, in the exercise of management responsibil y under this section, conflicts of land ownership, jurisdiction, or authority are unreconcilable or unmanageable other than at an unreasonable cost and expense to the state, the commissioner after public hearing in accordance with A.S. 44.62 may modify, subject to the approval of the legislature, the boundaries of the Chugach State Park not to exceed 20 per cent of the total acreage described in §210 of this chapter. (§1 ch 112 SLA 1970).

However, much of the land in question belongs to the State of Alaska. How there can be an unreconcilable conflict between the State and the State escapes us. If one department of the state wishes to have land once assigned to its management, again made available for a purpose in conflict with A.S. 41.20.200, the declaration of purpose for the Chugach State Park, then why cannot the park land be simply transferred out of their hands altogether. This is at least argueably already the affect of A.S. 41.20.210 designating the state land as a park. Cannot it be exchanged for other lands in the control of the Division of Lands? In other words, we totally fail to see where an irreconcilable conflict exists, unless it is that one division of the Department of Natural Resources is loath to loose control of some land in order that another division of the Department of Natural Resouces may maintain control of some lands. That conflict is readily reconcilable by a simple order from the commissioner that the principility of the Division of Lands be invaded for the benefit of the state park.

Less philosophical and more concretely legal, is our contention that it appears to our satisfaction that the University of Alaska, alleged beneficiary of paragraph 1 of the resolution is not an agency which A.S. 41.20.220 designated as an agency beneficiary of the section. The statute speaks of administrative conflicts under the administrative authority granted to the Division of Parks, the Highway Department and the Department of Fish and Game. It strikes us that most logical that highway rights-of-way problems along the alignment of the Seward Highway were the principle concern in the placing of this language in the statute.

The university lands in question are generally steep lands, not terribly well suited to non-park uses, and affording the people of the state relatively accessable and lower-lying lands for recreational purposes. We suggest that paragraph 1 of the resolution be struck in its entirety from the resolution.

Paragraph 2 of the proposed resolution would delete certain portions of Bird and Penguin Creek valleys which are lands selected by the Greater Anchorage Area Borough. Bird and Penguin Creek valleys likewise afford a beneficial park recreational area to the people of the greater Anchorage area. Indeed, this is one of the generally accepted mechanized recreation areas. We see no particular purpose which could be served in transferring the lands to the Greater Anchorage Area Borough and deleting them from the park. Would it not be far more sensible to allow the Greater Anchorage Area Borough to select other lands of an equivalent quantity from within the Greater Anchorage Area Borough and leave these lands in question in park status?

The third paragraph of the proposed resolution would delete certain lands in the Girdwood valley from the park. This subject was discussed extensively by the Park and Recreation Council of Anchorage, and the proposal varies from that accepted by the Park and Recreation Council in one significant fact. Section 18 is among those proposed to be deleted, varies sharply from steep alpine territory to low-lying and developable territory. We would suggest that a modification should be placed in this paragraph of the resolution to the same effect as that modification applying to Section 8, to wit, that the portion of Section 18 deleted from the park should only be that part lying below 500 foot altitude.

We are in general agreement with the balance of the resolution, but would urge the defeat of the resolution if it can not be amended as above suggested.

Very truly yours,

E. G. Burton, Secretary
PROSPECT HEIGHTS ASSOCIATION, INC.

TELEGRAM

RCA ALASKA COMMUNICATIONS, INC
PHONE: 586-6440
JUNEAU, ALASKA 99801

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PMS REP HELEN BEIRNE

3555

HOUSE OF REPRESENTATIVES

JUN

BT

RECENTLY HEARED ABOUT RESOLUTION 70 AND FOUND THAT THE BOROUGH PLANNING PEOPLE HAVE NOT STUDIED IMPLICATIONS OF THE LEASE OF BOROUGH LANDS FROM STATE PARK. AM VERY CONCERNED THAT THIS BILL IS BEING RUSHED TO WITHOUT ADEQUATE KNOWLEDGE. HEARINGS HELD LAST SUMMER DID NOT DEAL WITH THIS ISSUE OR THE RELEASE OF UNIVERSITY LANDS FROM THE PARKS. AM CONTACTING AS MANY BOROUGH AND STATE PEOPLE AS I CAN TO FIND OUT BACKGROUND. PLEASE HOLD BILL UNTIL WE CAN FIND OUT MORE. THANKS SO MUCH FOR EVERYTHING

SHARON CISSNA BOX 1036

STATE OF ALASKA

WILLIAM A. EGAN, GOVERNOR

DEPARTMENT OF ADMINISTRATION

OFFICE OF THE COMMISSIONER / POUCH C — JUNEAU 99801

HCR-10

8 February, 1974

Honorable Clem V. Tillion, Chairman
House Judiciary Committee
State Capitol
Juneau, Alaska 99801

Dear Representative Tillion:

A review of HCR 10 indicates that an error was made in the preparation and the following corrections should be made:

Change line 26, page 1 to read

Anchorage Department of Labor Building	4,300,000

Add, between line 26 and 27 on page 1

Fairbanks Public Safety Building	1,200,000

The total of HCR 10 is not affected by these changes.

Very truly yours,

Richard Freer

Richard Freer
Deputy Commissioner

Telephone (907) 277-4528

William A. Greene
Attorney at Law

425 G Street, Suite 950
Anchorage, Alaska 99501

SB-488

March 28, 1974

Representative Clem Tillion
House of Representatives
Alaska State Legislature
Juneau, Alaska

Re: Senate Bill No. 488: "An Act Relating to the Merger and Consolidation of Corporations."

Dear Representative Tillion:

Senate Bill No. 488, a copy of which is enclosed, was introduced in the Senate last week and hopefully will reach the House and, I presume, your committee in the next few days. May I sincerely request your support of the Bill and its expeditious passage in the House.

The purpose of Senate Bill No. 488 is to expressly authorize triangular or three-party mergers in consolidations in which the stock of a third corporation not a party to the merger or consolidation may be issued in exchange for the merging corporation's stock. (E.G. issuance of a parent corporation's stock to shareholders of a corporation being acquired by the parent's subsidiary corporation.)

The pertinent portions of Alaska's Business Corporation Act have not been amended since their enactment and there presently exists a question whether or not Alaska law permits triangular mergers and consolidations. The Model Business Corporation Act was amended in 1969 to answer the question by expressly authorizing this type of merger or consolidation of corporations.

Triangular mergers are well recognized as an important addition to the flexibility of corporate organization and acquisition. Since 1967 when Delaware authorized triangular mergers and consolidations, thirty-one other states have specifically authorized them. (See attached list.) The desirability of triangular mergers was recognized by the

Model Business Corporation Act when it was amended in 1969 and as you know, Alaska's business corporation laws were originally adopted almost verbatim from the Model Act. Shortly after the State of Delaware first authorized the three-party merger, Congress amended the Internal Revenue Code to allow triangular mergers the same tax-free reorganization status accorded the more traditional two-party merger. If this type of merger is specifically authorized by state statute, they then may qualify as a tax-free reorganization under the Internal Revenue Code and are less likely to be disqualified from the tax-free treatment. The Congress also recognized the acceptability and necessity for providing for triangular mergers and consolidations.

The language of Senate Bill No. 488 authorizing triangular mergers is taken verbatim from the Model Business Corporation Act. The proposed bill does not delete any provision of Alaska's corporation laws and triangular mergers would have all the safeguards and be obliged to fulfill all the requirements for merger now specified by our current laws.

Your assistance and support in the expeditious committee action and House passage of Senate Bill No. 488 will be most appreciated.

Very truly yours,

William A. Greene

William A. Greene
Attorney at Law

WAG/vjb
Enclosure

COOK INLET
CIRI
REGION, INC.

Refer to: #0413
Attn: Ralph A. Johnson

February 12, 1974

Honorable Clem Tillion
House of Representatives
Juneau, Alaska 99801

Dear Representative Tillion:

I am calling your attention to House Joint Resolution No. 69 submitted by Representative Fischer. This resolution relates to the disposal of Federal surplus property. The bill requests the Congress of the United States to enact legislation requiring that in the disposal of Federal surplus property, the point of last Federal use in Alaska be given first priority with political subdivisions on an equal footing with others.

Cook Inlet Region is in the unfortunate position of having most of the land that was similar in kind and character upon which the villages are located, selected by the State of Alaska prior to 1969. Even though we feel that we have lost part of our heritage, we are willing to accept that fact.

However, we are entitled to all surplus Federal lands and some State selected lands as quoted in Section 3(e) of the Act:

> "Public Lands" means all Federal lands and interests therein located in Alaska except: (1) the smallest practicable tract, as determined by the Secretary, enclosing land actually used in connection with the administration of any Federal installations, and (2) land selections of the State of Alaska which have been patented or tentatively approved under section 6(g) of the Alaska Statehood Act, as amended (72 Stat. 341,77 Stat. 233), or identified for selection by the State prior to January 17, 1969."

The conflict that the Secretary of the Interior faces in our situation, is having to give us land with one hand and to withhold it with the other. This dilemma has caused our region additional work and legal expense.

....2

519 D STREET • ANCHORAGE, ALASKA • PHONE 274-7575

We ask your assistance to avoid any such conflict with the State of Alaska. House Bill no. 69, can damage the progress we have made and impede any future selections we may have for land.

We need and ask your support in obtaining all Federal surplus land within the Cook Inlet Region rather than placing stumbling blocks in our road.

Sincerely
COOK INLET REGION, INC.

By ____________________
President

THE AUDUBON CAUSE

THE AUDUBON VIEW

The Defeat of the SST —A Sign of the Times?

In the past eighteen months we have seen at least four good signs that we may be winning the battle against environmental deterioration. Signs that public concern is getting through to the decision-makers.

The first was passage by Congress of the National Environmental Policy Act of 1969, which established the Council on Environmental Quality—to advise the President and Congress and to provide a focus for conservation planning.

The second was the decision not to build a major jetport in a location that would have polluted Everglades National Park and jeopardized the water supplies of South Florida. Some realty speculators and political bitter-enders are still struggling to reverse the public's preliminary triumph, however, and the victory will not be nailed down until a new site for the jetport is agreed upon.

The third good sign was President Nixon's courageous and unprecedented action in halting construction of the nonsensical Cross-Florida Barge Canal. It was the first time in history that the U.S. Army Corps of Engineers and their lobby of ditch-diggers, dredgers, and barge shippers had a large project turned off after millions of dollars had been poured down the rathole.

Does this mean abandonment at last of the time-honored principle of the Congressional pork barrel—that it is always necessary to send good money after bad? Perhaps. Congress made such a decision in voting to stop sinking tax monies into an environmentally dangerous and socially useless supersonic transport.

The SST vote, in our view, was an imperfect response to the best scientific opinion and to a public demand that America must reorder its priorities and reject its blind subservience to technology.

Imperfect because the vote was so close—215 to 204 in the House of Representatives and 51 to 46 in the Senate. This indicates that Congress is still inordinately responsive to the special-interest lobbies and relatively unresponsive to public opinion on crucial issues. New York Senator James L. Buckley, who voted for further public investment in the SST prototype, revealed that his mail had been running five to one against the plane.

The public simply cannot buy the argument that, as a matter of national prestige and world leadership, the United States must be first among nations in committing an economic and environmental blunder of global proportions.

It was, yes, an imperfect response by Congress—but highly encouraging. Another good sign that the environment may be winning.

A Threat to a Unique River and to 250,000 Sandhill Cranes

In November 1967, Congress passed and President Johnson signed a bill authorizing the Nebraska Midstate Irrigation Project. It was an action that received almost no political attention or publicity outside Nebraska. Planning is now underway by Bureau of Reclamation engineers, but no funds for construction have yet been appropriated.

So, fortunately, there is still time for the Department of the Interior and Congress to reconsider the project. It must be reconsidered because resources of national and international significance are involved.

Early each March, great flocks of sandhill cranes start concentrating in the Platte River bottomlands between Lexington and Grand Island, Nebraska. They come from wintering grounds in Texas, New Mexico, and Mexico. By the first of April, as many as 250,000 of these stately birds—more than 90 percent of the continental population of the species—are feeding by day in the wet meadows and marshes and in last season's grainfields. At night, they roost in the shallow waters of the multichanneled river.

Wild ducks and geese by the tens of thousands also use this stretch of the Platte as stopover and staging grounds before moving on to nesting areas in Canada and Alaska. And so do the whooping cranes. This most celebrated of America's endangered species is frequently seen in midmigration along this same big bend of the Platte.

Cranes, waterfowl, plus eagles and shorebirds—all combine, each spring, to make this one of the few great wildlife spectacles left in North America.

The central and essential feature of the Nebraska Midstate Irrigation Project would be a diversion dam and canal near Lexington that would take most of the water out of this vital stretch of the Platte most of the time—and all of the water some of the time. In periods of drought, the Platte would be *dry* the year-round. This drastic ecological change could well reduce the sandhill crane to the status of an endangered species, further jeopardize the bald eagle, and conceivably administer the coup de grâce to the remnant flock of wild whooping cranes.

To charges of ecological destruction, the proponents of such engineering schemes characteristically offer a simplistic rebuttal. The wildlife, they say, can move elsewhere. But where? Look at a map. Where else in the Great Plains or the whole Midwest could 250,000 sandhill cranes find the same combination of feeding grounds and roosting security? Where and how could similar habitat be created—even at enormous cost?

And how do the engineers propose to alter the migratory instinct that for ten thousand years or longer has led the cranes to flock and feed here. And to begin their courtship rituals, before following the warming sun to northern nesting grounds?

We cannot recreate the Platte River, which in this island-studded stretch of its one thousand-mile course is unique among the rivers of America. We must think long and hard before destroying it. Indeed, we must evolve some special kind of protected status for the Platte and its remarkable concentrations of birdlife.

Alaska Pipeline or Canada Pipeline? Or Keep the Oil in the Ground?

Where Alaska's oil is concerned, questions are piling up faster than answers.

The Corps of Engineers and the Environmental Protection Agency have expressed new concern about the effect a trans-Alaska pipeline would have on the environment. Conservationists have added some new twists to their old—and still unanswered—questions. And Canada has added a new proposal that changes the whole situation.

Canadians have made a "major natural gas discovery" in the Arctic and suggest a joint pipeline route from Alaska's North Slope across to Canada, then up the Mackenzie River Valley and on to the U.S. From the view of minimizing environmental impact on the whole continent, combining the two nations' pipelines into one route, not two, would be an advantage. A pipeline all the way from Prudhoe Bay to Chicago—instead of piping the oil across Alaska, loading it on tankers, shipping it to Seattle, unloading it and piping it again—would cut the risk of spills. There are other advantages to a trans-Canada route, not least of which is that it is outside the Alaskan earthquake zone.

But is Canada equipped to provide effective watchdogging in the lonely Northwest provinces? And if not, have the people of the United States the moral right to risk Canada's wilderness to spare their own?

Indeed, Canada's Minister of Energy, Mines, and Resources, J. J. Greene, recently stated that he is not sure it would be in the public interest to release ecological study reports to the public *before* a decision on the safety of the Canada pipeline is made. Moreover, our neighbor to the north lacks even a single strong, nationwide citizen conservation group to insist on ecological safeguards.

Canadians, of course, are nervous about the prospect of the U.S. shipping the North Slope oil by tankers. Traveling either by an Arctic route or down the Pacific shore to Seattle, it is Canadian shoreline that the tankers would skirt.

And in their concern about pollution of northern waters, the Canadians have an ally in the Corps of Engineers, which has pointed out that the proposed trans-Alaska route would cross four major rivers and end up in Prince William Sound. As the guardians of our waterways, the Corps says it has doubts whether—at this point—it could issue the permits required for the pipeline. And EPA Administrator Ruckelshaus has asked the Department of Interior to delay a right-of-way permit.

Meanwhile, conservation organizations, including the National Audubon Society, testified at recent hearings held by the Bureau of Land Management, and challenged the validity of the "national security" arguments for immediate exploitation of the Alaska oil find. A number of other embarrassing questions were asked.

Quite simply, there is no immediate need for that Alaskan oil. But there are irreplaceable wilderness areas to be lost if we make the wrong move. The oil won't go away. It can stay in the ground until we are quite certain we can get it out safely.

The Hazard of DDT Is Beyond Imminent, Mr. Ruckelshaus

We are disappointed that the Environmental Protection Agency administrator, William D. Ruckelshaus, did not see fit to suspend shipment and sale of DDT—after the U.S. Court of Appeals directed him to face up to the problem. He made a similar, temporizing decision on the herbicide 2,4,5-T, included in the same court ruling.

Mr. Ruckelshaus could have ordered suspension while EPA goes through the convoluted procedures of deregistration, as prescribed by the obsolete Federal Insecticide, Fungicide, and Rodenticide Act of 1947. Instead, he cited two principal reasons for his go-slow policy.

It is difficult, he said, to ascribe to DDT an "imminent hazard to the public," which is the language of the law that authorizes suspension. The emphasis in interpretation is on the "public health." And perhaps it is difficult to demonstrate that large numbers of people are about to become sick or die because of exposure to any insecticide.

But there is no question that the hazard of DDT to the natural environment—and therefore to the welfare of mankind—is not merely *imminent*, but *past, present*, and *progressive*. The evidence is overwhelming in the rapid decline of several species of wildlife—some now threatened by extinction—because of reproductive failure induced by DDT contamination.

EPA's other reason for delay was that suspension now of DDT might cause farmers to expose themselves to the highly dangerous parathion, an organophosphate insecticide that is closely akin chemically to the deadly nerve gases. Parathion has been responsible for many deaths in the past two decades, including two youths who were exposed last summer on tobacco farms.

Instead, the fact that parathion can still be purchased by anyone in rural seed and fertilizer stores and applied by untrained workers is further evidence of the weakness of regulatory laws—and the irresponsibility of agriculture agencies that have promoted the use of dangerous pesticides while failing to police them. Parathion should have been removed from the open market years ago.

While temporizing on DDT and 2,4,5-T, Mr. Ruckelshaus did announce the beginning of cancellation proceedings against dieldrin, aldrin, and mirex. All three, like DDT are chlorinated hydrocarbons that persist in the environment and cause widespread ecological damage, for they are concentrated and circulated in nature's food chains. For this action we commend the EPA administrator. Unfortunately, cancellation involves adversary proceedings—similar to that Wisconsin DDT trial—which conservation forces will be obliged to underwrite from all too meager funds.

We also endorse Mr. Ruckelshaus' call to Congress to revise the Insecticide, Fungicide, and Rodenticide Act in order to give him strong controls over the so-called "economic poisons." ■

by CHARLES H. CALLISON

The 92nd Congress convened January 21st, with 67 new Senators and Representatives. In the first few days of the session, the flood of bills was staggering. In one day alone—the second day of the House session—1,954 bills were put in the hopper. It is obvious that there will be more bills on the environment this year than ever before. Even now there are so many that we can only list a few of the more important ones. Here is a brief list, along with the members of the key committees that will be considering them . . .

Environmental class actions—H.R. 49 by Representative John D. Dingell of Michigan and seven colleagues permits private citizens or groups to sue in court against polluters. Referred to the House Committee on Merchant Marine and Fisheries. Similar S. 1032 by Senators Philip A. Hart of Michigan and George S. McGovern of South Dakota went to the Senate Commerce Committee.

Water pollution control—S. 523 by Senator Edmund S. Muskie of Maine and ten colleagues probably is the measure that will be perfected and reported by the Senate Public Works Committee to strengthen the hand of the Environmental Protection Agency in water pollution control. It proposes markedly increased federal aid to states and municipalities and stronger abatement powers, including enforceable effluent standards. Similar powers are proposed by the Nixon Administration in S. 1012, S. 1013, S. 1014, and S. 1015, introduced by Senator John Sherman Cooper of Kentucky and others. Senator Muskie's Subcommittee on Air and Water Pollution began hearings on these bills in March.

Ocean dumping—H.R. 807 by Representative Michael Harrington of Massachusetts and 19 colleagues empowers the Environmental Protection Agency to regulate the discharge or dumping of wastes into U.S. coastal and other waters. To the House Committee on Merchant Marine and Fisheries. Several similar bills are expected in both House and Senate.

Regulation of pesticides—H.R. 4152 by Representatives W. R. Poage of Texas and Page Belcher of Oklahoma is the Nixon Administration bill to rewrite the outmoded Federal Insecticide, Fungicide, and Rodenticide Act and give the Environmental Protection Agency better control over the sale and use of pesticides. The National Audubon Society supported it, and also the identical S. 745 by Senator Robert W. Packwood of Oregon, when invited to testify in March before the House Committee on Agriculture and a Senate agricultural subcommittee. A similar bill, S. 660, introduced by Senator Gaylord Nelson of Wisconsin, is in some ways better than S. 745. It also is before the Senate Committee on Agriculture and Forestry.

Ban on DDT—S. 272 by Senator Nelson would prohibit the sale or interstate shipment of DDT in the United States. To the Senate Committee on Agriculture and Forestry.

Ban on chlorinated hydrocarbons—S. 232 by Senator Nelson would ban aldrin, chlordane, DDD/TDE, dieldrin, endrin, heptachlor, lindane, and toxaphene. All are long-lasting, environmentally polluting chlorinated hydrocarbon insecticides. To the Senate Committee on Agriculture and Forestry.

Restrictions on pesticide exports—H.R. 1077 by Representative Ogden R. Reid of New York also prohibits U.S. sale or shipment of DDT, dieldrin, aldrin, endrin, heptachlor, toxaphene, chlordane, lindane, or DDE. It would go further by allowing exports only to countries whose governments specifically request supplies. To the House Committee on Agriculture.

Stream channelization reform—H.R. 200 by Representative Ben Blackburn of Georgia amends the Fish and Wildlife Coordination Act to prevent U.S. Soil Conservation Service watershed projects from destroying the ecology of natural streams and wetlands. To the House Committee on Merchant Marine and Fisheries.

Public Lands Organic Act—S. 921 by Senator Henry M. Jackson of Washington and seven colleagues provides a new "organic act" for administration of the public domain lands, which are chiefly in the western states and Alaska. It repeals the obsolete general mining law of 1872, under which public lands have been shredded, and substitutes a controlled mineral leasing system. Although they probably will recommend strengthening amendments, most conservation organizations—including the National Audubon Society—will support S. 921. To the Senate Committee on Interior and Insular Affairs.

National land use policy—S. 632 by Senator Jackson and six colleagues would broaden the authority of the Water Resources Council and river basin commissions to include land use planning, and also would provide financial assistance to the states for land use planning within federal guidelines. Senator Jackson also introduced S. 992 as recommended by President Nixon to provide planning grants to the states through the Secretary of the Interior. Representative Wayne N. Aspinall of Colorado introduced the Administration measure as H.R. 4332, and also his own H.R. 2449, which is similar except for sanctions in the form of reduced federal aid for highways, recreation lands, etc., for states that fail to complete their planning programs on time. Referred to the Senate and House Committees on Interior and Insular Affairs.

Urban mass transit—H.R. 55 by Representative William F. Ryan of

New York permits a state to elect to use funds from the Highway Trust Fund for urban mass transportation facilities. To House Committee on Public Works.

Protection of hawks and owls—H.R. 5821 by Representative Dingell and nine colleagues extends to hawks and owls the same federal protection now accorded bald and golden eagles. Referred to the House Committee on Merchant Marine and Fisheries.

Rare species—H.R. 3616 by Mr. Dingell and seven colleagues amends the Endangered Species Act of 1969 to extend its provisions to species that are "rare" and need protection although they may not be immediately "threatened with extinction." To the House Committee on Merchant Marine and Fisheries.

Wild predatory mammals—H.R. 689 by Mr. Dingell and six colleagues proposes to reform the predator control program of the Bureau of Sport Fisheries and Wildlife by reducing the army of federal trappers and poisoners and substituting an "extension trapper" system in cooperation with the states. To the House Committee on Merchant Marine and Fisheries. Similar S. 273 by Senator Nelson is before the Commerce Committee.

San Francisco Bay Refuge—H.R. 111 by Representative Don Edwards of San Jose and seven California colleagues authorizes a San Francisco Bay National Wildlife Refuge of 21,662 acres, a plan that has the enthusiastic backing of Bay area Audubon societies. To the House Committee on Merchant Marine and Fisheries.

Western Hemisphere wildlife—S. 249 by Senator Alan Cranston of California implements the long-neglected Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, a treaty which the United States signed with Latin American countries in 1940. It would prohibit the hunting, trapping, or sale of a number of rare and endangered kinds of wildlife not adequately protected by federal or state law. To the Senate Commerce Committee.

Hunting from aircraft—H.R. 5060 by Representative John P. Saylor of Pennsylvania and 21 colleagues prohibits shooting wildlife from aircraft. The House passed a similar measure last year but the Senate amended it to death. To the House Committee on Merchant Marine and Fisheries.

Senate Committee on Agriculture and Forestry

Democrats: Herman E. Talmadge (Georgia), chairman, Allen J. Ellender (Louisiana), James O. Eastland (Mississippi), B. Everett Jordan (North Carolina), George McGovern (South Dakota), James B. Allen (Alabama), Hubert H. Humphrey (Minnesota), Lawton Chiles (Florida).

Republicans: Jack Miller (Iowa), George D. Aiken (Vermont), Milton R. Young (North Dakota), Carl T. Curtis (Nebraska), Robert Dole (Kansas), Henry Bellmon (Oklahoma).

Senate Commerce Committee

Democrats: Warren G. Magnuson (Washington), chairman, John O. Pastore (Rhode Island), Vance Hartke (Indiana), Philip A. Hart (Michigan), Howard W. Cannon (Nevada), Russell B. Long (Louisiana), Frank E. Moss (Utah), Ernest F. Hollings (South Carolina), Daniel K. Inouye (Hawaii), William B. Spong Jr. (Virginia).

Republicans: Norris Cotton (New Hampshire), Winston L. Prouty (Vermont), James B. Pearson (Kansas), Robert P. Griffin (Michigan), Howard H. Baker Jr. (Tennessee), Marlow W. Cook (Kentucky), Mark O. Hatfield (Oregon), Ted Stevens (Alaska).

Senate Committee on Interior and Insular Affairs

Democrats: Henry M. Jackson (Washington), chairman, Clinton P. Anderson (New Mexico), Alan Bible (Nevada), Frank Church (Idaho), Frank E. Moss (Utah), Quentin N. Burdick (North Dakota), George McGovern (South Dakota), Lee Metcalf (Montana), Mike Gravel (Alaska).

Republicans: Gordon Allott (Colorado), Len B. Jordan (Idaho), Paul J. Fannin (Arizona), Clifford P. Hansen (Wyoming), Mark O. Hatfield (Oregon), Ted Stevens (Alaska), Henry Bellmon (Oklahoma).

Senate Committee On Public Works

Democrats: Jennings Randolph (West Virginia), chairman, Edmund S. Muskie (Maine), B. Everett Jordan (North Carolina), Birch Bayh (Indiana), Joseph M. Montoya (New Mexico), Thomas F. Eagleton (Missouri), Mike Gravel (Alaska), John V. Tunney (California), Lloyd Bentsen (Texas).

Republicans: John Sherman Cooper (Kentucky), J. Caleb Boggs (Delaware), Howard H. Baker Jr. (Tennessee), Robert Dole (Kansas), J. Glenn Beall Jr. (Maryland), James L. Buckley (New York), Lowell P. Weicker Jr. (Connecticut).

House Committee On Agriculture

Democrats: W. R. Poage (Texas), chairman, John L. McMillan (South Carolina), Thomas G. Abernethy (Mississippi), Watkins M. Abbitt (Virginia), Frank A. Stubblefield (Kentucky), Graham Purcell (Texas), Thomas S. Foley (Washington), Eligio de la Garza (Texas), Joseph P. Vigorito (Pennsylvania), Walter B. Jones (North Carolina), B. F. Sisk (California), Bill Alexander (Arkansas), Bill D. Burlison (Missouri), John R. Rarick (Louisiana), Ed Jones (Tennessee), John Melcher (Montana), John G. Dow (New York), Dawson Mathis (Georgia), Bob Bergland (Minnesota), Arthur A. Link (North Dakota), Frank E. Denholm (South Dakota), Jorge L. Cordova (Puerto Rico).

Republicans: Page Belcher (Oklahoma), Charles M. Teague (California), William C. Wampler (Virginia), George A. Goodling (Pennsylvania), Clarence E. Miller (Ohio), Robert B. Mathias (California), Wiley Mayne (Iowa), John M. Zwach (Minnesota), Robert Price (Texas), Keith G. Sebelius (Kansas), Wilmer Mizell (North Carolina), Paul Findley (Illinois), John Kyl (Iowa), J. Kenneth Robinson (Virginia).

House Committee On Interior and Insular Affairs

Democrats: Wayne Aspinall (Colorado), chairman, James A. Haley (Florida), Ed Edmondson (Oklahoma), Walter S. Baring (Nevada), Roy A. Taylor (North Carolina), Harold T. Johnson (California), Morris K. Udall (Arizona), Phillip Burton (California), Thomas S. Foley (Washington), Robert W. Kastenmeier (Wisconsin), James G. O'Hara (Michigan), William F. Ryan (New York), Patsy T. Mink (Hawaii), James Kee (West Virginia), Lloyd Meeds (Washington), Abraham Kazen Jr. (Texas), Bill D. Burlison (Missouri), Robert G. Stephens Jr. (Georgia), Joseph P. Vigorito (Pennsylvania), John Melcher (Montana), Teno Roncalio (Wyoming), N. J. Begich (Alaska), James G. Abourezk (South Dakota), Jorge L. Cordova (Puerto Rico).

Republicans: John P. Saylor (Pennsylvania), Craig Hosmer (California), Joe Skubitz (Kansas), John Kyl (Iowa), Sam Steiger (Arizona), James A. McClure (Idaho), Don H. Clausen (California), Philip E. Ruppe (Michigan), John N. Happy Camp (Oklahoma), Manuel Lujan (New Mexico), Sherman P. Lloyd (Utah), John Dellenback (Oregon), Keith G. Sebelius (Kansas), James D. McKevitt, (Colorado), John H. Terry (New York).

House Committee On Merchant Marine and Fisheries

Democrats: Edward A. Garmatz (Maryland), chairman, Leonor K. Sullivan (Missouri), Frank M. Clark (Pennsylvania), Thomas L. Ashley (Ohio), John D. Dingell (Michigan), Alton Lennon (North Carolina), Thomas N. Downing (Virginia), James A. Byrne (Pennsylvania), Paul G. Rogers (Florida), Frank A. Stubblefield (Kentucky), John M. Murphy (New York), Joseph E. Karth (Minnesota), Walter B. Jones (North Carolina), Robert L. Leggett (California), Speedy O. Long (Louisiana), Mario Biaggi (New York), Charles H. Griffin (Mississippi), Glenn M. Anderson (California), Eligio de la Garza (Texas), Peter N. Kyros (Maine), Robert O. Tiernan (Rhode Island), James V. Stanton (Ohio).

Republicans: Thomas M. Pelly (Washington), William S. Mailliard (California), Charles A. Mosher (Ohio), James R. Grover Jr. (New York), Hastings Keith (Massachusetts), Philip E. Ruppe (Michigan), George A. Goodling (Pennsylvania), William G. Bray (Indiana), Paul N. McCloskey Jr. (California), Jack H. McDonald (Michigan), M. G. Snyder (Kentucky), Robert H. Steele (Connecticut), Edwin B. Forsythe (New Jersey), Pierre S. du Pont (Delaware).

House Committee On Public Works

Democrats: John A. Blatnik (Minnesota), chairman, Robert E. Jones (Alabama), John C. Kluczynski (Illinois), Jim Wright (Texas), Kenneth J. Gray (Illinois), Frank M. Clark (Pennsylvania), Ed Edmondson (Oklahoma), Harold T. Johnson (California), William Jennings Bryan Dorn (South Carolina), David N. Henderson (North Carolina), Ray Roberts (Texas), James Kee (West Virginia), James J. Howard (New Jersey), Glenn M. Anderson (California), Patrick T. Caffery (Louisiana), Robert A. Roe (New Jersey), George W. Collins (Illinois), Teno Roncalio (Wyoming), N. J. Begich (Alaska), Mike McCormack (Washington), Charles B. Rangel (New York), James V. Stanton (Ohio), Bella S. Abzug (New York).

Republicans: William H. Harsha (Ohio), James R. Grover Jr. (New York), James C. Cleveland (New Hampshire), Don H. Clausen (California), Fred Schwengel (Iowa), M. G. Snyder (Kentucky), Roger H. Zion (Indiana), Jack H. McDonald (Michigan), John Paul Hammerschmidt (Arkansas), Clarence E. Miller (Ohio), Wilmer Mizell (North Carolina), John H. Terry (New York), Charles Thone (Nebraska), LaMar Baker (Tennessee).

AUDUBON ACTION

The Real Gypsy Moth Problem: Spray Planes with Insecticides

The worst damage done by the gypsy moth is in the minds of men conditioned to seek a chemical solution for every insect problem—and in the ecological devastation caused by frenetic and unnecessary spraying programs. To counter a plan by the Westchester County government to blanket all county parks with the insecticide Sevin (carbaryl) this summer, local Audubon chapters combined forces in an education program.

Scarsdale Audubon Society compiled an impressive fact sheet to explain why the spraying plan was unnecessary and unsound, and mailed it to Commissioner Charles Pound of the county Department of Parks, Recreation, and Conservation, and to all county legislators. Saw Mill River Audubon Society produced an impressive documented report by its vice-president, Dr. Stanley C. Wecker, an associate professor of biology at the City University of New York—a paper that will be published for wider distribution by the National Audubon Society. Finally these chapters, plus the Bedford Audubon Society and Hudson Valley Audubon Society, joined Westchester garden clubs and civic groups in circulating a leaflet entitled, "Do's and Don'ts for Controlling the Gypsy Moths."

Victory at Honey Hollow: Compromise on Powerline Route

A ruling by the Delaware River Basin Commission has removed at last the threat of a 500,000-volt powerline through the heart of Honey Hollow Watershed National Historic Landmark in Bucks County, Pennsylvania. Exercising its authority over "water related resources" and "elements of its comprehensive plan," the commission told the Philadelphia Electric Company to accept a compromise route that will cross a corner of the scenic watershed but leave intact and unspoiled the central portion where Bucks County environmentalists have planned a major conservation education center.

Bucks County Audubon Society has been allied with the Honey Hollow Watershed Association, Bucks County Conservancy, and other local and national conservation organizations in a long fight to preserve the integrity of the historic landmark (See "Death Row," *Audubon*, January 1970).

Next steps are to acquire the lands and easements required to implement the nature center plan. A feasibility study for the center was made by the National Audubon Society.

Tahoma Audubon Society Fights for Nisqually Delta

"There is not, but there should be, a Department of Solitude. It is one natural resource still undowered by alphabet and is recognized as valuable only by birds, birdwatchers and view-watchers. Along the crest of the west bank of the Nisqually Delta lies a developer's dream. And perhaps an ecologist's nightmare. For people like to build on crests and look across the natural terrain to distant vistas of reach and sound, rivers and islands, woods and wildlife. There, with their own Panavision screen, engulfed in distant solitude, they feel a kinship to the natural environment.

Thus Washington's Tahoma Audubon Society contends that a "view loss" worth at least \$2,120,000 is among the natural resources to be destroyed if the Port of Tacoma succeeds in its plan to turn the delta of the Nisqually River into a deepwater port for industrial development. Other preliminary calculations: Loss of waterfowl, \$18,750,000; loss of ground cover, \$1,097,000; loss of trees, \$6,657,000; loss of soil, \$756,000; loss of CO, reduction capacity, \$10,763,000; and loss of estuary to marine ecosystem, great but unestimated pending further study.

To alert local officialdom and the State of Washington about the environmental values at stake in the port plan, the Audubon chapter published a "Prospectus to Retain and Enhance the Nisqually Delta as a Natural Biological Laboratory and Wildlife Refuge." Robert W. Ramsey, landscape architect, was editor, and contributors included Charles D. Bronson III, landscape architect; William A. Daugherty, engineer and former Army officer; Charles Dolan, civil engineer; Mrs. Stanley R. Engle, conservationist and charter president of the Tahoma Audubon Society; Dr. Ernest L. Karlstrom, ecologist; Dr. Fred L. Tobiason, research chemist; Marty Wade, illustrator, and Dr. Gordon D. Alcorn and John Slipp, naturalists.

A struggle lies ahead to save the Nisqually Delta, the last unspoiled area of its kind on Puget Sound—at the mouth of the last unpolluted river flowing into the Sound.

Action Lines

Tucson Audubon Society is challenging the economics as well as the ecological effects of a \$50 million channelization project proposed for the lower Gila River . . . At Jamestown, North Dakota, the new ENPRO (Environmental Protection) Chapter of the National Audubon Society published full-page newspaper ads against a barge canal plan that would turn 600 miles of the James River into a "sterile ditch" . . . Green Mountain Audubon Society was in the thick of campaigns to preserve the Victory Bog and Camel's Hump areas, now owned by the State of Vermont . . . "Happy Birthday, Earthday" letters—printed on recycled paper, of course—were sent in April by Pennsylvania's Valley Forge Audubon Society members to business leaders, politicians, "favorite polluters . . ."

The Ohio Audubon Council compiled and distributed an *Ohio Legislative Guide* listing names, addresses and districts of state legislators and U.S. senators and representatives . . . Merrymeeting Audubon Society at Brunswick, Maine, has published a *Maine Conservation Directory*. It includes citizen conservation groups, state agencies, and educational institutions . . . National Audubon Society was joined by its large Collier County chapter in trying to block a dredge-and-fill development that threatens our Rookery Bay Sanctuary at Naples, Florida . . .

Strip-mine devastation in eastern Kentucky was viewed firsthand by 127 concerned citizens on a tour sponsored by Louisville Audubon Society. The trip got wide publicity . . . At the urging of the Arkansas Audubon Society, the Arkansas Wood Products Association has "requested and implored" its members who own pinelands to preserve nesting trees used by the endangered red-cockaded woodpecker . . . Orleans Audubon Society sells a "Birding Information Kit" for \$1 to members and \$2 to nonmember birders visiting in the New Orleans area . . . One of our newer chapers, Coastal Georgia Audubon Society, was among the parties to a court action that delayed a mirex fire ant spraying program there. The state agreed to halt spraying until after the case is heard, making it too late for any spring program. ■

econotes

edited by ROXANNA SAYRE

The last commercial whaling operation in the U.S. will be closed down if an order by Secretary of Commerce Maurice H. Stans stands. But the Del Monte Fishing Company of Richmond, California, is contesting the decision. The firm argues that it kills only a small number of the whales slaughtered around the world every year.

The U.S. Supreme Court has upheld New York State's endangered species law. Shoe companies had challenged the constitutionality of the Mason Act, which forbids the sale of all alligator and crocodile products. The big cats and several other threatened animals are likewise protected. Having exhausted all avenues of appeal to the courts, the shoemakers were trying to amend the law in the frantic closing days of the state legislature. They want to legalize some crocodilian products.

The bounty system must be finally beaten at the local level. According to Missouri conservationist Charles Laun, who keeps nationwide bounty statistics, there are only seven statewide bounty systems left. But in 23 states, bounties are being paid by at least 400 counties. Thus, unless state legislatures can be persuaded to outlaw *all* bounty payments, the antibounty campaign now depends on local initiative by concerned citizens. For a 12-page *Guide for the Removal of Wildlife Bounties*, send an eight-cent stamp to: Bounty Information Service, Stephens College Post Office, Columbia, Missouri.

The scenery in our national parks will include more policemen this summer. Director George B. Hartzog Jr. is hiring 40 more men to handle crowds at what the National Park Service considers problem areas. They include Lake Mead National Recreation Area, Cape Cod National Seashore, and Yosemite, Yellowstone, and Grand Canyon National Parks. Meanwhile, the present staffs at these parks will receive special law enforcement training. So will all park ranger candidates, some seasonal rangers, and selected park supervisors.

The Golden Eagle Passport is back after a year's absence—but it may not stay around long. The 91st Congress authorized the return of the family park entrance permit and raised its price from $7 to $10. But the Interior Department, watching its budget, has recommended to Congress that annual park passes be discontinued. Instead, higher individual fees would be levied and extended to cover areas now free. Meanwhile, the Golden Passport is good for a year and admits the purchaser, his car, and its occupants to more than 4,000 public land areas.

The new Undersecretary of Interior is Dr. William T. Pecora, chief of the U.S. Geological Survey and a career government scientist since 1939. His was the second name proposed as second in command to Secretary Rogers C. B. Morton. First choice was Dr. James R. Schlesinger, assistant director of the Office of Management and Budget. He was rejected by powerful Congressmen from Western states; they felt his background in national security and defense matters did not give him expertise to deal with Interior problems.

Who pollutes the Miami River? Miami International Airport is the major contributor. What would have happened if an Everglades jetport had been approved? Instead of the "clean enclave" that the Dade County Port Authority said it could operate, it probably would have proved impossible to control the polluters. The Port Authority admits that "some problems will probably always exist in a facility which . . . is comparable to a city of approximately 30,000 persons . . . and which is comprised of multiple lessee operations, functioning 24 hours a day, 365 days a year, utilizing several thousands of people." A Dade County Pollution Control study of the Miami River showed that storm drains at the airport obviously are being used as sewers, because they contain "excessively high" amounts of oil, detergents, and human wastes. One time, inspectors caught a major airline, Delta, dumping sanitary wastes directly into a storm drain. And findings like a high reading of 1,353 parts per million of oil can be explained by the routine flushing away of jet fuel spillages.

The wonders of Biscayne Bay National Monument could be destroyed in a few years. This warning applies as well to John Pennekamp Coral Reef State Park and to every reef from Miami to Key West—if development of South Florida continues uncontrolled. The prediction comes from writer-diver Bill Barada, who spent a year documenting his charges for *Skin Diving* magazine. More than 50 million gallons of raw sewage are dumped into the sea daily by Miami. The filth lies a foot deep on the ocean floor and washes back on swimmers. North Biscayne Bay is a giant sewage-filled bathtub, fed by ditches and canals that are "open sewers." At low tide this crud is sucked out and spread along the shore and over reefs. In many areas, little life remains. Moreover, south along the Keys sediment from countless dredge-and-fill operations covers and kills corals. And now there's the added threat of a channel and deepwater port—a $70 million industrial complex—between the national monument and Pennekamp Park. Not to forget thermal pollution of Card Sound from Florida Power and Light's Turkey Point installation. And the state's new bulkhead line ruling that gives developers free rein to destroy mangrove swamps and salt marshes.

A second Panama Canal could change the ecology of the whole Atlantic. Despite this warning from scientists, an Atlantic-Pacific Interoceanic Canal Study Commission has told President Nixon that such a canal should be built and ought to be started by 1975. The warning has come from a National Academy of Sciences panel. It recommends that 12 to 14 years of biological research be carried out to be certain the canal would not prove an ecological and economic disaster. The new canal would be located near the present one but at sea level, without locks. Because the Pacific Ocean is somewhat higher, the opening would allow water to flow into the Atlantic. If the oceans should be connected without some massive barrier, no one knows what might happen. Pacific invaders like poisonous sea snakes and coral-eating crown-of-thorns starfish could ruin both the ecological balance and the tourist trade in the Caribbean. New fungi and bacteria might disrupt Central American shrimp catches and other fisheries. And, if species in one ocean prove more vigorous than those of the other, they could invade and kill off between 5,000 and 6,000 species of plants and animals.

A copper mine in Puerto Rico that threatens bioluminescent bays and a national forest is the target of a joint environmental action by six large Protestant denominations. The churches—Episcopal, United Church of Christ, United Methodist, United Presbyterian, Lutheran Church in America, and American Baptist—own small blocks of stock in the two companies planning to exploit $3 billion in copper deposits in the island's central mountain region. And they are campaigning to delay the mining project until environmental safeguards are guaranteed. But the companies—Kennecott Copper Corporation and American Metal Climax Corporation—declined to participate in a hearing held by the churches. Meanwhile, a report to the island's Environmental Quality Board revealed that mining wastes would be piped overland and dumped two miles at sea; ocean currents would carry them to famous (and already threatened) bioluminescent bays 30 miles away. And the smelter would dump 70 tons of sulfur dioxide a day into the air over the beautiful Guanica National Forest. The two firms had engaged in secret negotiations with the Puerto Rican government since 1964—until a newspaper broke the story. The churches have now launched a proxy fight to force the companies to assume environmental responsibilities.

A third bid for an oil refinery site is being made at Searsport, Maine, by a firm that calls itself Maine Clean Fuels Inc. Despite the name, the company has been rejected twice in its search for a place to put a $150 million refinery for the desulfurization of fuel oil. Its first try was at Riverhead, Long Island, under the name of its parent company, Fuel Desulfurization Inc. Conservationists opposed the plant and the necessary zoning change never was passed. Then, last summer, under the name of Maine Clean Fuels, the firm sought to locate in South Portland, Maine. But the city council voted down the project before the company could even seek approval from the Maine Environmental Improvement Commission. Under a new law, the commission must approve projects of more than 20 acres that could harm the environment. The Searsport proposal is now under consideration. Public hearings were completed early in April and the commission then had 45 days to decide about the company's latest search for a home.

The first ocean dumping ban has gone into effect—in the San Francisco area. Dumping is now forbidden within a big triangle some miles out from the Golden Gate, an area of crab nursery grounds where the catch is showing a drastic decline. Fines for violations range up to $6,000 a day. The aim of the California regional water board that ordered the ban is to halt all ocean disposal of wastes in the San Francisco area, unless they can be proved harmless. In recent years both private firms and federal agencies have dumped millions of gallons of wastes into the ocean there—chemicals, cannery garbage, radioactive containers, and explosives.

Thermal pollution curbs have been set for Lake Michigan. The restrictions were adopted in a federally convened conference attended by officials of the four states bordering on the lake—Illinois, Indiana, Michigan, and Wisconsin. The agreement forbids discharge of heated water that would raise temperatures more than three degrees above normal within 1,000 feet of an outlet pipe. This means that both nuclear and fossil fuel power plants will have to install cooling facilities. Before the conference, Northern Indiana Public Service Company broke the impasse by voluntarily agreeing to install cooling towers at its Bailly nuclear plant east of Gary. In Michigan, conservation groups won a victory when Consumers Power Company agreed on both cooling towers and an improved nuclear waste system for its Palisades plant at South Haven. The groups had intervened last May 15th to hold up licensing of the plant, and the delay had been costing the company $105,000 per day. Similar action is planned against two Wisconsin plants. While the new thermal pollution restrictions were accepted by three states, Illinois refused to comply and the federal Environmental Protection Agency may have to intervene. An Illinois official contended that its one nuclear plant, at Zion, would not heat the water enough to warrant cooling towers, and that it was taking action to ban any more such plants on the lake.

Russia is building six giant nuclear powerplants—three of them more than twice the size of any in this country. The Soviets have not had any heated debates over the environmental effects of atomic power; the delay has been for economic reasons only. Their new five-year plan includes giant reactors of a million kilowatts, larger than any in the West. Three of these will be double that size—two units of a million kilowatts each—at Leningrad, Kursk, and near Kiev. At present the Soviets have only three of the world's 80 nuclear generating stations.

The Soviets have been silent about oil pollution incidents because they are planning a pipeline project even more ambitious and potentially damaging than the one proposed for Alaska. They are thinking in terms of large-diameter pipelines, for both oil and gas, that would stretch from Siberia as far as France, West Germany, and Italy. But the Russians already are having trouble with a 40-inch pipeline running along the Ural River and the Caspian Sea. Opened last year, the 800-mile line—which carries crude oil to a refinery—developed several leaks during the severe winter cold. Bulldozers threw up earthwork banks to contain the spilled oil. But with the spring thaw the oil may escape to damage the rich sturgeon fishing grounds in the Caspian Sea, spread over fertile farmlands, and be carried into the Ural River.

Make-your-own gas and oil projects are being funded by several major companies in anticipation of future shortages. Consolidated Natural Gas Company, a major gas utility already plagued by shortages, wants to build an experimental gassification plant. The plant, when technological problems are solved, would convert coal into pipeline gas. And in anticipation of this breakthrough, Consolidated has options on areas in Pennsylvania and

West Virginia that contain more than 200 million tons of coal. Five oil companies are supporting research into a chemical process that would convert pulverized coal into synthetic crude or industrial grade fuel oil. The crude could then be refined into gasoline and other petroleum products. The five oil companies are: Atlantic Richfield, Continental, Gulf, Sun, and Humble.

Will the ultimate nonpolluting car be a windup model? A few scientists think so and they have a $190,000 government contract to develop one at Johns Hopkins University—as the automakers stand by scoffing. The developers say it would run by "flywheel energy storage," but in fact it is a sophisticated version of a child's windup toy—without the big brass key. Its motor would be a 222-pound, free-spinning disc or flywheel that would rotate at 2,000 miles an hour, its energy converted into electricity to propel the car. Practical only for city or suburban driving, it would have to be plugged in to an electrical outlet and "rewound" every 100 miles. Automakers claim the high-speed flywheel would be dangerous, especially in an accident, but the scientists say it would disintegrate harmlessly. Two problems they haven't solved: how to generate the extra electricity without more polluting powerplants, and building the actual car, which exists only on the drawing board.

Antipollution compliance will not mean employe layoffs, Union Carbide Corporation has decided. Earlier, the company had warned that it might have to lay off as many as 625 employes and shut down some operations in order to comply with the Environmental Protection Agency's deadlines for pollution abatement at its ferroalloy plant in Marietta, Ohio. It now says it has met EPA's April 1st deadline for a 40 percent reduction of sulfur dioxide emissions by switching to low-sulfur fuel. It has on hand enough higher quality coal to comply with a 25 percent reduction in fly ash by September, and is searching for additional supplies to reduce fly ash emissions by 70 percent by April 1972. Compliance with federal deadlines, the company says, is costing about $2.3 million this year.

United States Steel faces more pollution charges. The company, which has been in court in both Illinois and Indiana, is one of four concerns that the Justice Department has charged with polluting the Ohio and Monongahela rivers in the Pittsburgh area. Legal actions charging a total of 73 violations of the 1899 Refuse Act were filed in federal district court against U.S. Steel, Jones & Laughlin Steel Corporation, Wheeling-Pittsburgh Steel Corporation, and Pennsylvania Industrial Chemical Corporation. They are accused of discharging such poisons as acid and chrome wastes, cyanide, iron, and oil. Each of the 73 counts carries a maximum fine of $2,500.

An outlay of $20 million to stop pulp mill pollution will be made by ITT Rayonier under an agreement that halted a federal suit against the firm. Rayonier was facing charges arising from the dumping of wastes from its Port Angeles, Washington, plant into the harbor there. Action against the firm began when the Environmental Defense Fund requested that the company's contract with Bonneville Power Administration be canceled. The Environmental Protection Agency then investigated the complaint and prepared a suit. Rayonier buys power from the federal project under a contract that expires in 1983 and which can be canceled if its waste products are found to pollute the waters or harm aquatic life. EDF claimed an extensive four-year study of the harbor showed that Rayonier was contributing about 92 percent of the wastes that "have produced acute and chronic damages to marine life," including salmon, oysters, and a long list of commercially valuable sea life. Rayonier was the only pulp mill on Puget Sound that had fought compliance with an earlier state order to remove 80 percent of the sulfite liquor from wastes before they are dumped. It will build the necessary treatment facilities by June 30, 1974.

A paper company has agreed to close an obsolete mill ahead of schedule in order to halt its pollution of Lake Champlain. The mill, owned by International Paper Company, was scheduled to shut down this summer, but a court order pushed the time up to April 24th. The pulp operations of the mill at Ticonderoga, New York, which the company had said were causing 70 percent of its pollution of the lake, were halted last December. Operations are being shifted to a new mill four miles to the north that has $5 million worth of pollution-control equipment. The State of Vermont, however, is still suing the paper company, and the State of New York, to force them to clean up the sludge beds in the lake that have been built up over the years from the mill's discharges.

A road through Overton Park in Memphis has been halted again, this time by the U.S. Supreme Court. It was at least a temporary victory for conservationists, who have repeatedly gone to court to reroute Interstate 40. (See "Death Row," *Audubon*, January 1970.) The high court ruled that the case must go back to a federal district court for review to determine whether, in authorizing the route through Overton Park, the decisions of two Secretaries of Transportation, Alan S. Boyd and John A. Volpe, had been "arbitrary, capricious, or otherwise not in accordance with law." The Supreme Court noted it was not clear that Boyd and Volpe had considered all "feasible and prudent alternatives" to using public parkland. Federal law states that funds for roads through parks should be approved in "only the most unusual situations." The route for the six-lane highway was first set in 1958 and would take 26 acres from one of our finest city parks—one that contains 170 acres of forest and an abundance of wildlife. The National Audubon Society was a party to the suit, along with Citizens to Preserve Overton Park and the Sierra Club.

The U.S. Supreme Court will decide the Mineral King case, probably in the fall. The Sierra Club has been attempting for two years to prevent construction by Walt Disney Productions of a giant ski and recreation complex in California's Mineral King Valley. When the case was first heard in U.S. District Court, the judge ruled that the Sierra Club had the right, or "standing," to sue because of its interest in conservation. It also issued a temporary injunction barring the Secretaries of Interior and Agriculture from issuing permits for construction and for a new access highway. The U.S. Court of Appeals later reversed the decision, denying the Sierra Club's right to sue and affirming the validity of the permits issued. The club then appealed to the Supreme Court. The Disney development would occupy more than 13,000 acres of land in Sequoia National Forest and Sequoia National Wildlife Refuge, as well as necessitating an access highway and power transmission lines through Sequoia National Park.

A court ruling has halted work on the Cossatot River dam in Arkansas, a 13-year-old Corps of Engineers flood-control project. (See "Death Row," *Audubon,* September 1970.) This is believed to be the first permanent, or after-trial, injunction ever entered against the Engineers. And it is the first time that such an action, brought under the National Environmental Policy Act of 1969, has reached this point in court. (The recent halting of the Cross-Florida Barge Canal came by Presidential order after only a preliminary injunction had been issued.) The plaintiffs, the Environmental Defense Fund, the Arkansas Audubon Society, the Ozark Society, the Arkansas Ecology Center, and two individuals, brought action last winter to halt construction of Gillham Dam. They contended it would destroy the last major free-flowing stream in the Ouachita Mountains and produce no benefits, not even the flood-control benefits claimed as its justification.

The Corps had spent $9 million in preliminary construction, but contracts for the Cossatot dam itself were not to have been awarded until last December 22nd. The Corps voluntarily halted further work, pending final settlement of the court case. In his decision, federal District Court Judge G. Thomas Eisele said the Corps' two environmental impact statements fell far short of the requirements of the law, and ruled that such statements must consider all environmental changes resulting from the dam's construction as well as explore alternatives, and include comments from all federal, state, and local agencies that would be affected by the project. While the judge admitted that damming the Cossatot would reduce the "diversity and individual choice" that the act declares to be desirable, he did not agree with the conservationists' view that this gave the courts the power to halt the dam altogether—only the power to see that all the procedural requirements of the act were complied with. The government was expected to appeal.

Half the battle of Joyce Kilmer Memorial Forest has been won—a highway will not go through the famous North Carolina wilderness. The U.S. Forest Service and the Federal Highway Administration announced they had reached an agreement not to defile the memorial to the poet who wrote "Trees." But since no final decision has been made on an alternate routing, the road still could plow through a second roadless area, a move that conservationists also oppose. This second area is the adjacent Slickrock tract, which should be left roadless and combined with the Joyce Kilmer Forest to be set aside as part of the National Wilderness Preservation System.

New York City's Jamaica Bay should remain a sanctuary—not be paved over to make additional runways for Kennedy Airport. This finding by a National Academy of Sciences study group has been accepted by the Port of New York Authority, which operates the airport and which commissioned the study. The findings generally pleased a coalition of conservation groups that has been fighting to preserve the bay as a wildlife sanctuary and make it part of a proposed Gateway National Seashore for the metropolitan area. Instead of extending the present runways, the NAS study suggested that a combination of better technology and more efficient use could solve the problems of airport congestion that now exist. It recommended a modernized airport traffic control system, consolidation of present flight schedules, and limiting use of the airport by private planes. The one controversial part of the report is a section that recommends the bay not be made part of the national seashore but be retained by the city and developed both as a wildlife refuge and a recreation area—with swimming, fishing, and boating—for nearby inner-city residents. Under the Gateway plan, these people would have to travel some distance to reach a beach.

Wild river status for the Middle Snake may be the only way to protect it from the dam-builders. A Federal Power Commission examiner has recommended that a combine of Western power companies be allowed to build the proposed Mountain Sheep Dam there—in contrast to recent advice against it by FPC attorneys. But the recommendation also proposes that dam construction be delayed until 1975 to give time for this area of the river, along the Oregon–Idaho border, to be added to the nation's wild rivers system. Both the Interior and Agriculture Departments favor this. While this latest FPC recommendation recognizes that such a dam would destroy a spectacularly beautiful part of the country, it also claims that future Western power needs would justify its destruction. And it recommends a second dam at a site called Pleasant Valley.

A so-called non-polluting detergent was seized as "toxic," but is now going back on the market after the manufacturer agreed to add a warning to the label. The non-phosphate detergent, sold under the names "Ecolo-G" and "Bohack No-Phosphate," was confiscated by the Food and Drug Administration after tests showed it contained a "hazardous substance," sodium metasilicate, that irritated people's eyes and skin and killed half of the test animals that were fed small quantities of it. The manufacturer, North American Chemical Corporation of Paterson, New Jersey, was allowed to sell the product again after it agreed to put on the package a highly visible warning that reads in part: "Danger. May cause burns. Harmful if swallowed. Eye irritant. Contains sodium metasilicate. Avoid contact with skin, eyes and mucous membrane . . . Keep out of reach of children."

Studies that might prevent construction of the Tocks Island Dam on the Delaware River have been ordered by the President's Council on Environmental Quality. The dam is another Army Corps of Engineers project long opposed locally and now the object of mounting criticism from national conservation groups. Authorized nine years ago, it is planned as part of a proposed national recreation area. But the dam would create a 37-mile reservoir reaching from Stroudsburg, Pennsylvania, nearly to Port Jervis, New York. This would displace scores of residents and drown the valley's natural beauty, replacing it with yet another giant man-made lake that would have a shoreline often consisting of acres of mud flats. ■

AUDUBON BLACK PAPER #1

OIL POLLUTION

This is about oil pollution of the waters of the world. About inadequate regulation of the production, transportation, and refining of oil and its products. About inadequate, careless, and negligent oil company practices. About inadequate research into the effects of oil pollution on marine resources—and on man. About the growing threat to the seas from pollution by petroleum.

by MARVIN ZELDIN

drawings by Arthur Getz

OIL POLLUTION OF THE WATERS OF THE WORLD

Source	Tons Per Year	Percent of Total
Used motor and industrial oil	3,300,000	67.2
Tankers (normal operations)	530,000	10.7
Other ships (bilges)*	500,000	10.1
Refineries, petrochemical plants	300,000	6.0
Tanker and ship accidents	100,000	2.0
Non-ship accidents	100,000	2.0
Offshore production (normal operations)	100,000	2.0
Total:	4,930,000 tons (metric)	

Source: Environmental Protection Agency.
*Oil from pleasure craft not included.

Casting Troubles on Oiled Waters

Worldwide, more than 2 billion tons, or some 600 billion gallons, of crude oil were produced in 1970 to meet man's seemingly insatiable demand for energy. For gasoline and lubricating oil for the ever-increasing number of cars and trucks on the world's highways. For fuel oil for electric power-generating plants. For oil to heat our homes and offices. For fuel and lubricants for industry, aircraft, ships, and trains. For chemical manufacturing.

But also in 1970, an estimated 5 million tons, or some 1.5 billion gallons, of crude oil or petroleum products were spilled into the waters of the world, deliberately or accidentally. That's the equivalent of a 20-gallon fill-up for 75 million cars.

Half of the major spills of the past have been within one mile of shore, 80 percent within 10 miles of shore. Thus areas most likely to be rich in shellfish and nursery grounds for many fish have been subjected to massive doses of oil pollution—in addition to the chronic low-level contamination from oil and other pollutants which afflicts many estuaries.

Shellfish have been contaminated and killed. Millions of seabirds have been killed. Thousands of miles of shoreline and beaches have been soiled by oil. Recreation areas and values have been degraded. While scientists disagree on the effects of oil pollution on marine organisms, there is growing evidence of oil's destructiveness in the marine environment. Oil can kill marine organisms by coating and asphyxiating them. Toxic components of oil can kill marine organisms on contact. Oil can destroy the food sources of marine life. Components of oil can enter the food chain. Oil can reduce the resistance of marine organisms to infection and other stresses. Oil can interfere with reproduction. Oil can penetrate and remain in sediments. Oil can persist in the sea; more and more oil lumps are being found on the surface of the deepest seas far from land.

In U.S. waters alone, there are approximately 7,500 oil spills each year, an average of almost 21 a day. Not all are the tanker collisions or groundings or offshore well blowouts which make the newspaper headlines as major disasters. Day in and day out, year after year, there is also unheralded oil pollution of our rivers and oceans from tankers dumping oily ballast waters, ships cleaning their bilges, sloppy loading and unloading of tankers and barges, leaks from wells, refineries, and storage tanks, pipeline breaks, and the disposal of used oils from filling stations and industries.

The collision of two Standard Oil Company of California tankers in San Francisco Bay in January 1971 caused a major oil spill and received nationwide news coverage. Not widely reported, however, were the 110 spills of oil and chemicals into the abused waters of San Francisco Bay in 1968; 186 in 1969; 213 in 1970; and a 12,000-gallon fuel oil spill just 11 days before the tanker crash.

When the tanker *Torrey Canyon* went aground on a reef off the coast of Cornwall, England in 1967, it was en route to Milford Haven, Wales, the largest oil port in the United Kingdom. Milford Haven has a reputation as a "tough" port. It has enforced strict measures to prevent and control oil pollution since it began large scale operations in 1960. Nevertheless, Milford Haven had three major spills in its first seven years and now experiences about 100 slight to moderate spills a year.

Portland, Maine, is the second largest oil port on the East Coast. It too has a reputation as a "tough" port. It had an average of almost one spill a week in 1969. The Coast Guard says most were "nuisance spills, troublesome but small."

The Coast Guard also says that nationwide there has been a 500 percent increase in spills *reported* in the last five years. And the number of reported spills will continue to increase, not only because the volume of oil used continues to grow but also because federal law now requires anyone who spills oil, offshore or onshore, to immediately report the spill or face a $10,000 fine, a year in prison, or both. After the law went into effect in April 1970, the number of spill reports began to increase gradually. By the end of 1970, the Coast Guard had received about 4,000 reports of oil spills—a fourfold increase over the 1,007 spills reported in 1969.

Nobody wants oil spills. Aside from the environmental toll they exact, they cost money. Oil companies lose valuable crude oil or refined products. They lose expensive tankers, offshore wells, or refinery equipment. They now face stiff fines and liability for cleanup under a 1970 law. And the oil industry pays dearly in unfavorable public relations.

But despite the ecological and financial costs, oil spills occur. A Canadian task force report on an oil spill in Chedabucto Bay off Nova Scotia last year observed that "if spills in a kitchen were as frequent as spills in the oil industry, our homes would be pigsties."

The pages that follow describe how and why, and what can be done about oil pollution.

"There are tankers at sea being operated by what I would call unscrupulous individuals who are anxious to keep those ships moving and to cut their turnaround time." (An executive of a major U.S. oil company in an interview with the author.)

Tankers, Tankers Everywhere

Tankers and other ships put about 1.1 million tons of oil into the oceans of the world each year, according to the best available estimates. Tanker contribution to oil pollution includes deliberate dumping of oily ballast water, spills while loading and unloading, collisions, groundings, and sinkings.

Tanker disasters have become so frequent that insurance companies have virtually ceased insuring them. Tanker owners have had to form their own plan for self-insurance. (They call it a "voluntary international indemnification plan.")

Insurance companies and a world growing increasingly concerned about the effects of oil pollution have ample reason to worry.

Consider the tanker *Arrow* which went aground on a rock in Chedabucto Bay, Nova Scotia, on February 4, 1970. Dr. P. D. McTaggart-Cowan, executive director of the Science Council of Canada, headed a special task force which studied and cleaned up the *Arrow* spill. We asked him what caused the wreck.

"There was no excuse for the accident," he said in an interview. "If you read the official inquiry, you will bore yourself to tears. In my own judgment—and this takes nothing away from the official inquiry—it was complete incompetence of the captain, which in the case of most accidents is just the final link of a chain composed entirely of weak links that went all the way back to the owners.

"The radar wasn't working, hadn't been working for some time. I don't think it was working when it left Aruba. The depth-sounder wasn't working. The gyrocompass wasn't working. The standard compass had an error that was sometimes 12½ degrees and sometimes they didn't know. There was really none of the standard navigation equipment in that tanker that had been working.

"As far as we know, the only man in the crew who professed any navigation skills was the captain, and there are doubts about his. As far as we know, there were no up-to-date coastal charts on the ship. All he had was an outdated deep-sea chart stamped all over 'not to be used in coastal waters.' The captain claimed that he was in fog, but there was a fisherman on an island six miles away who turned to his buddy and said, 'Ahoy, that ship's going to hit the rock,' a few minutes before it hit."

The *Arrow* was an 18,000-ton tanker. The *Torrey Canyon*, in comparison, was 117,000 tons. During 1959, oil tankers lost throughout the world had a capacity of 350,000 tons—equal to almost 20 *Arrows* or 3 *Torrey Canyons*. In the last six months of 1969, worldwide tanker losses amounted to almost 600,000 tons—equal to 33 *Arrows* or 5 *Torrey Canyons*. In the three years before the *Torrey Canyon* wreck, there were 329 accidents involving tankers.

Said McTaggart-Cowan of the frequency of tanker accidents: "This is a disgraceful situation. There's no control. There's no positive control of shipping the way there is of aircraft. An aircraft flying the Atlantic is under control the whole time. They're given a bit of air space, others are kept away from there, and they're guided into airports. In shipping, you have a couple of tankers owned by the same company running into one another in San Francisco Bay. You have this silly ass out in Long Island hitting a rock. That rock's been there a long time and I'm sure it's on every chart. And what's he doing driving blind ahead in some fog? This isn't allowed in aviation."

Meanwhile, the world's tanker fleet continues to grow, both in numbers and in ship size, as more and more crude oil and petroleum products are shipped around the globe. At the end of 1959, there were 3,276 oil tankers in the world with a total capacity of 62.7 million tons. Ten years later, the world's tanker fleet numbered 3,893, an increase of 617 ships. Capacity had more than doubled, however, to 146 million tons—a 131 percent increase.

At the end of 1959, there were 523 tankers on order, with a total capacity of 19.7 million tons, an average of 37,800 tons per ship. At the end of 1969, there were 570 tankers on order, with a total capacity of 59.3 million tons, an average of 104,100 tons per ship.

Today at least four 327,000-ton supertankers carry oil across the seas. Each is equal to 18 *Arrows* or 3 *Torrey Canyons*. The largest tanker currently on order is a super-super giant of 550,000 tons—equal to 30 *Arrows* or almost 5 *Torrey Canyons*. And tankers as large as 1 million tons are under study.

Many fear the devastating impact on the marine environment of a wreck of a supertanker three or five times larger than the *Torrey Canyon*. Dr. Robert C. Clark Jr., a research oceanographer at the National Marine Fisheries Service laboratory in Seattle, Washington, is one of them. He's been studying the dangers of oil pollution to the Puget Sound area.

The oil pollution situation there is "nowhere near as bad as it is in most of the estuaries on the East Coast," he said in an interview. "What we're very worried about is not the problems we have now, but what might happen when oil is brought into Puget Sound from the North Slope of Alaska. It's predicted that crude oil moving into Puget Sound will increase at least six times within the next five years. Supertankers will arrive in Puget Sound through Juan de Fuca Strait and thread through deep, narrow channels between the numerous islands of the San Juan Archipelago before discharging their cargoes at the north Puget Sound refineries.

"An accident to a single large tanker could result in the spilling of millions of gallons of oil over large portions of the Greater Puget Sound Basin. Currents and wind would carry a large oil slick through the channels and islands of the basin, resulting not only in enormous cleanup and legal problems but also in the threatening of the estuarine nursery grounds of salmon and groundfish as well as the extensive intertidal shellfish beds."

Is there an environmental limit to the size of oil tankers, we asked Kerryn King, a vice-president of Texaco, Inc., and chairman of the American Petroleum Institute's committee for air and water pollution?

"To the contrary," he answered, "I think the larger tankers become, the better environmental risk you have. That may sound like an anachronism, but let me tell you why. Energy needs are going to continue to grow about 7 percent a year. This means that roughly every 10 years on a compounded basis, you're getting close to doubling the amount of energy that's being consumed in the world. If you're trying to haul this in 60,000 to 70,000-ton tankers as opposed to 200,000 or 250,000, or 350,000 or even 500,000-ton tankers, you are going to have a much larger number of tankers plying the waters, clogging the ports, moving around. As the density of traffic becomes greater, then the chance of accident becomes greater.

"I don't think we have any problem except human error. When you have a $30 million piece of property, you're not going to turn it over to some office boy to handle. You're going to have every protective thing you can possibly think of to take care of that investment. There is every incentive in the world to the oil companies, to our marine fleets, to protect these very large investments. I see the advent of the 250,000-ton or even the 500,000-ton tanker as putting an end to the kind of human error that has occurred in the past because the quality of seamanship, the quality of the people running these ships, has not always been as high as you can now afford to have."

What do you think about the trend to larger and larger tankers, we asked Dr. Gordon J. MacDonald, a member of the Council on Environmental Quality? "In general, provided certain safety construction standards are met, I think that this is a move in the right direction. The collision probabilities are even greater when you have more (smaller) tankers moving about. Furthermore, by making them large, then you can insist upon them carrying all the proper navigational safety equipment. I'm not scared by the big tankers provided you compartmentalize, double-hull the thing, take the precautions we're insisting upon. The total amount of oil you would spill from a fleet of 500,000-ton tankers would be less than a fleet of tankers carrying 50,000 tons each."

The problem, of course, is the "human error" King mentioned. Not all tankers which have had accidents were as poorly equipped as the *Arrow*. The two Standard of California tankers which collided in San Francisco Bay in January 1971, for example, supposedly had radar and other navigation and safety devices. How this

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equipment is used is another matter. A Coast Guard investigation found evidence of negligence and charges have been filed against the captains of the two tankers.

Said one observer of that spill and a veteran of many others: "The ships are so big, there is so much momentum, that even if they discover a mistake, there is not enough time to change course."

The two tankers involved in the San Francisco Bay collision were "baby" tankers, incidentally—17,000 tons each.

Despite the assurances from industry and government, the prospects do indeed appear more oily for the world's already troubled seas as tankers grow in size.

As noted earlier, tankers also pollute the seas by dumping their oily ballast water and pumping out their bilges. In 1963, these practices added an estimated 441,000 tons, or more than 127 million gallons, of oil to the oceans of the world. Since then about 80 percent of the world's tanker fleet has adopted the "load on top" technique. Under this system, oily water is kept on board and emptied into receiving tanks on shore, where the oil can be separated from the water and used.

But the system doesn't always work. Shore facilities to handle the dirty water are usually nonexistent. Where they do exist, they are usually inadequate. Too often tankers simply dump as they used to. Here's how an oil industry official (who must remain anonymous for obvious reasons) put it in an interview.

"It used to be, before the load-on-top technique, that all companies, as soon as they were 50 miles away from land and wanted to ballast or clean their tanks, went ahead and did it. Now we see it differently. We hold the oil–water waste on board the ship. When we come into a port, we pump it out, usually into a refinery, where we can rerun it. This takes time. It costs money. It reduces the amount of cargo we can carry."

Consequently, "there is a substantial number of fly-by-night operators who are so buck conscious and are trying to make money so fast, that they cut some corners. They clean their tanks at sea at night. They pump bilges overboard. The thoughtless, careless, or even deliberate act of just a few people is still giving the whole industry an oily name. Frankly, I would be in favor of anything that could be done to apprehend and prosecute these people."

What do you suggest? "The United States might say that any ship coming into a harbor in this country which is found guilty of discharging oil wastes at sea will be barred from returning, or something of this kind." He suggested using aerial surveillance with sophisticated detection techniques which can pick up any substantial amount of oil on the water, day or night. He said that his own company monitors the cargo and ballast in its own tankers. If a captain dumps dirty ballast water, "he's going to be fired."

Meanwhile, the 20 percent of the world's tanker fleet which does *not* use the load-on-top technique dumps about 500,000 tons, or some 145 million gallons, of oil into the seas each year as a result.

The maritime nations of the world have been attempting to cope with oil pollution on the international level since 1954. In that year, the International Convention for Prevention of the Pollution of the Sea by Oil was agreed to. (The United States ratified the convention and enacted implementing legislation in 1961.) In brief, the convention says that vessels cannot discharge any oil wastes within 50 miles of a country's shorelines and that any discharges of oily water in permissible zones must be entered in logbooks carried on board ship.

The convention was amended in 1962; the prohibited zones were extended and any new ships over 20,000 tons were required to be equipped with facilities which eliminate the need for any discharge. (Carl W. Buchheister, as president of the National Audubon Society, served as an adviser to the U.S. delegation to the 1962 conference which amended the convention.)

However, a Coast Guard officer told us, "the convention is impossible to enforce." The limitations on discharges outside the prohibited zones are "meaningless" unless you can take a sample of the discharge. "We have never had anyone convicted in this country of violating the convention." Furthermore, the maximum penalty under existing law is $2,500.

The convention was again amended in 1969 to further limit discharges—to about 20 gallons per nautical mile. The United States signed but has not yet ratified the recent amendments. (At a NATO conference last year, the U.S. proposed a no-oil discharge policy anywhere in the world on the high seas.)

While 49 nations were represented at the 1969 conference which drafted the amendments to the convention, only 19 signed and thereby indicated their intention to ratify. Twenty-nine nations did not sign the amendments—including countries whose flags fly on many tankers, such as Liberia, Greece, and Japan. Panama and Honduras, which also provide flags of convenience for many tankers, did not participate in the 1969 conference. Thus there is a loophole as mammoth as a supertanker in the international regulations which seek to reduce oily discharges into the oceans.

Liberia, for example, accounted for 22 percent of the world's tanker tonnage at the end of 1968. The *Torrey Canyon* was registered in Liberia and flew the Liberian flag. It was owned and chartered by U.S. nationals and manned by an Italian captain and crew, and was carrying oil for Union Oil Company when it went aground in 1967. The *Arrow* was also flying a Liberian flag when it went aground in Chedabucto Bay in 1970, although it was owned by a Panamanian company and was carrying oil for a Standard Oil of New Jersey subsidiary.

The Canadian task force report on the *Arrow* oil spill summed up its views on tanker operations in these words: "We are appalled by the callousness and sloppiness that we find in the operation of the world's tanker fleets, particularly those which sail under 'flags of convenience' . . . There are unquestionably many fine masters of tankers who have highly qualified crews, who operate their ships with prudence and a regard for others, and have ships that are well maintained, with adequate equipment. But the operation of the so-called 'flags of convenience,' representing over a third of the world's total tonnage of tankers, is at the other end of the spectrum, and is exemplified by the *Arrow* . . .

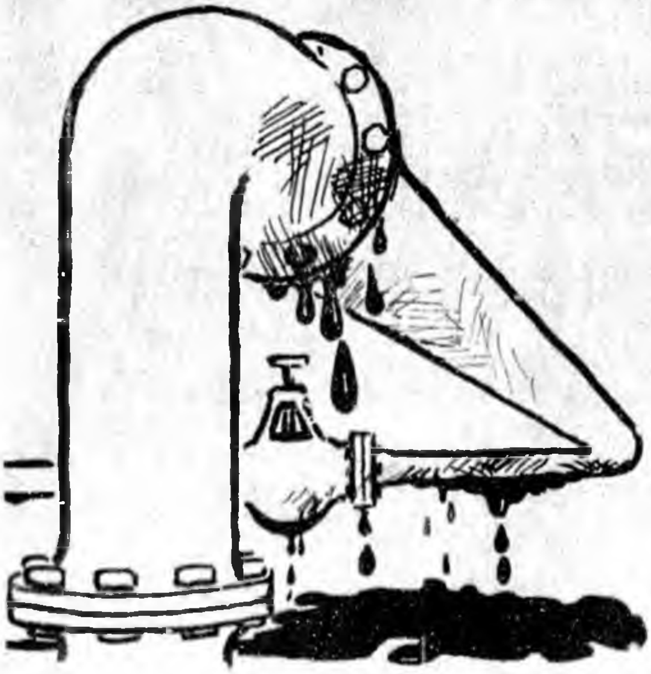
"Even with regard to the operation of non-tankers, it would appear that far too many masters are still living in the days of sail and go blindly ahead at full speed with none of their navigation equipment working. Unreasonable pressures brought to bear on masters by the ships' owners concerned only with profits are an important factor in this problem.

"We also find that with very few exceptions international law in marine matters seem to be written to protect the mariner and his ship from being molested by hostile natives at the ports at which he calls. This too may have been valid a century ago, but if the appalling safety record of tankers is to be drastically changed and the rights of those who stand to suffer from unnecessary marine accidents are to be protected, an entirely new approach to an international maritime convention will have to be taken."

The Canadian task force then called for a new international convention for the operation and control of shipping throughout the world.

(The *Arrow* went aground on Cerberus Rock in Chedabucto Bay in February 1970. Among the coastal areas fouled with oil was a beach at Arichat. Said the task force report, in a final comment on ship practices: "It is still almost unbelievable to us that a ship passing Cerberus Rock in June 1970 would deliberately pump its tanks or its bilges and as a result re-oil a beach in Arichat that had just been cleaned.")

The question, of course, is how much longer will the nations of the world tolerate oil pollution of the seas by tankers and ships? Meaningful international regulation apparently is not in sight. Individual nations—including the United States— which are major importers of crude oil and refined products could act unilaterally. They could close their ports to tankers and other ships which are not equipped to retain oil wastes, are not equipped with proper navigation safeguards, and are not manned by competent crews. However, the economics and politics of oil being what they are nationally and internationally, it will require a massive campaign by aroused environmentalists to shut off this major source of oil pollution of the oceans.



"I'll tell you this. If I walk around a refinery of ours and I find that kind of a situation (oil going down storm drains directly into waterways), we'd have a new plant superintendent the next day." (Kerryn King, vice-president of Texaco, Inc., and chairman of the American Petroleum Institute's committee for air and water conservation, in an interview with the author.)

Refining the Refineries

If Mr. King makes those words stick—and if other oil company officials follow up on their proclamations of purity—there would be considerable turnover in the ranks of oil refinery management, considerable changes in industry practices, or both.

For according to the men who work at the terminals and tank farms and who run and maintain the equipment which breaks down crude oil into gasoline, jet fuel, motor oil, fuel oil, and dozens of other products, "pollution control is far down the ladder" in refinery operations. As a result, refineries and petrochemical plants contribute an estimated 300,000 tons of the oil which pollutes the waters of the world each year.

Refinery workers we interviewed tell of chronic low-level spills in loading and unloading tankers and barges. While he praised U.S. ships, a refinery worker told us: "The foreign flags are bad. They don't take any particular precautions. One of them told me, 'What the hell do I care. It's not my country. I don't live here.' "

Refinery workers also tell of oil draining into waterways from constantly leaking valves.

Of retaining ponds between refineries and rivers which don't retain oil.

Of skimmers which don't skim oil off the top of storm waters.

Of separators which don't separate oil–water wastes.

Of equipment running and running without proper maintenance despite oil and gas leaks and the loss of products. "They figure cost over loss and find out that the loss isn't as great as the cost. It's as simple as that," said a refinery worker.

Of oily sludges dumped in marshes and fields.

Of washing oil off equipment and letting the dirty water go into the river.

Of pollution control devices failing but production continuing. "They're not going to curtail production to repair it. They run as long as they can get away with it if the community doesn't holler or scream," said another oil worker.

Of steam disguising emissions of pollutants into the air. "Steam is the biggest agent that they use to hide all their sins in a refinery."

Of caustic chemicals going directly into rivers.

Of poor or no treatment of refinery waste water.

Of unmanned loading of barges without automatic cutoff devices.

Of pollution control equipment not being used at night and on weekends. "Some of our guys who were off work over the weekend called the police because of the terrible odor in the community from the refinery."

Of flanges requiring six or eight bolts having only three to hold a connection together.

Of disdain for the health and safety of refinery employes. "In one pump house, the company's solution to fumes and gas gathering there was to take the windows out to ventilate the place," said one refinery worker. "We've had that for years," countered a man from another refinery.

Of underground leaks from storage tanks.

Of birds killed by waste oil and refinery fumes.

Of toxic lead spread on the ground to weather.

Of refinery wastes sterilizing the soil and preventing even the toughest of weeds from growing.

Of company rejection of employe efforts to enforce pollution abatement. "The people in the community are the ones who will have to do the job. The company won't listen to us."

Of full-time pollution control people in some refineries, none in others.

Of inadequate enforcement of pollution control laws. "We never see an inspector," said a refinery worker.

A. F. Grospiron, president of the Oil, Chemical and Atomic Workers International Union, says that some operations in oil and chemical plants "are being conducted under cover of night in order to obscure smoke, mist, dust, and other pollutants." He adds that toxic wastes are impounded "until sufficient rain falls to furnish dilution, at which point the impounded wastes are released into the local drainage system. We believe also that weekends are used in certain instances because of lessened surveillance."

Grospiron also points out that "in recent years, there has been a noticeable increase in the number of fires and explosions involving petroleum. We believe this is because (1) the oil companies are less careful in the maintenance of their equipment than they used to be, (2) there often is inadequate manpower on duty to cope with emergencies, and (3) sometimes the safe capacities of refinery equipment are overloaded."

What about this, we asked King of Texaco. Are plant managers under such tremendous pressure to produce that they cut corners on safety and pollution control?

"That's an entirely possible situation," he said, "because human beings being what they are, people are inclined to take shortcuts if they think that's the most expedient thing for them to do and if they're not convinced that either they are going to be reprimanded or faulted or in some way taken to task for having operated in such a way.

"That's the reason why in our company, instead of having our refinery department monitor itself, we put the responsibility with our research and technical department. And our research and technical engineering people are the ones who go around and look over the refinery and how it's being operated and confer with the refining department management and with the plant management."

King added: "The thing that you have to install to get clean air and clean water is money, to give you the kind of equipment that can recapture either the emissions that go into the atmosphere or the emissions that go into water. It's this capital investment that's the answer, although I must say that if you're going to operate it properly and efficiently, people who are in charge of the operation must be trained how to do it. They must be convinced that you mean business. And they must be convinced that this is not just lip service when management says we are going to be good citizens and operate this plant properly. They've got to know you mean it. And I think our people do."

Perhaps. But some of the refinery conditions described above were related to us by Texaco employes.

Federal officials confirm many of the sloppy practices in the oil industry. "It's common knowledge that good housekeeping can reduce the frequency of oil spills by about 50 percent," said one specialist on oil pollution prevention and control in the Environmental Protection Agency's Water Quality Office.

Richard T. Dewling, chief of research in the Water Quality Office, summed up what can be done in testimony before a Senate committee last year: "It is our opinion that a modern oil terminal and petroleum refining or other petroleum associated industry can be designed and operated utilizing advanced technology to eliminate or minimize the risk of pollution. Such techniques include use of better port safety procedures, establishment of additional navigation aids, fail-safe design concepts, and operational control systems for refineries and petrochemical complexes."

He said it is possible "to operate industrial plants that do not pollute." The technology is available "to allow no discharge, or essentially none, of pollutants at some cost which is as yet uncertain and has not been completely demonstrated in any American refinery." For example, he continued, "in combination with water reuse and by-product recovery, an appropriate distillation system can be designed to close the loop in a refinery and protect the environment." And while "advanced waste treatment alternatives are available for utilization where especially high levels of pollution control are required," at present "this high level of treatment of petrochemical wastes is not commonly practiced."

Dewling added that "net discharges of potentially harmful pollutants can be reduced to zero under commercial operations encountered in refineries" and that "a refinery or petrochemical complex can be designed to effectively contain, collect, and recover pollutants caused by spills, runoff, loading, and other nonprocess plant operations, within the boundaries of the plant." However, he said, "this would require that the best available technology be designed at the outset and applied on a continuing basis."

From an enforcement point of view, federal water pollution fighters do not have the authority to enter an oil refinery or any other private property except if there is an imminent and substantial threat of massive pollution. What is needed, they say, is the right of entry for pollution prevention, abatement, and inspection, and the right to require companies to maintain records and the right to review those records, including the amount and content of discharges into waterways. Legislation to give the federal government this authority is now pending in Congress.

The Coast Guard, however, does have authority to enter and inspect any private property that is "part of a waterfront facility"—any place a tanker can tie up. Commander Dan Charter explained in an interview: "In most major port areas, the facility would probably be inspected once a day. In New York Harbor, the Coast Guard runs a daily helicopter patrol. In most port areas, there's a daily waterside patrol by small boat. In most major port areas, boat patrol is made twice a day or even more frequently. In addition, there are shore inspections, by vehicle and foot patrol. Where petroleum is handled, we would try for a daily inspection if a vessel was in port transferring fuel."

He added that the Coast Guard now has a target of boarding at least 25 percent of bulk oil carriers that come into U.S. ports—to physically board and inspect them, before or after they dock. In addition, Commander Charter said, regulations now require that during loading or unloading of oil, there must be a man in charge on the facility and on the vessel. It is "now illegal to have an unmanned loading or unloading operation. These two people have to be in direct communication with each other. They can't start the operation until there's clearance. The fellow on the receiving end has to give clearance that they're ready for operation."

Kenneth E. Biglane of the Environmental Protection Agency's Water Quality Office told us he hopes to see the end soon of what he calls the "shout and holler" technique. "That's when you're off-loading fuel oil onto a landside storage facility or taking fuel oil from a landside storage facility. The chief means of communication is to shout and holler 'Cut it off!' That and the good old eyeball method."

Why don't oil companies use automatic cutoffs in loading and unloading operations at docks, as they do at filling stations? "I don't know all of the technological reasons," Biglane said, "but I will say that when such suggestions are offered to industry currently, we get more than amused musings as a reception. There's an effort to explore within their own shops why something as self-evident as this cannot be evolved."

"Oil is, gallon for gallon as thrown out, the most destructive to aquatic life of all the foreign substances now entering our coastal waters." (Thurlow C. Nelson in "Effect of Oil Pollution on Marine and Wildlife," 1925.)

West Falmouth Fallout

On September 16, 1969, a Northeast Petroleum Company barge carrying 625,000 gallons of No. 2 fuel oil, the type used for home heating, went aground off West Falmouth, Massachusetts, in Cape Cod's Buzzard Bay. About 170,000 gallons of oil spilled into the water. Strong winds carried the oil toward shore and heavy seas churned much of it into the water column.

The spill did not generate much press coverage outside of the immediate area. It was not terribly large compared to the major oil pollution disasters which have plagued a pollution-conscious world in recent years. (The *Torrey Canyon* spilled 29.4 million gallons of oil. Union Oil's Santa Barbara spill, 4.2 million gallons. Chevron's Gulf of Mexico spill, 1.3 million gallons. Standard Oil of California's San Francisco Bay spill, over 1 million gallons.) And virtually no seabirds were involved.

But the West Falmouth spill has become extremely significant to the oil industry and to governments, scientists, and environmentalists here and abroad.

The reason: West Falmouth is just a few miles from Woods Hole, home of the Woods Hole Oceanographic Institution. Within hours, top scientists with the liberty, ability, and inclination to act were on the scene from Woods Hole. Led by Dr. Howard Sanders, a biologist, and Dr. Max Blumer, a chemist, they launched the most thorough study ever made of the effects of oil pollution. The study combined the most modern methods of chemical analysis and biological observation. The study began immediately after the spill and is still going on.

While the final report is not yet in, the findings already released have shaken those—including the oil industry—who have been saying for years that the effects of oil pollution on the marine environment and marine organisms are generally minor and of short duration. Some findings:

On September 17th and 18th, the water was a brown coffee-colored emulsion and the shoreline was littered with thousands of dead and dying fish and marine inverterbrates. "It was clearly evident that we were viewing a massive and immediate kill," said Sanders. He noted that the carcasses of the great majority of animals lacking hard parts rot and decompose so that no remnants of their presence remain.

On September 19th the tide pools "were literally filled with dead and decaying or moribund bodies" of worms, clams, other inverterbrates, and fish. But "a week later only the shells of clams and snails were still present. Thus there would be little evidence for the massive mortality if the survey were carried out more than 10 days after the oil spill," said Sanders.

Two days later, the wind shifted and oil still floating on the surface was dispersed out to sea. But while oil was no longer visible in the water, the effects of the spill remained and continued for months.

The Woods Hole scientists put it this way in late 1970, more than a year after the spill: "Oil from the accident has been incorporated into the sediments of the tidal rivers and marshes and into the offshore sediments, down to 42 feet, the greatest water depth" in the area. "The fuel oil is still present in inshore and offshore sediments . . . The pollution has been spreading on the sea bottom and now covers at least 5,000 acres offshore and 500 acres of marshes and tidal rivers. (The original spill covered only about 500 acres.) Bacterial degradation of the oil is slow; degradation is still negligible in the most heavily polluted areas and the more rapid degradation in outlying, less affected, areas has been reversed by the influx of less degraded oil from the more polluted regions.

"The kill of bottom plants and animals has reduced the stability of marshland and sea bottom; increased erosion results and may be responsible for the spread of the pollution along the sea bottom. Bacterial degradation first attacks the least toxic hydrocarbons. The hydrocarbons remaining in the sediments are now more toxic on an equal weight basis than immediately after the spill. Oil has penetrated the marshes to a depth of at least one-to-two feet, bacterial degradation within the marsh sediment is still negligible."

The scientists also noted that "where oil can be detected in the sediments there has been a kill of animals; in the most polluted areas the kill has been almost total. Control stations outside the area contain normal, healthy bottom faunas." Moreover, affected areas had not been repopulated nine months after the accident.

They continued: "Mussels that survived last year's spill as juveniles have developed almost no eggs and sperm. Oil from the spill was incorporated into oysters, scallops, soft-shell clams, and quahogs. As a result, the area had to be closed to the taking of shellfish. The 1970 crop of shellfish is as heavily contaminated as was last year's crop. Closure will have to be maintained at least through this second year and will have to be extended to areas more distant from the spill than last year. Oysters that were removed from the polluted area and were maintained in clean water for as long as six months retained the oil without change in composition or quantity. Thus, once contaminated, shellfish cannot cleanse themselves of oil pollution.

"The tidal Wild Harbor River, a productive shellfish area of about 22 acres, contains an estimated four tons of the fuel oil. This amount has destroyed the shellfish harvest for two years. The severe biological damage to the area and the slow rate of biodegradation of the oil suggest that the productivity will be ruined for a longer time."

The Woods Hole team concluded: "All crude oils are poisons for all marine organisms; many crude oil distillates are more severely poisonous because they contain higher proportions of the immediately toxic compounds. Long-term toxicity may harm marine life that is not immediately killed by spills, and oil can be incorporated into the meat of marine animals, making it unfit for human consumption. Crude oil and oil products may cause cancer in marine organisms and in man; even at very low concentrations, oil may interfere with processes vital to the propagation of marine species.

"The most immediately toxic fractions of oil are water soluble; therefore, recovery of oil slicks is often futile, except for the esthetic improvement. Treatment with detergents, even the 'nontoxic' ones, is dangerous because it exposes marine organisms to higher concentrations of soluble and toxic hydrocarbons and because it disperses oil into droplets that can be ingested and retained by many organisms. Natural bacterial action eventually decomposes spilled oil; however, the most toxic fractions disappear much more slowly than the more harmless ones. Within the lipids of marine animals and in sediments, petroleum hydrocarbons are stable for long time periods."

To say that the West Falmouth findings created great consternation in the oil industry is an understatement. The oil industry officials we interviewed asked that their comments *not* be quoted. However, their off-the-record comments covered quite a range.

Said an executive of one major oil company: "Oh, God, Dear Dr. Blumer! He can hold opinions and that's all he has. He has no scientific facts to back them up."

Another oil company spokesman put it more politely: "A wide body of knowledge developed over many years refutes the speculations made recently by Blumer."

Still another industry official: "Most of his research and findings are based on a fuel oil spill, not on crude oil. Fuel oil is very toxic. From this, Blumer has extrapolated and reached conclusions that cannot be supported."

And another: "Unless Dr. Blumer has carbon-dated his hydrocarbons, he is indeed shooting from the hip when he states that hydrocarbons found in the marine life of the sea came from petroleum."

What about these accusations? Based on interviews with many experts and digging into many documents, these conclusions are possible:

• The oil industry notwithstanding, the West Falmouth findings are based on an abundance of facts. Not one critic we talked to could or would cite a specific error. Blumer, Sanders, and their colleagues have impeccable credentials in the scientific community.

• Fuel oil is indeed more toxic than some crude oils. However, fuel oil is part of petroleum and is therefore contained in crude oil. If crude oil is spilled, it carries with it whatever fuel oil is in it. Furthermore, fuel oil loses some long-term poisons in the refining process—such as carcinogens—which are present in crude oil. A crude oil spill contains even more poisons than a fuel oil spill. Thus attempts to denigrate the West Falmouth findings because fuel oil and not crude oil was spilled do not hold up. If anything, crude oil might have even more serious long-term effects. (Said one scientist: "Every spill that ever comes out is an exception to the industry! This is a standard ploy of the oil industry. If there's any damage, they say, 'Well, this is atypical. This is a special case.' But we have 10,000 special cases each year.")

• We asked Dr. Blumer about carbon-dating and "shooting from the hip." He replied: "If that person came to me, we could discuss this very unemotionally and I could prove to him that those hydrocarbons came from petroleum. There are hydrocarbons there which *never* occur naturally in marine life." Blumer added that carbon-dating is really not necessary, but if anyone in the oil industry wants to do the carbon-dating, Blumer would be happy to supply samples.

• The West Falmouth findings are also supported by bits and pieces of evidence in other studies. But those studies have generally been down-played. As Dr. Thomas A. Murphy of EPA's Office of Water Quality put it in a paper in July 1970:

"The larger and widely publicized spills have been remarkably free of documented environmental effects of great severity, other than, of course, the damage to birds and beaches." After *Torrey Canyon*, "everyone seemed to heave a great sigh of relief that the effects of the oil were essentially negligible compared with the effects of the chemicals used to 'clean the oil up.' Again with the *Ocean Eagle*, off San Juan in 1968, and last year's Santa Barbara incident, biological damage was observed, but not to the extent feared."

However, Murphy continued, "behind these publicly discussed events were a number of incidents where biological damage was substantial." He added that "sometimes the biological damage was massive and the recovery slow." Murphy also pointed out that "lesions and cancerous growths on marine organisms have long been associated, although somewhat tenuously, with oil pollution."

But "most of these reports of severe biological damage were dismissed, in view of the relatively minor effects of massive spills of crude oil, as being due to unusual circumstances."

Murphy added: "Thus, these disturbing observations from the West Falmouth spill are not that surprising; they are supported by other observations, albeit less direct, made during the past 40 years. They seem to be less the product of a unique set of circumstances than of the proper set of observations."

Murphy called the West Falmouth findings "very disturbing" and then asked: "Are they unique or are they something we now see because we have begun looking for it? I think the latter."

The West Falmouth findings raise obvious questions about the research methods used in the past to determine the effects of most major oil spills. We put this to some oil company people and received this candid response from one official: "Almost everything has been based on the visibility of oil."

(There are also indications that the "visibility of oil" is a prime consideration in the minds of too many in industry and in government, in the U.S. and abroad. This has led to the use of chemical dispersants to break up the oil and get it out of sight, away from recreation areas, as fast as possible. This also leads to a denial of any possible ecological consequences, for if you can't see the oil, what harm could it do, after all!)

In an interim appraisal of the effects of the 1970 Chevron oil spill in the Gulf of Mexico, Dr. Leslie L. Glasgow, then Assistant Secretary of the Interior, wrote: "To date there have been no confirmed reports of environmental damage which can be directly attributed to this oil spill," and "there has been no detectable impact on commercial fishery catches."

Glasgow added: "Very little effort, however, was made by either public or private agencies to evaluate the impact of the spill on species other than those of direct commercial or recreational importance. Damage to other species, which may be essential to the fishery, either directly by serving as a food source, or indirectly through ecological interrelationship of the biota, could have occurred and not have been detected. Because of the chronic oil leakage which has occurred in the area over many years and the rapid biological turnover, it is unlikely that damage, if indeed it did occur, could now be detected. The same would be true of the possible longer-term effects, such as an accumulation of hydrocarbons in the marine food chain."

Studies of the effects of most major oil spills have concentrated primarily on damage to shorelines, to adult fish, birds, whales, seals, etc., and on the size of fish catches. Little or no chemistry has been used.

Thus the Plymouth Laboratory of the Marine Biological Association of the United Kingdom was able to report in 1968: "Pollution by the *Torrey Canyon* oil was found to have little biological effect apart from the tragic destruction of seabirds."

Thus a report by A. D. Little, Inc., in 1969 was able to declare: "A review of the literature indicates that in deep water, whether in the open ocean or a mile or so offshore, no significant damage to marine life is encountered from even large oil spills because pelagic fish avoid the spill and few other marine species are present."

And a Dillingham Corporation report in 1970 to the American Petroleum Institute's committee for air and water conservation was able to conclude: "The effects of an oil spill on the environment are most significant with regard to harm to seabirds and their habitats resulting in loss of bird life. Shellfish beds, inshore fish spawning areas, and high-use coastal property may also be affected. However, in most instances the effects appear to be temporary. Damage to the environment from oil spill control activities appears to be linked primarily to the indiscriminate use of chemical dispersants with the danger limited to marine life in the nearshore or intertidal zone and to possible adverse effects from application of dispersants to beaches."

But despite these reassuring words, the oil industry is becoming concerned. In November 1970, Esso Research and Engineering Company announced it had awarded a $380,000 contract to Battelle Northwest Laboratories "to determine the long-term fate of oil spills on the sea and their long-term effects on marine life." Esso Research and Engineering is a subsidiary of Standard Oil of New Jersey, the world's largest oil company. Esso Research Vice-President Frank Feely explained: "To date, information on the effects of oil and oil tracing agents at sea has been mainly derived from short-term laboratory experiments. It is our aim . . . to secure data on the long-range effects of oil spills in order to fill the gap in the present body of scientific knowledge on this subject."

And the American Petroleum Institute itself has been considering a study of "the fate of oil in water and its effect on ecology." API's subcommittee on oil spills cleanup last year proposed such a study, to begin in 1971 at a cost of $100,000, saying: "There is a strong feeling that the API should support studies dealing with the ecology as a result of oil spills." The subcommittee said it had "no defined program at that time." As of early 1971, API was considering "a real comprehensive program which will be a tremendous contribution to the field," according to a spokesman. He said "nobody has really made an intensive study" of the environmental effects of oil spills. It will be "very, very expensive."

Why this newfound interest in the effects of oil pollution? Here's how API's Committee for Air and Water Conservation explained it in material prepared for public use by an industry spokesman in December 1970: "In past years, it had generally been assumed that natural processes, including degradation by micro-organisms, would break down petroleum oils into benign substances. Observation of large volume, long-term naturally occurring seepage . . . provided no evidence to the contrary. However, in recent months, there has been speculation, on the basis of early tests, that some hydrocarbon oil fractions might be unusually resistant to degradation and also toxic to certain life forms. Our advisors in the biological fields recommend that this question of petroleum toxicity be resolved as quickly as possible, one way or another."

(Note the use of the word "speculation"—it's consistent with the industry's response to questions about the significance of the West Falmouth findings.)

The API spokesman then added: "A major portion of our current budget is now dedicated to research on this problem."

API's attention to the long-range effects of oil spills on the environment is certainly welcome. But the budgetary claim was premature, to say the least. In 1969, API's subcommittee on oil spills cleanup spent $600,000. In 1970, estimated expenditures were $1.2 million. Nothing was spent in either year to determine the effects of oil spills. (API's total budget, for all activities, was $12.2 million in 1969, and $13.7 million in 1970.) What 1971 will bring will be disclosed when API announces a decision on its contemplated research on the environmental effects of oil pollution.

Different researchers may come up with different conclusions about the effects of oil pollution, of course. A case in point is the 1969 Union Oil spill in Santa Barbara Channel. Dr. Dale Straughan of the University of Southern California, Allan Hancock Foundation, looked into the effects of the spill in a $150,000 study financed by the Western Oil and Gas Association, an industry trade association. Dr. Straughan reported in 1970 that "3,600 dead birds were collected by March 31, 1969" and that "mortality occurred among animals that were covered with a thick layer of oil." She said there was no evidence that any whales or seals were affected or killed by the oil. Dr. Straughan concluded that "the damage to flora and fauna was not as great as predicted by pessimists after the spill" and "the biota of the area is recovering rapidly."

Dr. Michael Neushul of the University of California, Santa Barbara, also investigated that spill, under a $7,000 contract from the Federal Water Pollution Control Administration. In a report kept under wraps for more than a year by FWPCA, Neushul said: Statements that "there was no extensive ecological damage" seem "overoptimistic." He said "conclusions obtained a few months after a pollution incident of this sort should not be held as proof that there will not be long-term effects and gradual erosion of natural resources which we have seen in other locations."

Neushul added: "Man-made pollution has obviously influenced the complex communities of marine plants and animals in the study area. There is clear indication that a subtle and gradual erosion of this natural resource has begun . . . Whether repeated or continuing oil pollution contributes to long-term ecological degradation in the Santa Barbara area remains to be seen."

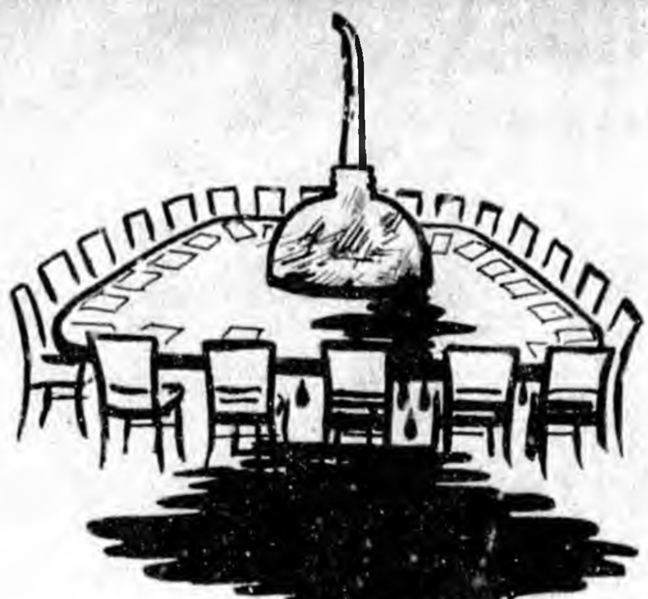
He found the "main effect" of the oil seepage caused by the Union Oil blowout "will be to reduce the availability of intertidal surfaces for the attachment and growth of marine organisms. The effects may also be long-term, influencing the growth and reproduction of various marine organisms."

Neushul called for "more effective environmental monitoring in order to detect situations where our physical and biological resources are being taken from us, monitoring which continues not just during major environmental crisis, but for years."

We asked Dr. Gordon J. MacDonald, a scientist and a member of the Council on Environmental Quality, about his reactions to the West Falmouth oil spill findings. "Basically, I agree with them," he replied. "I think the evidence on which they are based is still controversial, some of it." He added: "We suspect that what Blumer says is right, but the evidence isn't that secure." He also noted that "Blumer has done more in chemical analysis, as far as I know, than anyone else."

The Water Quality Office of the Environmental Protection Agency (formerly the Federal Water Quality Administration) is carrying out research of its own at its laboratories. At least one project underway parallels Blumer's work. The researchers were reluctant to discuss details because the project was not concluded, but one scientist said the conclusions "probably will confirm most of Blumer's findings."

We also asked Dr. P. D. McTaggart-Cowan, executive director of the Science Council of Canada, about Blumer's work. "It's careful work," he declared. "I think it will stand up to the scrutiny of his peers. It is certainly worrisome. He's entitled to draw what conclusions he thinks he should because he's a careful scientist. I think others will have to respect his work because this is a difficult field. I think they will find what Max Blumer has found."



"The nonpolluting disposal of used oil presents an increasingly important problem as the quantities of these oils increase, disposal grows more costly, and public pressures increase to eliminate or reduce pollution from all sources." (American Petroleum Institute report on used oil disposal.)

Berks' Black Friday

Friday, November 13, 1970, was not a good day for Berks Associates, Inc., a company which rerefines used oil, such as the oil drained from your car's crankcase when you pull into your neighborhood filling station for an oil change.

Berks, a small company in a dwindling industry, has a plant at Douglassville, Pennsylvania, about 40 miles north of Philadelphia. Berks had about 20 million gallons of oily sludge, the residue of used oil after reprocessing, in five lagoons on company property. Rain-weakened walls of two lagoons broke and 3 million gallons of sludge spilled into the Schuylkill River. Attempts to contain the sludge failed and it oozed down the Schuylkill and into the Delaware River. Fifty miles of the Schuylkill and 15 miles of the Delaware were contaminated. The sludge entered the water supply intakes of several towns, and water supplies were promptly shut off. Containment and clean up operations got underway immediately, under the National Contingency Plan for oil and hazardous materials pollution.

Meanwhile, back at the plant, there was a threat of more trouble. The rain-soaked walls of the lagoons were in danger of collapsing and releasing the remaining 17 million gallons of sludge into the Schuylkill. This posed an "imminent and substantial threat to the public health or welfare" from an "actual or threatened discharge of oil" under the Water Quality Improvement Act which was signed into law on April 3, 1970. For the first time, that provision of the act was invoked by Secretary of the Interior Walter Hickel. (Water pollution control has since been transferred from Interior to the new Environmental Protection Agency.)

The government went to court to abate the threat. The company agreed to shore up the walls of the lagoons, to build an emergency lagoon, to purchase and install an incinerator to burn the sludge, to remove the sludge from the lagoons, and then to landfill the empty lagoons, all under federal supervision. The agreement has since been carried out.

Berks' Black Friday was the first test of the 1970 law which gave the government new legal tools to prevent and control oil pollution. The tools worked well. There was no doubt about the "imminent and substantial threat." The National Contingency Plan, a system to coordinate federal agencies' spill control and clean-up activities, also worked well. The Federal Water Quality Administration (now the Water Quality Office in EPA) provided the on-scene command and other personnel. The Coast Guard headed the clean-up operation. (The company is liable for the costs.) Other federal agencies also participated.

But there is more to the Berks story. The state of Pennsylvania had been aware for some time of the danger of oil pollution from the Berks plant. It had cited the company for violations 8 times in some 11 years prior to the spill—and fined the company a total of $300. Earlier in 1970, the Pennsylvania Department of Health had named Berks the fifth worst water polluter in the state. Beyond that, however, nothing had been done to *prevent* a Black Friday. Once again, a spill was required to dramatize the inadequacy of state and federal efforts to *prevent* pollution.

A recent investigation by *The New York Times* exposed one of the basic causes of this deplorable nationwide situation. As *The Times'* national environmental correspondent, Gladwin Hill, put it: "Most of the state boards primarily responsible for cleaning up the nation's air and water are markedly weighted with representatives of the principal sources of pollution." *The Times* probe revealed that "the membership of air and water pollution boards in 35 states is dotted with industrial, agricultural, municipal, and county representatives whose own organizations or spheres of activity are in many cases in the forefront of pollution," Hill wrote. In California, for example, "for years a board member dealing with pollution of Los Angeles harbor has been an executive of an oil company that was a major harbor polluter."

The Times' discovery prompted Environmental Protection Agency Administrator William D. Ruckelshaus to write the governors of the 50 states and remind them that "it is imperative that the men and women who sit on these boards—and who are empowered to set and implement reasonable standards of pollution abatement—be influenced only by the general public interest and not by any vested interests." Ruckelshaus added: "The credibility of our efforts at every level to restore environmental conditions rests on our ability to pursue a rigorously independent course."

David D. Dominick, EPA's Acting Commissioner for Water Quality, cited the Berks spill in a letter to the heads of state water pollution control agencies early this year. "One need only fly across our nation to know that many of the elements present in the Schuylkill River event are repeated at hundreds of points," he wrote. "All types of materials, from industrial and mining wastes to raw chemicals, are stored in lagoons often directly adjacent to rivers, streams, and lakes. This practice may have been acceptable and tolerable in the past. Times have changed, however, and I believe that we must take whatever measures we can to guard our waters against these potential damages."

Dominick urged the states "to determine the extent to which your water may be threatened and to seek the cooperation of your municipal and industrial leaders in adopting remedial measures which will prevent environmental damage from this source."

The Berks spill also drew attention to another problem. Immediately after the spill, with the plant shut down, the collection of used oil from filling stations and industrial plants stopped in parts of the area. Slicks of used oil began appearing in some rivers and streams in Pennsylvania and in Delaware Bay. Slicks coming directly out of storm sewers were observed from the air. After the Berks plant went back into operation in early December, the oil slicks largely disappeared. Some collectors, filling stations, and industries had simply dumped their waste oil into sewers and streams to be rid of it.

They were not alone, for getting rid of waste oil is a national and international problem of vast dimensions. According to the American Petroleum Institute, an estimated 450 million gallons of used oil are disposed of each year in the U.S. "without complete assurance that some pollution potential doesn't exist." That is, says an API report on used oil, it is either put in sewers or is dumped on the ground or falls in the "mysterious category" of "fate unknown."

Worldwide, it is estimated that a total of 957 million gallons (3.3 million tons) of oil used in motor vehicles and industries winds up in the rivers and oceans each year. Used oil thus represents about two-thirds of the 5 million tons of oil added to the world's waters annually.

In the U.S., the capacity of rerefining plants which process used oil has dropped almost 50 percent in the last six years. The number of reprocessing plants has declined from about 150 to fewer than 50. Capacity of the plants still operating is estimated at 100 million to 125 million gallons a year.

"The rerefining industry is simply disappearing," a government official told us, for three basic reasons. First, rerefined oil no longer enjoys the excise tax subsidy—and consequent price advantage—it used to have. Second, the Federal Trade Commission requires the oil to be labeled "rerefined." This has reduced buyer acceptance. Third, the "virgin" lubricating oils manufactured by oil companies now contain many chemical additives to enable them to stand up over 4,000 to 6,000 miles. The days of an oil change every 1,000 miles are long gone. While this is a boon to the motorist, the additives and suspended solids in the used oil are a bane to the rerefiners. Many of the rerefining plants are old and cannot handle the additive-laden used oil.

As a result, some used oil collectors have gone out of business. More and more oil is being dumped into sewers and streams. In addition to its direct pollution effects, used oil also decreases the efficiency of sewage treatment plants and at times causes fires in the plants. Some disreputable collectors mix used oil with fuel oil and sell it for home heating. They don't get many repeat sales, however, for the mixture generally clogs the burners.

Research is currently underway on converting waste crankcase and industrial oil into usable products—for home heating, for fueling industrial and powerplant boilers, etc.

The reuse of waste oil would mean conserving a valuable natural resource and eliminating a major source of oil pollution of the waters of the world. "Waste oil is a tremendous resource for energy in an energy-short world," a pollution controller told us. "Something's got to be done to put it to use and keep it the hell out of the environment."

One of the most likely markets for recycled and purified waste oil would be large consumers of fuel oil, such as electric utilities. But sales of rerefined waste oil to utilities would reduce the major oil companies' sales of their own residual fuel oil to those customers. Thus the API report is more concerned with disposal rather than reclamation of used oil. The report concludes:

"Based on the studies conducted by this committee, it seems that the task of assuring nonpolluting disposal should be handled on a high priority basis by individual companies rather than the industry as a whole. While the problem of used industrial oil disposal is generally handled by the users, and is not likely to bring immediate discredit to the petroleum industry, oil companies have a more direct responsibility for pollution problems caused by service stations bearing their name."

A variety of proposals have been made which go far beyond the oil industry's limited approach. It has been suggested that an excise tax be imposed on "virgin" lubricating oil to finance a system of collecting and reprocessing used oil into readily useful products. It has also been suggested that legislation might be necessary to require systematic, licensed collection and disposal of used oil. And it has been suggested that the oil industry, as the producer of a product which adds so greatly to water pollution, itself initiate a national used oil conservation program.

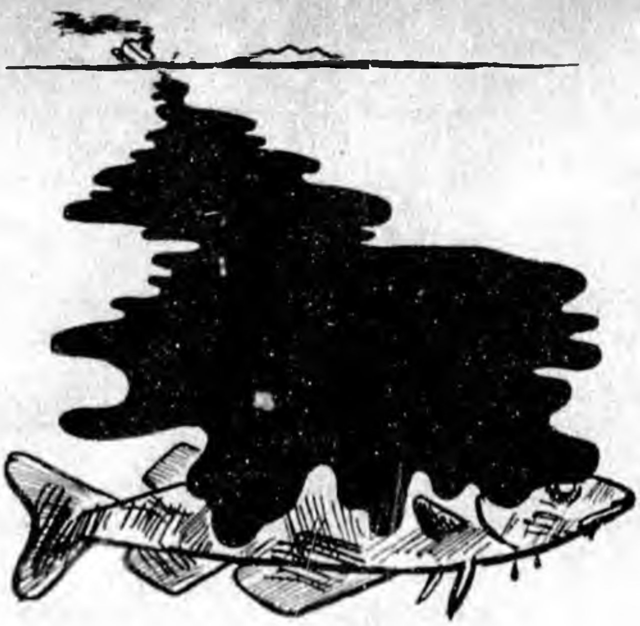
Companies manufacturing and using aluminum cans and glass bottles are recycling more and more of those discarded products. They are conserving natural resources, reducing the solid waste burden—and enjoying public relations dividends. One wonders why an industry as public-relations conscious as the oil industry does not go and do likewise.

"The possible effects of oil pollution of the various waters on the public health cannot be ignored." (U.S. Public Health Service report, 1924.)

Who's Minding the Fish Market?

Dr. Richard Backus is chairman of the biology department at Woods Hole Oceanographic Institution. He has been studying the distribution of deep-sea fishes in the Atlantic Ocean. In the process he has also studied the occurrence of lumps of congealed crude oil floating on the surface of the open sea.

He first noticed the oil lumps about six years ago



while using a surface-skimming net that picks up samples of marine life in the top few inches of the sea. He's found tar lumps varying from "golf-ball size to crumb size, and sometimes as big as baseballs," he said in an interview. He's found them in the eastern, western, and north Atlantic, and in the Mediterranean Sea. He's found tar lumps containing the most toxic parts of crude oil.

He's found amounts of oil lumps equivalent to "a pencil eraser per square yard for thousands and thousands of square yards." In some areas of the open sea, "it's unusual to tow one of these nets for a half-hour and *not* find at least some tar in the net," he said.

The surface-skimming nets also pick up a small fish called the saury. And Backus has found crude oil lumps in the stomachs of the saury—in one sample, in 3 out of 10. "The saury," Backus explained, "is a very abundant surface deep ocean fish in the North Atlantic. It's not a commercial fish but it's fed upon by larger fishes, including commercial fishes such as tuna. Then the tuna is ingesting the tar. What effect the tar has on the fish or upon man eating a tunafish sandwich made from a tuna that ate a saury that ate the tar, I have no idea. Nobody knows. The fact is that the tar ingested by the saury is a toxic substance. Whether that means it's toxic to the ultimate consumer in a saury-tuna-man chain, I have no idea."

We talked about this with Dr. Max Blumer, a chemist at Woods Hole and an expert on hydrocarbons. "We don't want to scare people," he said. "However, it is known that compounds of the type that cause cancer—for instance, that are present in tobacco smoke—are also present in crude oils. They have been isolated. It is known that these are cancer producers. It is known that such fractions produce cancer in laboratory test animals. We know how persistent the oil is in the marine environment. We know that once it is in marine organisms, in the fat of marine organisms, it will stay forever, almost.

"These two things coupled together raise this question: If such compounds are present in oil, if they are taken up by marine organisms, is this something that we should be concerned about in marine foods? It is not a question of somebody eating a polluted oyster and becoming ill the next day. This is *not* the question at all. Are we adding to the body burden that man already has?—that is the question. We get carcinogens from air pollution, from tobacco smoke, from heavily smoked foods, from sunlight. Is oil pollution of fishery products one additional factor that might contribute?

Is it? We asked Dr. Gordon MacDonald of the Council on Environmental Quality. "Petroleum contains carcinogenic compounds," he replied. "These compounds have been identified in barnacles and other sea life. Whether this represents an acute public health problem or not, is, in my mind, a very open question."

MacDonald added; "We are putting a lot of oil into the sea. The estimates vary considerably. My best estimate is somewhere around five million tons a year. We take six million tons of fish from the sea each year. This is a substantial problem and we really have to deal with it. It is potentially a very great problem in areas of the world that depend on fisheries for a major source of their protein—Southeast Asia, Indonesia, 85 percent of their protein comes from fish. Yet we have tankers going along in these waters that are deballasting. They could adversely affect the fisheries of these countries."

Is anyone monitoring these rich fishery areas? "No," said MacDonald. "There's been very little monitoring. What are the detailed effects of the various fractions of oil on shellfish, larvae, on the food chain? On plankton? What is the lifetime of oil in the water? We don't know. We've got to find out just how oil travels in the food chain, what components of the oil actually move up the food chain. Certainly not all the components of crude oil are carcinogenic, but we've got to determine if those that are, do they move up and are they concentrated?"

We put some of these questions to other federal agencies. Does the Food and Drug Administration check fish and shellfish for oil contamination, for toxic hydrocarbons from oil? No, said the FDA. They might check a batch of shellfish at times by a "sniffing" test, if there's a suspicion that they were harvested in an area hit by an oil spill. But there is no routine testing for petroleum hydrocarbons in seafood.

What about the National Cancer Institute? No, said an NCI spokesman. They are not doing any research on the carcinogenic effects of oil.

What about the National Institute of Environmental Health Sciences? No, said a spokesman. NIEHS "has not gotten into the question of the effects of oil in the environment on humans or animals."

What about the National Marine Fishery Service, formerly the Bureau of Commercial Fisheries in Interior and now part of the National Oceanographic and Atmospheric Administration? No, NMFS does not examine fish for oil contamination, said a spokesman.

No one, it appears, is minding the fish market.

And to compound the problem of oil on the sea, consider this finding by a group of scientists, as recorded in the invaluable book *Man's Impact on the Global Environment*, MIT Press, 1970:

"Chlorinated hydrocarbons such as DDT and dieldrin are highly soluble in oil films. Measurements of the effects of a natural slick in Biscayne Bay, Florida, showed that the concentration of a single chlorinated hydrocarbon (dieldrin) in the top one millimeter of water containing the slick was more than 10 thousand times higher than in the underlying water. About half of the pesticide in the water column was dissolved in the slick. We know that the small larval stages of fishes and both the plant and animal plankton in the food chain tend to spend part of the night hours quite near the surface, and it is highly probable that they will extract, and concentrate still further, the chlorinated hydrocarbons present in the surface layer. This could have seriously detrimental effects on these organisms and their predators."

"I'm sure you're all familiar with the bad run of luck the petroleum industry has had with oil spills over the past few years."—(L. P. Haxby, manager, air and water conservation, Shell Development Company, in a speech to an oil industry meeting, June 1970).

Gulf Coast Caper

A few days after Walter Hickel took office as Secretary of the Interior in January 1969, a Union Oil Company well blew out in federal waters in the Santa Barbara Channel off the coast of California. Some 4.2 million gallons of oil spilled into the sea before the blowout was contained. Hickel promptly ordered a review of all federal regulations governing oil and gas leasing and operations on the U.S. outer continental shelf, from Maine to Alaska. The regulations were subsequently strengthened. Environmental considerations were given greater emphasis. Safety provisions were improved to reduce the chance of human error.

On August 17, 1969, Hurricane Camille hit the coast of Louisiana and Mississippi, killing some 200 people and inflicting damages in the millions—including damage to oil facilities. Camille also forced a curtailment in offshore production. After Hurricane Camille, the state of Louisiana—which then set the rate at which oil could be pumped from wells in federal offshore waters—allowed oil companies to make up for lost production.

On August 28, 1969, the U.S. Geological Survey, part of Interior, issued revised orders for the Gulf of Mexico as part of the department's strengthening of offshore regulation. Among other things, the revisions tightened the requirements for storm chokes and other subsurface safety devices which prevent uncontrolled oil flows or blowouts on wells.

On February 5, 1970, Robert F. Evans, Interior's oil and gas supervisor in charge of overseeing oil and gas company operations in the Gulf of Mexico, sent a letter to an industry group, the Offshore Operators Committee. Evans complained of "weakness" in the "pollution control aspect of the offshore operation" involving "alarm systems, high and low level shutdown controls, platform shutdown equipment, and other similar equipment."

Evans told the industry organization that "there appears to be a certain hesitancy among some company field personnel to rely on such equipment for one reason or another." Evans reminded the offshore operators that "appropriate controls should be in service at all times." He also noted that not using controls "to insure continued operation is undesirable and could result in pollution."

In an interview with Dr. William T. Pecora, director of USGS, we asked why Evans had written that letter. "We had introduced a new set of orders," he said. "The inspectors were finding out that either some companies weren't getting the word to get with it, or they couldn't get the things they needed shipped to them to make the changes necessary. Whatever it was, he was giving the companies the opportunity to get with it, because we were going to start to close in on them. You have to give them a certain amount of time to comply."

Five days later, the companies ran out of time. Evans' concern about oil company "hesitancy" to use pollution control safety equipment erupted into national concern. On February 10th, a Chevron Oil Company producing platform some 75 miles southeast of New Orleans caught fire. When the fire was snuffed out one month later, oil which previously had been consumed in the flames poured into the Gulf. An estimated 30,000 barrels spilled into the sea before the last wild well was shut off on March 31st. At one point the spill created a 52-square-mile oil slick on the Gulf.

The fire and spill also created a huge stir in the federal government. On the Gulf Coast, the Geological Survey supervisor immediately shut down 20 Chevron platforms which were not involved in the fire.

Why? "Because," said Pecora, "he had reason to believe that the records being kept on the platforms were not consistent with the records we had in our district office. An immediate search was made on each of these 20 platforms and it was found that the down hole safety chokes were *not* in the wells that were producable."

Pecora explained that oil companies continually mail required records to the USGS district office, where "they are looked at, stamped, and filed." The records in the district office showed that the wells contained safety chokes. But, said Pecora, "our inspection showed they were *not* in the wells and that we had *not* been asked permission to have them removed."

Had the safety chokes been put in originally? "Yes," said Pecora, "they had been put in under our witness."

Had the company removed them without getting USGS permission? "That is correct," he said.

USGS inspectors then checked a number of platforms operated by other oil companies. And they found "a similar situation had developed on other platforms in the Gulf of Mexico," Pecora said.

Thus began the most intensive investigation ever of oil company offshore practices. The investigation produced a moral indictment of inadequate funds and manpower and inadequate regulation by the Interior Department of offshore oil operations. The investigation also produced a criminal indictment—the first ever under the 1953 Outer Continental Shelf Lands Act—of Chevron Oil Company, which is a subsidiary of Standard Oil of California, and criminal charges against eight other oil companies.

On May 5, 1970, a federal grand jury in New Orleans indicted Chevron on 900 counts of "knowingly and willfully" failing to have storm chokes or similar subsurface safety devices on 90 wells in the Gulf off the coast of Louisiana—90 wells without the devices for 10 days each.

On November 13, 1970, Humble Oil & Refining Company, a subsidiary of Standard Oil of New Jersey, was charged with 150 counts, involving 33 wells.

On November 20th, three more oil companies were charged:

Shell Oil Company, 170 offenses involving 40 wells. (Eleven days later, on December 1st, a Shell platform containing 22 producing wells burst into flames in the Gulf. The fire raged for 133 days before finally being extinguished on April 12th. By then, a million gallons of oil had been burned or spilled, and the oil was still flowing into the sea.

Continental Oil Company, 121 offenses on 26 wells.

Union Oil Company, 12 offenses involving 8 wells.

And on December 22nd, four other oil companies received pre-Christmas tidings:

Gulf Oil Corporation was charged with 125 offenses on 12 wells.

Mobil Oil Corporation, 75 offenses on 8 wells.

Tenneco Oil Company, 16 offenses on 4 wells.

Kerr–McGee Corporation, 10 offenses on 2 wells.

All charges against the nine oil companies were for allegedly failing to have a storm choke or similar subsurface safety device in the wells, as required by the Interior Department regulations under the 1953 Outer Continental Shelf Lands Act.

Chevron pleaded "no contest" to 500 of the 900 charges and was fined $1 million, $2,000 on each count, the maximum under the 1953 act.

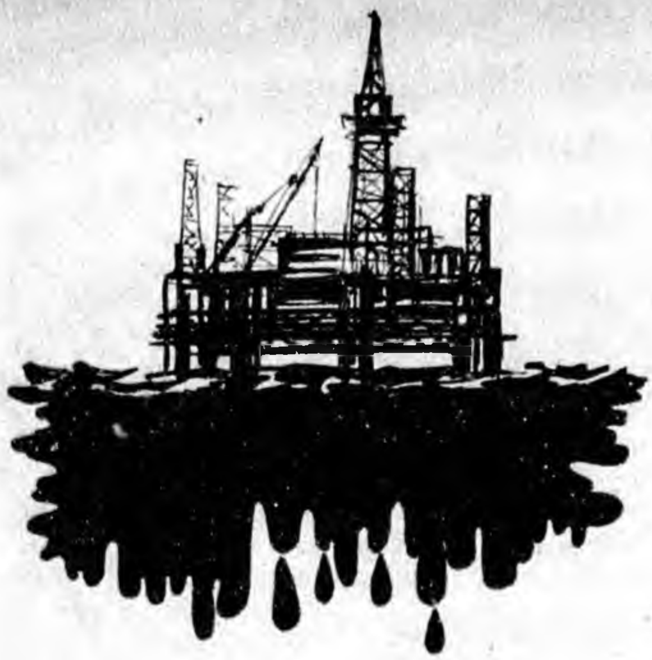
The other eight oil companies also entered "no contest" pleas and paid maximum fines: Humble, $300,000; Continental, $242,000; Union, $24,000; Gulf, $250,000; Tenneco, $32,000; Keer–McGee $20,000; Mobil, $150,000; and Shell, $343,000.

What had happened? How did nine oil companies—among them major firms which spend millions of dollars a year to advertise their devotion to the environment and to extoll their antipollution efforts—get into this fix?

Did USGS know of the alleged Chevron violations, for example, before the fire? "No," said Pecora. "We did not know of these. Our records were clear on this and our people were as surprised as everybody else was when this came out in the investigation. Our people were completely surprised when they found out that this had been going on."

When had the Chevron platform which caught fire been inspected last before the fire? "In the fall previous to the fire," said Pecora. "There had been four inspections of this platform in the previous two years. There were not violations at that time. The obvious conclusion is that they took out the safety chokes to increase their production for a given purpose."

How could more than 1,500 alleged offenses pile up? Doesn't this point the finger at USGS? "I think some people might want to come to that conclusion," said Pecora. "I would say that you're dealing with another problem. Here we had a single event in a period of a few months where for extenuating circumstances the companies did something and they got caught as a result of an event which permitted us to sense what was going on. The extenuating circumstances as reported to us in the trade was that there needed to be a sudden increase in production. And they moved quickly to do



this. Obviously they were getting away with it. The trade conversation we have picked up is that the companies had to increase their supply of oil to make up for a deficit largely due to Hurricane Camille. They cut a corner and took a calculated risk. They were caught with their pants down."

Most of the charges against the nine oil companies were for alleged violations of the August 28, 1969, USGS order in the fall and winter of 1969-1970. But the counts against two companies included alleged violations before August 28, 1969. Ten counts against Chevron were for alleged violations in 1967, 8 others in 1968, and 43 others in early 1969. Don't these early dates raise questions about the inspection program that had been going on before the fire?

"I see what your point is and I'm not so sure it's a valid point," said Pecora, "unless you can show that this is what a record proved. It's possible that some wells escaped notice. It's also possible that the records were pretty clean until we made a search following the Chevron fire and found certain things that were not supposed to be so. Rather than get into that too deeply, I would say:

"(1) That there was a shortage of inspection force, no question about it. We've been arguing this for years; (2) That the company practice, the rig practice, was really not up to full compliance and we caught them at it; (3) We did not overreact. The fact that they were doing this is bad. We had never encountered this before. And the fact that it was tied into a fire made it such a crisis that people finally listened to us and gave us more inspectors."

Interior's Geological Survey was indeed seriously understaffed for years. There were about 50 to 60 people in the USGS oil and gas section before the Santa Barbara blowout. It took Santa Barbara and the Chevron fire in the Gulf to awaken the Administration and Congress to the need for more funds for better regulation. There are now about 100 men in the oil and gas section, with 40 assigned specifically to safety regulation.

But even this is inadequate, for the 40-man inspection staff is responsible for 1,023 leases offshore Louisiana, Texas, and California on some 4.3 million acres of outer continental shelf lands. There are five offshore platforms containing some 150 producing wells in the Santa Barbara Channel, and more than 1,700 platforms containing some 8,000 producing wells in the Gulf of Mexico off Texas and Louisiana, plus miles of underwater pipelines and shore facilities.

The size of the federal enforcement staff is not the whole problem, however. The oil and gas conservation branch of USGS has been accused of clientism by some observers. Some critics have called it an arm of the oil and gas industry, we reminded Pecora, who recently was named Undersecretary of Interior by Rogers Morton.

"I've been aware of this," he said. "As a matter of fact, when I was out in Santa Barbara, they accused me of being in bed with the oil companies. As far as the Alaska pipeline is concerned, oil companies accused me of being in bed with the conservationists. I don't know how to respond to this. If I had to go down the Survey rolls, I'd find a hell of a lot more extreme conservationists than I would developers." If the oil and gas division of USGS was ever too close to the industry, Pecora added, "then it must have been changed under my administration."

What about this, we asked Stewart L. Udall, Secretary of the Interior from 1961 to 1969? "I know nothing that would indicate there was any kind of corrupt relationship," he replied. "But they regarded themselves as doing a good thing for the country by promoting more oil and gas exploration. In that sense, I think that they saw a common identity of interest with the oil companies that wanted exploration, you see. There was, without a doubt, a rather cozy industry relationship with these people who were supervising them. It's the sort of thing you get in the federal government, in state government. People settle in and they get in a nice little groove and it seems that everything's going well and so everybody becomes very chummy. You get a kind of slack attitude towards enforcement."

We asked Dr. Gordon MacDonald about the criticism of USGS. He's now a member of the Council on Environmental Quality but was vice-chancellor of the University of California, Santa Barbara, when the Union Oil blowout occurred. Said MacDonald: "This was an accusation that was made, perhaps with some validity, prior to the Santa Barbara oil spill and subsequent events. I think this is no longer true. Actions brought against Chevron in the Gulf, and other oil companies, show that they are really going after them. I expect this is a practice that will continue."

The Gulf Coast caper also raises questions about enforcement of the 1953 Outer Continental Shelf Lands Act under four Presidents—Eisenhower, Kennedy, Johnson, and until February 1970, Nixon. In announcing the federal grand jury action against Chevron on May 5, 1970, Attorney General John N. Mitchell said it was the first indictment to be brought under the 1953 act. Asked if this was the first time a violation had been found or if it was just the first time a case had been taken to court, a Justice Department spokesman replied: "Obviously, there were other violations, a number of which we found when we started looking for them."

But the Chevron case was the first time the federal government had gone to court against a company accused of violating the 1953 act.

Until the Chevron case, the Geological Survey had used the shutdown procedure. If he found a violation, a USGS inspector could immediately shut down a well and put a seal on it. The company could not start up the well until the necessary corrections were made and approved by the inspector. "This is a tough thing to do," Pecora explained. "When you shut down a production well they're relying on ashore, this hurts." This has been done frequently, said Pecora.

But why wasn't court action ever taken before the Chevron case? "The procedure requires going to the courts after the fact," he said. "It requires getting the Justice Department involved. The shutdown itself hurts more than the fine that comes out of this. The fine is $2 000 per day per violation. The on-the-spot action of a shutdown and a seal is the way to accommodate compliance immediately. They either comply or they don't go any further. Our insistence was compliance with the regulations. A violation going to court had not been supported before by the Interior Department because that is a punitive measure after the fact."

Isn't that true of any punishment for violation of a law? "That's right," he said. "But unless you can show that it was willful and negligent, the punitive character of a shutdown is a lot more forceful to get compliance."

One still cannot help but wonder why the criminal penalties provision of the 1953 law was not used until 1970. "This was a departmental policy," said Pecora. He added that in his five years as director of USGS, the Chevron case was the first considered "willful" because the records "showed it to be such. We knew we could prove it. So Justice demanded that we search all the records and come up with an analysis. And this is what we did."

While no one will talk on the record, what apparently happened is that after Hickel learned of the enormity of the case, the great number of alleged violations against Chevron and the other oil companies, he decided that the companies had to be taught a lesson. Attorney General Mitchell and the Nixon Administration apparently agreed, for the grand jury indictment of Chevron and the charges against the eight other companies followed.

Former Interior Secretary Udall offered this observation. "You see, this was embarrassing to Hickel. When Santa Barbara happened, that was on my doorstep, not his. He moved in and saw that the old regulations were too lax. He tightened them up. They did a pretty good job of tightening them up. Then a year later, the big Chevron spill occurs—*after* he's tightened the regulations."

Did the Geological Survey ever bring you information about alleged violations of the 1953 act during your eight years as Secretary of the Interior? "I don't want to be categorical, but I have no recollection of anything of this kind," Udall replied. "The fact of the matter is, though, that the attitudinal change has been so pronounced in the last few years. It was all evolving and changing. The companies that went out on the continental shelf were regarded back in the 1950s as people who were pioneering. They were developing a new technology. I think the people supervising the continental shelf—the Geological Survey field people—developed a very lenient attitude. This is my surmise. You know, 'okay, so they have spills, so there's a pollution incident; well, they're out there bringing in all this oil, they're bringing in these revenues. So don't be tough on them; kind of take it easy.' "

(The federal government received $275 million in royalties from oil and gas production on the outer continental shelf in 1970—$265 million from production in the Gulf of Mexico and $12 million from Santa Barbara Channel production. Total value of the 376.6 million barrels of crude oil and 2.4 trillion cubic feet of gas produced on outer continental shelf lands last year was $1.7 billion.)

"I was appalled myself to learn that the whole administration (of the 1953 act) was as slack as it apparently was," said Udall. "The Geological Survey people will tell you, I'm sure, that they were undermanned. They had to assume the companies were following the rules. That was the sort of administrative attitude that had developed. Then, when some big outrageous thing occurs, you suddenly look at it."

(Udall called his decision as Secretary of the Interior to permit leasing in the Santa Barbara Channel his "conservation Bay of Pigs" and said he considers it "one of the worst mistakes that I made and I regret it.")

The Gulf Coast cases also involved a numbers game of sorts. The indictment against Chevron listed 900 counts—90 wells allegedly without subsurface safety devices for 10 days each. Does this mean the wells operated without the safety devices for only 10 days each?

"Obviously we picked on an arbitrary number," a Justice Department spokesman replied. "You have to in these things. You've got to cut it off someplace."

He added that "because of the fact that we charged them with 10 days, that does not mean that only 10 days were involved."

The charges against Union Oil are a good example of picking an "arbitrary number." Union was charged with 12 separate offenses involving 8 wells. But USGS records show that those 8 wells produced oil without the safety devices installed for a total of 490 days. The "arbitrary number" game therefore meant, for Union Oil, 12 x $2,000, or $24,000 in fines, instead of a possible 490 x $2,000, or up to $980,000 in fines.

The full story of the Gulf Coast caper would have been opened to public scrutiny if the cases had gone to trial. But by pleading "no contest" and paying the fines levied by the court, the oil companies avoided having the details spread on the public record. (The government also avoided having its oily linen washed in public.) The Chevron settlement—a "no contest" plea and a $1 million fine—came first and set the pattern for the other cases. According to the Justice Department, the Chevron settlement was "in the interests of the government, since it rendered unnecessary a complex and costly trial." Also, said Justice, the Chevron case "serves notice upon other companies conducting oil drilling operations in the Gulf that the government intends to require strict compliance with the regulations of the Department of the Interior."

A Justice Department spokesman added that the Chevron settlement was also "consistent with the policy we use in any other criminal case." He added that "we usually get the better part of half" the counts. (Thus Chevron pleaded "no contest" to 500 of the 900 charges; the other 400 were dropped.) Besides, he said, "we might have gone into trial and lost it for one reason or another."

Maybe. Maybe not. But if the government had refused to accept Chevron's *nolo contendere* plea and had taken Chevron to court, the grand jury proceedings would have come to light. The full story of the alleged violations would have unfolded in open court. The public would have learned exactly what Chevron did and did not do. By pleading *nolo*, Chevron neither admitted nor denied guilt. It simply accepted the punishment handed down by the court—the $1 million fine. The details of the grand jury investigation remain shrouded in secrecy.

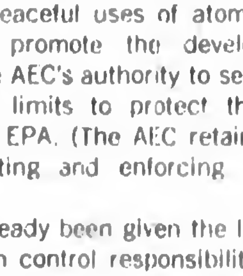
This much is clear, however: The 1970 Chevron fire and oil spill exposed the inadequacies of federal regulation of oil and gas company offshore operations. There was unwarranted reliance by the Interior Department on oil company records—a poor substitute for do-it-yourself enforcement. The Gulf Coast cases also point up the inherent problems of a system which permits one government agency to be both the promoter and the regulator of an industrial activity.

There is little doubt that the U.S. Geological Survey believes its mission includes stimulating development of offshore resources. Consider the recent words of Dr. Russell Wayland, chief of the USGS conservation division: "Since about 75 percent of total energy requirements for the United States are met by oil and gas, there can be no cessation in the effort to find and develop new and larger sources of oil and gas for the nation's economy. The greatest undeveloped potential area available to the United States is its outer continental shelf. Manifestly this exploration, drilling, and production must continue."

But should it continue under the supervision of the Geological Survey? Or should offshore exploration, drilling, and production be supervised by an agency responsible for safeguarding the environment, such as the Environmental Protection Agency?

When EPA was created by Presidential executive order in 1970, one of the objectives was to consolidate within one independent agency many of the environmental control activities previously spread among several different departments and agencies. One of the affected agencies was the Atomic Energy Commission, for example. The AEC had been both the promoter and the regulator of peaceful uses of atomic energy. The AEC continues to promote the development of nuclear power. But the AEC's authority to set radiation standards and emission limits to protect the environment was transferred to EPA. (The AEC retained its responsibility for implementing and enforcing radiation standards, however.)

EPA has already been given the Interior Department's water pollution control responsibilities. It would indeed appear logical now to complete the consolidation of water pollution control activities by transferring authority to regulate offshore mineral exploration and production from Interior's Geological Survey to EPA.



"One of the biologists in England at the time of Torrey Canyon *observed that the best thing to do was to wring their bloody necks. Well, of course, he did not receive sympathy from bird-lovers across the world." (Kenneth E. Biglane, director, division of oil and hazardous material, Water Quality Office, Environmental Protection Agency, in an interview with the author.)*

Fouling Our Feathered Friends

Oiled birds are undoubtedly the most tragic and pathetic symbols of man's carelessness and negligence in handling petroleum. While no one can say with any certainty precisely how many birds have been killed by oil pollution over the past 60 or 70 years, wildlife experts believe the casualties run into the hundreds of thousands, at a minimum, and perhaps even into the millions each year. There are kill counts for specific spills, of course. But the figures include only those oil-soaked birds washed ashore, and the experts believe those are only a small fraction of the total loss in each spill. Uncounted seabirds, covered with oil, unable to fly, sink or drift helplessly at sea until they disappear without a trace, either eaten by predators or decomposed by the elements.

Some known bird kills from oil pollution: Approximately 7,000 birds perished in the San Francisco Bay oil spill in January 1971. A minimum of 10,000 and possibly as many as 100,000 seabirds died off Kodiak Island, Alaska, in an oil spill in February 1970. About 7,100 birds died in the oil spill in Chedabucto Bay off Nova Scotia in February 1970. At least 3,600 seabirds were killed in the Santa Barbara spill in 1969. In that same year, from 15,000 to 25,000 oiled eiders were washed ashore in the Netherlands and about 1,500 guillemots and razorbills were caught in an oil spill on the coast of north Wales. The *Torrey Canyon* disaster killed at least 30,000 birds in England and France in 1967. Earlier, an estimated 100,000 birds were killed by oil pollution on the coasts of the British Isles in the winter of 1951–52.

The Royal Society for the Protection of Birds believes oil and other pollution of British coastal waters is threatening the existence of two seabirds—the guillemot and the razorbill. The society says guillemots declined by almost 25 percent between 1967 and 1969, and that both species declined even more dramatically in 1970. The society estimates that as many as 100,000 birds have vanished and that oil is largely responsible.

Since the early 1900s, ornithologists have noted an appalling loss of seabirds in many regions of the world. Breeding colonies of some species have disappeared in chronically oil-polluted areas such as Kent and Sussex in England, and Normandy in France. When the tanker *Thomas W. Lawson* went aground on the Isles of Scilly off the coast of England in 1907, its 2 million gallons of crude oil severely affected a colony of puffins then believed to number about 100,000. Sixty years later, when the tanker *Torrey Canyon* went aground off the same Isles of Scilly, the colony contained only about 100 birds. Nearby seabird colonies had been similarly decimated in the 60 years.

R. B. Clark of the University of Newcastle upon Tyne notes: "By mischance, the species most vulnerable to oil slicks have an exceptionally low reproductive rate. Auks, which are probably the most important casualties in the North Atlantic, do not breed every year; they produce only a single egg and the loss of eggs and fledglings in a colony may be as high as 50 percent."

Diving birds are the most vulnerable to oil. Oil kills them in two ways. It coats a bird's body, damages the plumage, and prevents it from flying. Oil breaks down the bird's natural insulating oils and waxes which shield it from water and prevent the loss of body heat. Oil may also displace the air between the feathers and the skin, or disrupt the structure of the plumage, thus depriving a bird of insulation from cold. When the oiled bird preens its plumage, it ingests the poisonous oil. Many birds are blinded by oil. Indirectly, birds can be affected by oil pollution of their nesting grounds or damage to their food chain by destruction of marine life on which they feed.

Efforts to clean and rehabilitate oiled birds have generally been unsuccessful. Rarely do more than 10 percent of treated birds survive. Dr. John W. Aldrich of the Interior Department's Bureau of Sport Fisheries and Wildlife sums up the problem: "Salvage efforts have been made in different parts of the world and have involved a number of species of water birds of widely divergent habits, different tolerances to captive conditions, and different degrees of contamination. A few of the results have been encouraging, but none have resulted in salvaging more than a small fraction of the treated birds. However, the experiences have revealed the main problems to be overcome. These are:

"(1) Curing the initial poisoning from ingestion of oil; (2) preventing chilling due to the loss of thermal insulation by the plumage; (3) removing the oil from the plumage; (4) renewing the waterproofing characteristics of plumage; (5) developing proper housing, feeding, and other care designed to keep that particular species in captivity long enough to rehabilitate it."

While "oil of varying sorts can be cleaned from the plumage of birds with several kinds of cleaners," Aldrich notes, "so far there is no convincing evidence that the natural water-repelling qualities can be restored to the cleaned feathers." If a bird survives the toxic oil, the stress of oiling, handling and captivity, and the danger of disease, it must usually be held in captivity until it molts—until its damaged feathers have been replaced with new, naturally waterproof feathers. It may take six months to a year for a bird to molt. Without its natural waterproofing, a bird becomes waterlogged and sinks and drowns.

Aldrich believes research is needed on: "(1) Methods for cleaning plumage and renewing waterproofing characteristics; (2) toxicological and physiological effects of oil on birds and treatments for these effects; (3) methods of caring for recuperating birds in captivity after rehabilitation (care varies greatly among species); (4) induction of premature molt to replace affected feathers as soon as possible."

Philip Stanton, a biologist at Massachusetts State College at Framingham, has been experimenting with different techniques for treating oiled birds at his Wildlife Rehabilitation Center in Upton, Massachusetts. The process is expensive. Oil-contaminated birds have to be collected, transported, and washed; pens, pools, food, heat, and caretakers are needed for six months or longer. "I wouldn't even want to think about the cost per bird," Stanton says.

Others estimate it can cost $1,000 to *try* to save a single bird. With a success ratio of only 10 percent, only 100 of every 1,000 oiled birds treated are likely to survive. Thus the cost could run to $10,000 per surviving bird. The American Petroleum Institute gave Stanton a $10,500 grant in 1970 to enable him to expand his center.

But costs aside, Stanton and other researchers are seeking to develop techniques to assure at least a few survivors in event of a catastrophic oil spill that might threaten the existence of an entire species or race.

One of the most promising developments in the treatment of oiled birds occurred early this year following the collision of two Standard Oil of California tankers in San Francisco Bay. Spurred by the nonprofit Ecology Centers in the area, volunteers by the hundreds turned out to help clean up the spilled oil and to collect and treat oiled birds.

Bird care centers were established under the guidance of veterinarians. Using mineral oil instead of the usual detergents to clean the birds, and other innovative techniques, they achieved a survival rate of about 28 percent, according to preliminary results. In contrast, the survival rate of oiled birds treated at the San Francisco Zoo, where conventional methods were used, was substantially lower. The Ecology Center plans to document its findings in a handbook on bird care when all the evidence is in.

Meanwhile, while we await the development of new, more successful techniques of rehabilitating oil-fouled birds, what should the concerned wildlifer do if he finds oiled birds? With the very low survival rate to date, is it worth trying to save them?

Conservationists disagree. Some say yes. They reason that even though no technique has been developed to deal with the problem in event of a large oil spill, the effort has to be made. "It's humanely necessary to try," says one. "You have to encourage the amateur societies to do what they can," says another.

Others say no, it's not worth it. It's a waste of time.

As one wildlife management official put it: "While the strong humanitarian motives are worth something, is it a reasonable conservation effort? Especially while money is so short for other conservation efforts?" He conceded, however, that he wasn't sure what advice he would give publicly if an oil spill hit birds in his area.

For those who feel an effort must be made to try to save oiled birds, the experts suggest reporting or taking the birds to emergency treatment centers which are often set up after large spills. Or if no treatment center is operating, report or take the birds to the nearest wildlife agency, Audubon Society, zoo, or similar organization. The experts also advise that amateurs resist the temptation to try to clean and treat the birds themselves. It's difficult enough for the professionals.

It's also suggested that greater attention needs to be paid to *preventing* birds from becoming contaminated by spilled oil. Some researchers think birds are unable to distinguish oil-polluted waters from unpolluted waters. Others think seabirds are attracted by dead and dying marine life on oil slicks and oil-covered beaches.

It's therefore suggested that it might be worth experimenting with noisemakers and other techniques to scare birds away from oil-polluted areas.

Federal law now requires anyone spilling oil, offshore or onshore, to report the spill immediately or face a fine of up to $10,000 or one year in jail, or both. Notification immediately sets in motion containment and clean-up operations under the National Contingency Plan for pollution by oil or other hazardous materials.

Why not a national seabird contingency plan, perhaps spearheaded by the National Audubon Society, to immediately set in motion protection and rehabilitation procedures? Major breeding colonies and migration patterns are already well known. Bird-scaring equipment could be stored and maintained in those areas by local Audubon Societies and promptly put to use when an oil spill occurs. An expert team of veterinarians, biologists, communications people, and professional organizers could be kept on standby, to be flown to any emergency. As cleaning and rehabilitation know-how improves, supplies and facilities for caring for oiled birds could also be maintained near the most significant colonies. At a minimum, the results could well be a dramatic reduction in the number of birds contaminated by oil in the first place. And if a catastrophic spill should strike and endanger the very survival of a species, a national seabird contingency plan could prevent its extinction.

"I would urge you not to judge our industry only by what we say, but judge us by what we do." (Kerryn King, a vice-president of Texaco, Inc., and chairman of the American Petroleum Institute committee for air and water conservation, in an interview with the author.)

Prevention When?

When large oil spills occur, it is virtually impossible to get the oil out of the water before it wreaks its ecological and esthetic havoc. Kenneth Biglane of EPA's Water Quality Office told a government–industry conference on oil spills in December 1969:

"After nearly three years since the *Torrey Canyon* casualty, this nation—and I suspect this is true worldwide—still cannot mount sufficient technical or operational responses to positively control large spills of oil once it has been spilled to the aquatic environment."

Today, more than four years after *Torrey Canyon*, that's still true, as another industry–government conference on oil pollution will undoubtedly be told this June. We have the technology to find oil and drill thousands of feet beneath the sea floor to get it out of the earth. But we do not have the technology to clean it up promptly and properly when it spills.

Booms—barriers used to try to contain spilled oil—generally fail in the open sea and in swift-running rivers. Skimmers, suction pumps, and other devices employed to get oil out of water cannot cope with large amounts of oil. Chemicals used to disperse oil are usually more toxic than the oil itself. Burning spilled oil has not been successful; besides, it would be a fire hazard as well as a source of air pollution in harbor areas. Attempts have also been made to sink spilled oil; fortunately they have not worked well either, for it's a cosmetic approach only and could do more damage by driving oil onto bottom organisms and sediments than leaving it alone.

In sum, "present technology for handling major oil spills, especially in the open sea, is primitive," in the words of L. P. Haxby, manager of air and water conservation for Shell Development Company and chairman of the American Petroleum Institute's subcommittee on oil spills cleanup. Haxby says the "most effective cleanup technique is to spread straw as an absorbent and pick it up with rakes and pitchforks—as was done at Santa Barbara. But dependence on hand labor to spread and harvest straw is certainly an anachronism in the space age."

Another veteran of oil spills, a federal official, says: "There is a total feeling of helplessness. You throw all your assets into the situation. You wind up using straw."

Or relying on fate. As then Assistant Secretary of the Interior Dr. Leslie L. Glasgow said in a report on Chevron's offshore well spill last year: "Although Chevron developed the most extensive and sophisticated oil containment and recovery system ever assembled, its success was at best marginal because of the rough seas. Only about 15 percent of the oil spilled was recovered . . . It was not the human efforts expended, but the fortunate circumstances of favorable, abnormal, offshore winds and season of the year that combined to prevent a serious pollution incident."

(Nevertheless, the government urges anyone seeing oil in water to report it to the nearest Coast Guard station or EPA Water Quality field office.)

Both the government and the oil industry are attempting to develop new equipment and techniques to contain and remove oil from water immediately after a spill. But, according to David Dominick, EPA's Acting Commissioner for Water Quality, "we don't see anything on the horizon that's going to give us a rapid breakthrough. I think the emphasis has got to be on prevention."

"Prevention" has been delayed, however. The 1970 Federal Water Pollution Control Act requires the government to issue regulations establishing "procedures, methods, and requirements" to prevent oil spills from vessels, onshore and offshore facilities. More than a year has gone by since the act was passed—and EPA has not yet issued the performance standards. Why the delay? The oil industry and the government have been negotiating for months on how tough the standards should be and how much time industry should be given to comply. As an EPA spokesman put it, "The regulations are going through the bureaucracy." In one of its moves through the bureaucratic labyrinth, a draft of the regulations finally made it to the office of EPA Administrator Ruckelshaus last month.

At any rate, the government hopes the standards to be issued under the 1970 act and the act's liability provisions will bring oil pollution under some sort of control. Dominick explained in an interview:

"The element of human error appears to be the largest single source of oil contamination. We feel that the best way to get at this problem of human error is to impose very strict requirements on the oil companies so they in turn will see fit to impose strict requirements on their employes. The strict liability provisions of the act are going to give us the greatest payoff in the long run, because you cannot as a regulatory effort prevent people from doing something stupid. What you can do is make it so onerous in a financial sense that they will see to it that their own practices improve. The liability provisions of the act are going to prove to be the greatest deterrent to unnecessary spillage of oil or hazardous material that we have."

The act makes anyone spilling oil liable for clean-up costs—up to $14 million or $100 per gross ton, whichever is less, for vessels, and up to $8 million for cleanup of oil spills from onshore facilities or offshore wells. (Union Oil Company paid $7.2 million to the British and French governments for clean-up costs after the *Torrey Canyon* wreck.) Liability for cleanup is unlimited in cases of "willful negligence or willful misconduct." In addition, anyone who knowingly discharges oil in violation of the act may be fined up to $10,000.

The government has other legal tools to use against oil polluters. One is the 1899 Refuse Act, virtually ignored until recent years. That act prohibits discharges into navigable waters without a permit from the U.S. Army Corps of Engineers. By Supreme Court decision, oil is considered a prohibited discharge under this act. But the maximum penalty under the 1899 law is only $2,500 and this law is generally used only when the stricter 1970 act is not applicable. (From July 1969 through October 1970, 181 criminal cases were filed under the Refuse Act.) Offshore oil production in federal waters is regulated under the 1953 Outer Continental Shelf Lands Act; again, the maximum penalty is small—only $2,000 per offense.

The increasing frequency of oil spills, the adverse publicity they evoke, a growing public mood of outrage over environmental pollution, and tougher legal penalties are spurring the oil industry to action. The American Petroleum Institute says the industry spent $288.3 million in 1970 for the "control or prevention of water pollution in the United States" and $271.2 million in 1970 for "control or prevention of air pollution." In total, says API, "the oil industry's yearly antipollution expenditures have more than doubled in the past five years," rising from $271 million in 1966 to $559 million in 1970, or to $1.5 million a day.

A Texaco newspaper ad last year asked the question: "Is the oil industry making only a token effort to solve the pollution problem?" The ad went on to say, of course, that "the answer is no" and that Texaco spends "more than one million dollars each week on air and water conservation."

In 1969, the U.S. oil industry had total income of $65.3 billion. The industry's spending for air and water pollution control thus amounts to 9/10th of 1 percent of its gross income. Texaco's gross income in 1970 was $6.78 billion. Texaco's spending for conservation thus amounts to 7/10th of 1 percent of its gross income.

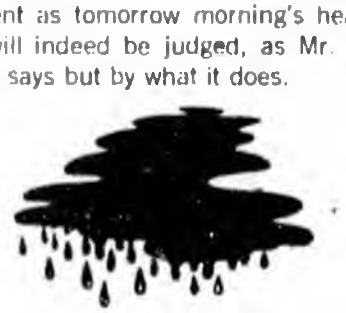
It has been suggested that oil companies stop advertising their products and devote their ad budgets to pollution prevention and control. (Nine major oil companies spent a total of $130 million for advertising in 1968, the latest year for which figures are available.) After all, people need gasoline and oil for their cars, etc. They'll buy whether the companies advertise or not.

The effectiveness of the 1970 federal anti-oil pollution law and of industry's efforts to reduce spills also remains to be seen. If the past is indeed prologue, oil spills—small, medium, and large—are likely to continue to occur because of carelessness and negligence in the oil and marine transportation industries and because of inadequate regulation to prevent spills.

Not that the government and oil industry aren't trying. They are. There are many devoted conservationists in government at all levels. Many in the oil industry are as concerned about pollution and environmental quality as the most ardent member of the National Audubon Society. Many are attempting to reduce their company's and the industry's adverse impact upon the environment, while at the same time continuing to supply the energy needs of our motorized, industrialized society.

Texaco's Kerryn King summed up the industry's dilemma: "Energy consumption goes up and up and up and up. We have to find ways and means to satisfy this energy need and do it in such a way that we are not doing irreparable harm to the environment. And in fact, what we've got to do is help improve the quality of the environment and we are perfectly prepared to do that."

How well the oil industry succeeds will be reflected by the oil it spills upon the water—an occurrence usually as frequent as tomorrow morning's headlines. The oil industry will indeed be judged, as Mr. King urged, not by what it says but by what it does. ■



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First came the Blue Book—a thoroughly documented report explaining government policy. Called a Blue Book because it is bound in blue covers. Next came the White Paper—no less authoritative a report, but usually less extensive in scope, summarizing perhaps the results of a recent investigation.

British Parliament gave both terms to the diction of bureaucratese. Now, *Audubon* contributes a new phrase. Black Paper. Black not because of its binding. Black because the subjects of these investigative reports will so often be grim. And the resolution of the problems they discuss will weigh heavily upon the quality of life on Earth—if not its very survival.

It is apropos that our first Black Paper focuses on the frightening issue of oil pollution of the waters of the world. This 21-page report, part of the expanding and vitally important section which we call "The Audubon Cause," reveals for the first time the appalling scope of oil pollution, the sad state of our technology for dealing with oil spills, and the sheer irresponsibility which breeds these frequent disasters.

Yet there is a chapter even more sinister. For science is just beginning to unravel the hidden ecc gical effects of oil pollution. And e early evidence suggests that we are faced with a poisoning of our waters, both fresh and salt, as grave as the death wrought by decades of callous drenching of our planet with pesticides.

These Audubon Black Papers will appear frequently, but irregularly. They will be thorough, documented, accurate, and fair. They will, obviously, be controversial, for few "facts" are incontrovertible. An industry's views of its inherent environmental ills (if it admits they exist) will rarely agree with the interpretation of a conservationist or an involved scientist.

These reports will also, unlike most government papers, be eminently readable. For they will be the work of highly qualified environmental writers, consulting with experts on both sides of a question. The author of Black Paper #1, Marvin Zeldin, spent months in research, traveled thousands of miles, and interviewed dozens of people, from respected scientists to oil company executives to refinery workers to government officials. (For that matter, we consider the credentials of all *Audubon* authors to be impeccable. As for our bias in favor of nature, we admit it with pride.)

Additional copies of the report on oil pollution can be obtained for 30 cents each by writing this magazine.

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To continue on the subject of black gold, there is growing suspicion that most of that oil from Alaska's North Slope is really destined for Japan. Despite all those protestations that the tundra reserves must be exploited immediately for "national security" reasons.

The oil could be shipped to Japan either directly from Prudhoe Bay or from Valdez at the end of a trans-Alaska pipeline. The net economic benefits to the oil companies run as high as $3.21 a barrel when compared with the costs of shipping the oil south to West Coast markets.

Indeed, the president of Phillips Petroleum has proposed an import-for-export plan that would bring an extra barrel of Venezuelan or Persian Gulf oil to the East Coast market for each barrel of Alaskan oil sent to Japan.

There is ample historical precedent for such a scheme. It's not generally realized that every board foot of lumber cut in the national forests of Alaska—and nearly 80 percent of the pulp—is shipped to Japan. This amounted to 561 million board feet of logs in 1970 alone. Meanwhile, lumber and paper prices continue to soar in the Lower 48, and the timber industry demands the right to ravage what is left of our national forest wildernesses.

Moreover, the U.S. Forest Service has not dedicated a single part of the magnificent forest of southeastern Alaska as a wilderness preserve. The trees, it argues, are promised to the local mills that supply Japan with wood and paper. Now, Americans may be forced to bear the tremendous environmental costs of supplying Japanese consumers with Alaskan oil.

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More on oil . . . One of the frequent problems in placing blame for oil pollution is determining the source. For instance, an oil slick fouling a sandy beach could have come from any of several tankers passing at sea. But scientists are developing ways of "fingerprinting" oil. It is now possible to tell by chemical composition whether oil originally came from Kuwait, Venezuela, or even a local area in Texas. In one study of 222 oil slicks, no two oils were identical. Ultimately, samples of all oil shipments would be filed with an international agency, much like human fingerprints are kept on file by police, to help in solving and prosecuting pollution crimes . . .

The British, meanwhile, have lost patience with oil shippers. After the fourth in a series of recent tanker mishaps in the English Channel, Parliament passed emergency legislation giving the government power to seize or sink any oil tanker threatening to pollute Britain's shores—even if the ship is outside territorial waters.

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An exclusive story in this issue details how the grey jungle fowl of India has been slaughtered, and its feathers smuggled into the U.S. and England, to satisfy the whims of elite trout and salmon fishermen. Detective work by agents from U.S. Customs and the Bureau of Sport Fisheries and Wildlife, with help from the National Audubon Society, led to a stiff fine against one of the largest mail-order sporting goods firms, Herter's. Now, similar criminal charges have been filed against Fireside Angler Company on Long Island. Three hundred trout flies can be tied with the neck feathers from a single jungle cock.

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We note with sorrow the passing, shortly before his 96th birthday, of Samuel H. Gottscho, for more than half a century one of the leading photographers of gardens and flowers, both wild and domestic. His pictures frequently appeared in *Audubon*, among the many magazines and books that featured his work. He took his final photographs only a week before his death. L. L.

Misc. No. 2

House Bill #93

THE WALL STREET JOURNAL, Friday, March 30, 1973

A 360-day year used by many banks to compute interest charged on loans is under legal attack around the nation. Critics assert the short year means an effective interest rate higher than stated and sometimes in violation of

The Banker's Year

365 Days May Have Been Good Enough for Caesar, But Lenders Find That 360 Provide More Profit

By JAMES F. CARBERRY
Staff Reporter of THE WALL STREET JOURNAL

In 46 B.C., Julius Caesar proclaimed that a year would be pegged at 365 days, with an extra day added every fourth year. What was good enough for Caesar has been good enough for the rest of us ever since—except for the nation's bankers.

A lot of bankers are using a 360-day year to compute the interest they charge to borrowers on commercial and corporate loans. This means, in effect, that they are collecting a smidgin more interest on these loans than their stated "annual" interest rates would indicate.

Though the practice has been going on for many, many years, it is only recently that borrowers have gotten angry enough about it to fight back. Lawsuits have been filed in Chicago, Philadelphia, Portland, Ore., and elsewhere, alleging that because the banks calculate on the basis of a bobtailed year they are charging an effective interest rate higher than that stated on loan agreements. Sometimes, it is alleged, these charges violate state usury laws.

$145 Million a Year

Though only small amounts of money are involved in the difference between the 365 and 360-day charges on any one loan, the nickels and dimes add up to an impressive pile.

Wright Patman, chairman of the House Banking and Currency Committee and the principal burr under the bankers' saddle, estimates that use of the bobtailed year results in overcharges to borrowers of at least $145 million a year. "This practice," he grumbled in a speech to Congress, "comes down to just plain old-fashioned greed. It is the kind of thing that saps the confidence of the American people in the banking system."

Use of the short year is sweeping. In a 1971 study, the Federal Reserve System found that most of the 232 banks responding based at least some commercial and corporate loan charges on it. More recent inquiries by this newspaper disclose that the practice is still widespread; for example, 15 of the nation's biggest banks admit to employing it.

According to the bankers, use of the bobtailed year began before the widespread use of adding machines; clerks who had to do the computations with pencil and paper found it a lot easier to multiply and divide by 360 rather than 365 or 366. Since nobody seemed to care much, the [illegible] [illegible] imbedded in the [illegible] computer [illegible] "Converting our [illegible] would be a massive job," says one officer of a major bank.

Borrowers Aren't Sympathetic

The argument that the 360-day year is custom and would be too much trouble to change meets with absolutely no sympathy among borrowers. They point out that some banks use the short year to figure the interest they charge [illegible] while using Caesar's year despite the difficulty in multiplying and dividing) to figure their payout to savings account depositors. And the bankers' own bank, the Federal Reserve System, itself uses the 365-day year in calculating what it will charge member banks borrowing from it.

The 1971 study by the Fed indicates there is no pattern to use of the short year. The same bank, it found, may use the short year in calculating interest on one loan but not on another. ("Little guy" borrowers aren't affected, since their loans are usually repaid in monthly installments that cover a whole 365-day year.)

Harold L. Perlman, a Chicago businessman and lawyer, got angry enough about the whole thing to file a class-action lawsuit in 1970 against First National Bank of Chicago, a unit of First Chicago Corp. The suit alleges that the bank overcharged Mr. Perlman about $5,000 by using the bobtailed year to calculate interest on two five-year loans totaling $1.7 million.

The suit also says that Mr. Perlman, who claims he learned of the short-year calculation only when he couldn't reconcile a bank interest charge with his own figures, wasn't told that his loans were based on a 360-day year. It asks that the bank refund the alleged overcharges to him and to every other customer who might be affected.

Bending a Little

First National replies that the 360-day year is traditional and that Mr. Perlman, a longtime customer of the bank, was aware of this. The bank moved to dismiss the lawsuit as a class action, but the Cook County circuit court denied the petition; the bank has appealed to the Illinois Appellate Court.

Banks have already lost a round in Oregon, where a federal district court has ruled that actual interest charges on several loans made by First National Bank of Oregon, a Portland-based unit of Western Bancorporation, were in excess of permissible state maximums. The reason: The bank was using the 360-day year. First National has appealed. In the meantime, another class action is pending in Philadelphia, where a lawyer has accused 20 banks of violating state usury ceilings through use of the bobtailed year.

As a result of the New Jersey state supreme court decision, 38 savings and loan associations in that state were required to rebate to borrowers about $2.4 million in overcharges resulting from their computing mortgage interest rates on the 360-day year. The court had declared use of the bobtailed year illegal in mortgage contracts of more than one year.

The banks are bending a little under the pressure. For one thing, corporate financial officers now are a lot more aware of the bankers' year. "We have many more corporate borrowers who've been insisting on a 365-day clause in their loan agreements. They're getting it, because we don't want them to go elsewhere," says an executive of a major California bank. In other cases, borrowers report that their bankers have quietly abandoned the practice without being asked, or at least have begun disclosing their use of the 360-day year in their loan agreements.

BANK RECORDS AND FOREIGN TRANSACTIONS

For Legislative History of Act, see p. 4394

PUBLIC LAW 91-508; 84 STAT. 1114

[H. R. 15073]

An Act to amend the Federal Deposit Insurance Act to require insured banks to maintain certain records, to require that certain transactions in United States currency be reported to the Department of the Treasury, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That:

TITLE I—FINANCIAL RECORDKEEPING

Chapter 1.—INSURED BANKS AND INSURED INSTITUTIONS

§ 101. Retention of records by insured banks

The Federal Deposit Insurance Act is amended (1) by redesignating sections 21 and 22 as 22 and 23, respectively, and (2) by inserting the following new section immediately after section 20:

"Sec. 21. (a) (1) The Congress finds that adequate records maintained by insured banks have a high degree of usefulness in criminal, tax, and regulatory investigations and proceedings. The Congress further finds that microfilm or other reproductions and other records made by banks of checks, as well as records kept by banks of the identity of persons maintaining or authorized to act with respect to accounts therein, have been of particular value in this respect.

"(2) It is the purpose of this section to require the maintenance of appropriate types of records by insured banks in the United States where such records have a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings.

"(b) Where the Secretary of the Treasury (referred to in this section as the 'Secretary') determines that the maintenance of appropriate types of records and other evidence by insured banks has a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings, he shall prescribe regulations to carry out the purposes of this section.

"(c) Each insured bank shall maintain such records and other evidence, in such form as the Secretary shall require, of the identity of each person having an account in the United States with the bank and of each individual authorized to sign checks, make withdrawals, or otherwise act with respect to any such account. The Secretary may make such exemptions from any requirement otherwise imposed under this subsection as are consistent with the purposes of this section.

"(d) Each insured bank shall make, to the extent that the regulations of the Secretary so require—

"(1) a microfilm or other reproduction of each check, draft, or similar instrument drawn on it and presented to it for payment; and

"(2) a record of each check, draft, or similar instrument received by it for deposit or collection, together with an identification of the party for whose account it is to be deposited or collected, unless the bank has already made a record of the party's identity pursuant to subsection (c).

"(e) Whenever any individual engages (whether as principal, agent, or bailee) in any transaction with an insured bank which is required to be reported or recorded under the Currency and Foreign Transactions Reporting Act, the bank shall require and retain such evidence of the identity of that individual as the Secretary may prescribe as appropriate under the circumstances.

"(f) In addition to or in lieu of the records and evidence otherwise referred to in this section, each insured bank shall maintain such records and evidence as the Secretary may prescribe to carry out the purposes of this section.

"(g) Any type of record or evidence required under this section shall be retained for such period as the Secretary may prescribe for the type in question. Any period so prescribed shall not exceed six years unless the Secretary determines, having regard for the purposes of this section, that a longer period is necessary in the case of a particular type of record or evidence.

"(h) The Secretary shall include in his annual report to the Congress information on his implementation of the authority conferred by this section and any similar authority with respect to recordkeeping or reporting requirements conferred by other provisions of law."

§ 102. Retention of records by insured institutions

Title IV of the National Housing Act [52] is amended by adding at the end thereof the following new section:

"Sec. 411. The Secretary of the Treasury shall prescribe such regulations as may be appropriate to carry out, with respect to insured institutions, the purposes set forth in section 21 of the Federal Deposit Insurance Act with respect to insured banks."

Chapter 2.—OTHER FINANCIAL INSTITUTIONS

Sec.

52. 12 U.S.C.A. § 1724 et seq.

§ 121. Congressional findings and purpose

(a) The Congress finds that certain records maintained by businesses engaged in the functions described in section 123(b) of this Act have a high degree of usefulness in criminal, tax, and regulatory investigations and proceedings. The Congress further finds that the power to require reports of changes in the ownership, control, and managements of types of financial institutions referred to in section 122 of this Act may be necessary for the same purpose.

(b) It is the purpose of this chapter to require the maintenance of appropriate types of records and the making of appropriate reports by such businesses in the United States where such records or reports have a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings.

§ 122. Authority of Secretary with respect to reports on ownership and control

Where the Secretary determines that the making of appropriate reports by uninsured banks or uninsured institutions of any type with respect to their ownership, control, and managements and any changes therein has a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings, he may by regulation require such banks or institutions to make such reports as he determines in respect of such ownership, control, and managements and changes therein.

§ 123. Authority of Secretary with respect to recordkeeping and procedures

(a) Where the Secretary determines that the maintenance of appropriate records and procedures by any uninsured bank or uninsured institution, or any person engaging in the business of carrying on in the United States any of the functions referred to in subsection (b) of this section, has a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings, he may by regulation require such bank, institution, or person—

(1) to require, retain, or maintain, with respect to its functions as an uninsured bank or uninsured institution or its functions referred to in subsection (b), any records or evidence of any type which the Secretary is authorized under section 21 of the Federal Deposit Insurance Act to require insured banks to require, retain, or maintain; and

(2) to maintain procedures to assure compliance with requirements imposed under this chapter. For the purposes of any civil or criminal penalty, a separate violation of any requirement under this paragraph occurs with respect to each day and each

separate office, branch, or place of business in which the violation occurs or continues.

(b) The authority of the Secretary under this section extends to any person engaging in the business of carrying on any of the following functions:

(1) Issuing or redeeming checks, money orders travelers' checks, or similar instruments, except as an incident to the conduct of its own nonfinancial business.

(2) Transferring funds or credits domestically or internationally.

(3) Operating a currency exchange or otherwise dealing in foreign currencies or credits.

(4) Operating a credit card system.

(5) Performing such similar, related, or substitute functions for any of the foregoing or for banking as may be specified by the Secretary in regulations.

§ 124. Injunctions

Whenever it appears to the Secretary that any person has engaged, is engaged, or is about to engage in any acts or practices constituting a violation of any regulation under this chapter, he may in his discretion bring an action, in the proper district court of the United States or the proper United States court of any territory or other place subject to the jurisdiction of the United States, to enjoin such acts or practices, and upon a proper showing a permanent or temporary injunction or restraining order shall be granted without bond. Upon application of the Secretary, any such court may also issue mandatory injunctions commanding any person to comply with any regulation of the Secretary under this chapter.

§ 125. Civil penalties

(a) For each willful violation of any regulation under this chapter, the Secretary may assess upon any person to which the regulation applies, and, if such person is a partnership, corporation, or other entity, upon any partner, director, officer, or employee thereof who willfully participates in the violation, a civil penalty not exceeding $1,000.

(b) In the event of the failure of any person to pay any penalty assessed under this section, a civil action for the recovery thereof may, in the discretion of the Secretary, be brought in the name of the United States.

§ 126. Criminal penalty

Whoever willfully violates any regulation under this chapter shall be fined not more than $1,000 or imprisoned not more than one year, or both.

§ 127. Additional criminal penalty in certain cases

Whoever willfully violates any regulation under this chapter, section 21 of the Federal Deposit Insurance Act, or section 411 of the National Housing Act, where the violation is committed in furtherance of the commission of any violation of Federal law punishable by imprisonment for more than one year, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

§ 128. Compliance

The Secretary shall have the responsibility to assure compliance with the requirements of this title and may delegate such responsibility to the appropriate bank supervisory agency, or other supervisory agency.

§ 129. Administrative procedure

The administrative procedure and judicial review provisions of subchapter II of chapter 5 and chapter 7 of title 5, United States Code, shall apply to all proceedings under this chapter, section 21 of the Federal Deposit Insurance Act, and section 411 of the National Housing Act.

TITLE II—REPORTS OF CURRENCY AND FOREIGN TRANSACTIONS

Chapter 1.—GENERAL PROVISIONS

§ 201. Short title

This title may be cited as the "Currency and Foreign Transactions Reporting Act".

§ 202. Purpose

It is the purpose of this title to require certain reports or records where such reports or records have a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings.

§ 203. Definitions and rules of construction

(a) The definitions and rules of construction set forth in this section apply for the purposes of this title.

(b) The term "Secretary" means the Secretary of the Treasury.

(c) The term "person" includes natural persons, partnerships, trusts, estates, associations, corporations, and all entities cognizable as legal personalities. The term also includes any governmental department or agency specified by the Secretary either for the purpose of this title generally or any particular requirement thereunder.

(d) The term "United States", used in a geographical sense, includes the States and the District of Columbia, and to the extent the Secretary shall by regulation specify, either for the purposes of this title generally or any particular requirement thereunder, the Commonwealth of Puerto Rico, the possessions of the United States, United States military establishments, and United States diplomatic establishments.

(e) The term "financial institution" means any person which does business in any one or more of the following capacities:

(1) an insured bank as defined in section 3 of the Federal Deposit Insurance Act;

(2) a commercial bank or trust company;

(3) a private banker;

(4) an agency or a branch within the United States of any foreign bank;

(5) an insured institution as defined in section 401 of the National Housing Act;

(6) a savings bank, building and loan association, credit union, industrial bank, or other thrift institution;

(7) a broker or dealer registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934;

(8) a broker or dealer in securities or commodities;

(9) an investment banker or investment company;

(10) a currency exchange;

(11) an issuer, redeemer or cashier of travelers' checks, checks, money orders, or similar instruments;

(12) an operator of a credit card system;

(13) an insurance company;

(14) a dealer in precious metals, stones, or jewels;

(15) a pawnbroker;

(16) a loan or finance company;

(17) a travel agency;

(18) a licensed transmitter of funds;

(19) a telegraph company;

(20) a Federal, State, or local government institution which performs any of the functions of any of the businesses listed above; or

(21) any other type of business or institution performing similar, related, or substitute functions specified by the Secretary by regulation for the purposes of the provision of this title to which the regulation relates.

(f) The term "domestic", used with reference to institutions or agencies, limits the applicability of the provision wherein it appears to the performance by such institutions or agencies of functions within the United States.

(g) The term "financial agency" means any person which acts in the capacity of a financial institution or in the capacity of a bailee, depository trustee, agent, or in any other similar capacity with respect to money, credit, securities, or gold or transactions therein, on behalf of any person other than a government, a monetary or financial authority when acting as such, or an international financial institution of which the United States is a member.

(h) The term "foreign", used with reference to institutions or agencies, limits the applicability of the provision wherein it appears to the performance by such institutions or agencies of functions outside the United States.

(i) References to this title or any provision thereof include regulations issued under this title or the provision thereof in question.

(j) All reports required under this title and all records of any such reports are specifically exempted from disclosure under section 552 of title 5, United States Code.

(k) For the purposes of section 1001 of title 18, United States Code, the contents of reports required under any provision of this title are statements and representations in matters within the jurisdiction of an agency of the United States.

(l) The term "monetary instruments" means coin and currency of the United States, and in addition, such foreign coin and currencies, and such types of travelers' checks, bearer negotiable instruments, bearer investment securities, bearer securities, and stock with title passing upon delivery, or the equivalent thereof, as the Secretary may by regulation specify for the purposes of the provision of this title to which the regulation relates.

§ 204. Regulations

The Secretary shall prescribe such regulations as he may deem appropriate to carry out the purposes of this title.

§ 205. Compliance

(a) The Secretary shall have the responsibility to assure compliance with the requirements of this title and may delegate such responsibility to the appropriate bank supervisory agency, or other supervisory agency.

(b) The Secretary may by regulation require any class of domestic financial institutions to maintain such procedures as he may deem appropriate to assure compliance with the provisions of this title. For the purposes of both civil and criminal penalties for violations of this section, a separate violation shall be deemed to occur with respect to each day and each separate office, branch, or place of business in which the violation occurs or continues.

§ 206. Exemptions

The Secretary may make such exemptions from any requirement otherwise imposed under this title as he may deem appropriate. Any such exemption may be conditional or unconditional, by regulation, order, or licensing, or any combination thereof, and may relate to any particular transaction, to the type or amount of the transaction, to the party or parties or the classification of parties, or to any combination thereof. The Secretary may in his discretion, in any manner giving actual or constructive notice to the parties affected, revoke any exemption made under this section. Any such revocation shall remain in effect pending any judicial review.

§ 207. Civil penalty

(a) For each willful violation of this title, the Secretary may assess upon any domestic financial institution, and upon any partner, director, officer, or employee thereof who willfully participates in the violation, a civil penalty not exceeding $1,000.

(b) In the event of the failure of any person to pay any penalty assessed under this title, a civil action for the recovery thereof may, in the discretion of the Secretary, be brought in the name of the United States.

§ 208. Injunctions

Whenever it appears to the Secretary that any person has engaged, is engaged, or is about to engage in any acts or practices constituting a violation of the provisions of this title, or of any order thereunder, he may in his discretion bring an action, in the proper district court of the United States or the proper United States court of any territory or other place subject to the jurisdiction of the United States, to enjoin such acts or practices, and upon a proper showing a permanent or temporary injunction or restraining order shall be granted without bond. Upon application of the Secretary, any such court may also issue mandatory injunctions commanding any person to comply with the provisions of this title or any order of the Secretary made in pursuance thereof.

§ 209. Criminal penalty

Whoever willfully violates any provision of this title or any regulation under this title shall be fined not more than $1,000, or imprisoned not more than one year, or both.

§ 210. Additional criminal penalty in certain cases

Whoever willfully violates any provision of this title where the violation is—

(1) committed in furtherance of the commission of any other violation of Federal law, or

(2) committed as part of a pattern of illegal activity involving transactions exceeding $100,000 in any twelve-month period,

shall be fined not more than $500,000 or imprisoned not more than five years, or both.

§ 211. Immunity of witnesses

Whenever a witness refuses on the basis of his privilege against self-incrimination, to testify or provide other information in a proceeding involving any violation of this title before or ancillary to—

(1) a court or grand jury of the United States,

(2) an agency of the United States, or

(3) either House of Congress, a joint committee of the two Houses, or a committee or a subcommittee of either House,

and the person presiding over the proceeding communicates to the witness an order requiring him to give testimony or provide other information, the witness may not refuse to comply with the order on the basis of his privilege against self-incrimination. No such testimony or other information so compelled under the order or evidence or other information which is obtained by the exploitation of such testimony may be used against the witness in any criminal case, except a prosecution for perjury, giving a false statement, or otherwise failing to comply with the order.

§ 212. Availability of information to other Federal agencies

The Secretary shall, upon such conditions and pursuant to such procedures as he may by regulation prescribe, make any information set forth in reports filed pursuant to this title available for a purpose consistent with the provisions of this title to any other department or agency of the Federal Government on the request of the head of such department or agency.

§ 213. Administrative procedure

Subject to section 203(j), the administrative procedure and judicial review provisions of subchapter II of chapter 5 and chapter 7 of title 5, United States Code, shall apply to all proceedings under this title.

Chapter 2.—DOMESTIC CURRENCY TRANSACTIONS

§ 221. Reports of currency transactions required

Transactions involving any domestic financial institution shall be reported to the Secretary at such time, in such manner, and in such detail as the Secretary may require if they involve the payment, receipt, or transfer of United States currency, or such other monetary instruments as the Secretary may specify, in such amounts, denominations, or both, or under such circumstances, as the Secretary shall by regulation prescribe.

§ 222. Persons required to file reports

The report of any transaction required to be reported under this chapter shall be signed or otherwise made both by the domestic financial institution involved and by one or more of the other parties thereto or participants therein, as the Secretary may require. If any party to or participant in the transaction is not an individual acting only for himself, the report shall identify the person or persons on whose behalf the transaction is entered into, and shall be made by the individuals acting as agents or bailees with respect thereto.

§ 223. Reporting procedure

(a) The Secretary may in his discretion designate domestic financial institutions, individually or by class, as agents of the United States to receive reports required under this chapter, except that an institution which is not insured, chartered, examined, or registered as such by any agency of the United States may not be so designated without its consent. The Secretary may suspend or revoke any such designation for any violation of this Act, or section 21 of the Federal Deposit Insurance Act, or section 411 of the National Housing Act.

(b) Any person (other than an institution designated under subsection (a)) required to file a report under this chapter with respect to a transaction with a domestic financial institution shall file the report with that institution, except that (1) if the institution is not designated under subsection (a), the report shall be filed as the Secretary shall prescribe, and (2) any such person may, at his election and in lieu of filing the report in the manner hereinabove prescribed, file the report with the Secretary. Domestic financial institutions designated under subsection (a) shall transmit reports filed with them, and shall file their own reports, as the Secretary shall prescribe.

Chapter 3.—REPORTS OF EXPORTS AND IMPORTS OF MONETARY INSTRUMENTS

§ 231. Reports required

(a) Except as provided in subsection (c) of this section, whoever, whether as principal, agent, or bailee, or by an agent or bailee, knowingly—

(1) transports or causes to be transported monetary instruments—

(A) from any place within the United States to or through any place outside the United States, or

(B) to any place within the United States from or through any place outside the United States, or

(2) receives monetary instruments at the termination of their transportation to the United States from or through any place outside the United States

in an amount exceeding $5,000 on any one occasion shall file a report or reports in accordance with subsection (b) of this section.

(b) Reports required under this section shall be filed at such times and places, and may contain such of the following information and any additional information, in such form and in such detail, as the Secretary may require:

(1) The legal capacity in which the person filing the report is acting with respect to the monetary instruments transported.

(2) The origin, destination, and route of the transportation.

(3) Where the monetary instruments are not legally and beneficially owned by the person transporting the same, or are transported for any purpose other than the use in his own behalf of the person transporting the same, the identities of the person from whom the monetary instruments are received, or to whom they are to be delivered, or both.

(4) The amounts and types of monetary instruments transported.

(c) Subsection (a) does not apply to any common carrier of passengers in respect of monetary instruments in the possession of its passengers, nor to any common carrier of goods in respect of shipments of monetary instruments not declared to be such by the shipper.

§ 232. Forfeiture

(a) Any monetary instruments which are in the process of any transportation with respect to which any report required to be filed under section 231(1) either has not been filed or contains material omissions or misstatements are subject to seizure and forfeiture to the United States.

(b) For the purpose of this section, monetary instruments transported by mail, by any common carrier, or by any messenger or bailee, are in process of transportation from the time they are delivered into the possession of the postal service, common carrier, messenger, or bailee until the time they are delivered into or retained in the possession of the addressee or intended recipient or any agent of the addressee or intended recipient for purposes other than further transportation within, or across any border of, the United States.

§ 233. Civil liability

The Secretary may assess a civil penalty upon any person who fails to file any report required under section 231, or who files such a report containing any material omission or misstatement. The amount of the penalty shall not exceed the amount of the monetary instruments with respect to whose transportation the report was required to be filed. The liabilities imposed by this chapter are in addition to any other liabilities, civil or criminal, except that the liability under this section shall be reduced by any amount actually forfeited under section 232.

§ 234. Remission by the Secretary

The Secretary may in his discretion remit any forfeiture or penalty under this chapter in whole or in part upon such terms and conditions as he deems reasonable and just.

§ 235. Enforcement authority

(a) If the Secretary has reason to believe that monetary instruments are in the process of transportation and with respect to which a report required under section 231 has not been filed or contains material omissions or misstatements, he may apply to any court of competent jurisdiction for a search warrant. Upon a showing of probable cause, the court may issue a warrant authorizing the search of any or all of the following:

(1) One or more designated persons.

(2) One or more designated or described places or premises.

(3) One or more designated or described letters, parcels, packages, or other physical objects.

(4) One or more designated or described vehicles.

Any application for a search warrant pursuant to this section shall be accompanied by allegations of fact supporting the application.

(b) This section is not in derogation of the authority of the Secretary under any other law.

CHAPTER 4.—FOREIGN TRANSACTIONS

§ 241. Records and reports required

(a) The Secretary of the Treasury, having due regard for the need to avoid impeding or controlling the export or import of currency or other monetary instruments and having due regard also for the need to avoid burdening unreasonably persons who legitimately engage in transactions with foreign financial agencies, shall by regulation require any resident or citizen of the United States, or person in the United States and doing business therein, who engages in any transaction or maintains any relationship, directly or indirectly, on behalf of himself or another, with a foreign financial agency to maintain records or to file reports, or both, setting forth such of the following information, in such form and in such detail, as the Secretary may require:

(1) The identities and addresses of the parties to the transaction or relationship.

(2) The legal capacities in which the parties to the transaction or relationship are acting, and the identities of the real parties in interest if one or more of the parties are not acting solely as principals.

(3) A description of the transaction or relationship including the amounts of money, credit, or other property involved.

(b) No person required to maintain records under this section shall be required to produce or otherwise disclose the contents of the records except in compliance with a subpena or summons duly authorized and issued or as may otherwise be required by law.

§ 242. Classifications and requirements

The Secretary may prescribe:

(1) Any reasonable classification of persons subject to or exempt from any requirement imposed under section 241.

(2) The foreign country or countries as to which any requirement imposed under section 241 applies or does not apply if, in the judgment of the Secretary, uniform applicability of any such requirement to all foreign countries is unnecessary or undesirable.

(3) The magnitude of transactions subject to any requirement imposed under section 241.

(4) Types of transactions subject to or exempt from any requirement imposed under section 241.

(5) Such other matters as he may deem necessary to the application of this chapter.

TITLE III—MARGIN REQUIREMENTS

§ 301. Amendment of section 7 of the Securities Exchange Act of 1934

(a) Section 7 of the Securities Exchange Act of 1934 (15 U.S.C. 78g)[53] is amended by adding at the end thereof the following new subsection:

"(f) (1) It is unlawful for any United States person, or any foreign person controlled by a United States person or acting on behalf of or in conjunction with such person, to obtain, receive, or enjoy the beneficial use of a loan or other extension of credit from any lender (without regard to whether the lender's office or place of business is in a State or the transaction occurred in whole or in part within a State) for the purpose of (A) purchasing or carrying United States securities, or (B) purchasing or carrying within the United States of any other securities, if, under this section or rules and regulations prescribed thereunder, the loan or other credit transaction is prohibited or would be prohibited if it had been made or the transaction had otherwise occurred in a lender's office or other place of business in a State.

"(2) For the purposes of this subsection—

"(A) The term 'United States person' includes a person which is organized or exists under the laws of any State or, in the case of a natural person, a citizen or resident of the United States; a domestic estate; or a trust in which one or more of the foregoing persons has a cumulative direct or indirect beneficial interest in excess of 50 per centum of the value of the trust.

"(B) The term 'United States security' means a security (other than an exempted security) issued by a person incorporated under the laws of any State, or whose principal place of business is within a State.

"(C) The term 'foreign person controlled by a United States person' includes any noncorporate entity in which United States

53. 15 U.S.C.A. § 78g(f) (1) to (3).

persons directly or indirectly have more than a 50 per centum beneficial interest, and any corporation in which one or more United States persons, directly or indirectly, own stock possessing more than 50 per centum of the total combined voting power of all classes of stock entitled to vote, or more than 50 per centum of the total value of shares of all classes of stock.

"(3) The Board of Governors of the Federal Reserve System may, in its discretion and with due regard for the purposes of this section, by rule or regulation exempt any class of United States persons or foreign persons controlled by a United States person from the application of this subsection."

(b) The amendment made by subsection (a) of this section does not affect the continuing validity of any rule or regulation under section 7 of the Securities Exchange Act of 1934 in effect prior to the effective date of the amendment.

TITLE IV—EFFECTIVE DATES

§ 401. Effective dates

(a) Except as otherwise provided in this section, titles I, II, and III of this Act and the amendments made thereby take effect on the first day of the seventh calendar month which begins after the date of enactment.

(b) The Secretary of the Treasury may by regulation provide that any provision of title I or II or any amendment made thereby shall be effective on any date not earlier than the publication of the regulation in the Federal Register and not later than the first day of the thirteenth calendar month which begins after the date of enactment.

(c) The Board of Governors of the Federal Reserve System may by regulation provide that the amendment made by title III shall be effective on any date not earlier than the publication of the regulation in the Federal Register and not later than the first day of the thirteenth calendar month which begins after the date of enactment.

TITLE V—PROVISIONS RELATING TO CREDIT CARDS

Sec. 501. Section 103 of the Truth in Lending Act (82 Stat. 146)[54] is amended by redesignating subsections (j), (k), and (*l*) as subsections (p), (q), and (r), respectively, and by adding after subsection (i) the following:

"(j) The term 'adequate notice', as used in section 133, means a printed notice to a cardholder which sets forth the pertinent facts clearly and conspicuously so that a person against whom it is to operate could reasonably be expected to have noticed it and understood its meaning. Such notice may be given to a cardholder by printing the notice on any credit card, or on each periodic statement of account, issued to the cardholder, or by any other means reasonably assuring the receipt thereof by the cardholder.

54. 15 U.S.C.A. § 1601 et seq.

"(k) The term 'credit card' means any card, plate, coupon book or other credit device existing for the purpose of obtaining money, property, labor, or services on credit.

"(*l*) The term 'accepted credit card' means any credit card which the cardholder has requested and received or has signed or has used, or authorized another to use, for the purpose of obtaining money, property, labor, or services on credit.

"(m) The term 'cardholder' means any person to whom a credit card is issued or any person who has agreed with the card issuer to pay obligations arising from the issuance of a credit card to another person.

"(n) The term 'card issuer' means any person who issues a credit card, or the agent of such person with respect to such card.

"(*o*) The term 'unauthorized use', as used in section 133, means a use of a credit card by a person other than the cardholder who does not have actual, implied, or apparent authority for such use and from which the cardholder receives no benefit."

Sec. 502. (a) The Truth in Lending Act (82 Stat. 146) is amended by adding after section 131 the following sections:

"§ 132. Issuance of credit cards

"No credit card shall be issued except in response to a request or application therefor. This prohibition does not apply to the issuance of a credit card in renewal of, or in substitution for, an accepted credit card.

"§ 133. Liability of holder of credit card

"(a) A cardholder shall be liable for the unauthorized use of a credit card only if the card is an accepted credit card, the liability is not in excess of $50, the card issuer gives adequate notice to the cardholder of the potential liability, the card issuer has provided the cardholder with a self-addressed, prestamped notification to be mailed by the cardholder in the event of the loss or theft of the credit card, and the unauthorized use occurs before the cardholder has notified the card issuer that an unauthorized use of the credit card has occurred or may occur as the result of loss, theft, or otherwise. Notwithstanding the foregoing, no cardholder shall be liable for the unauthorized use of any credit card which was issued on or after the effective date of this section, and, after the expiration of twelve months following such effective date, no cardholder shall be liable for the unauthorized use of any credit card regardless of the date of its issuance, unless (1) the conditions of liability specified in the preceding sentence are met, and (2) the card issuer has provided a method whereby the user of such card can be identified as the person authorized to use it. For the purposes of this section, a cardholder notifies a card issuer by taking such steps as may be reasonably required in the ordinary course of business to provide the card issuer with the pertinent information whether or not any particular officer, employee, or agent of the card issuer does in fact receive such information.

"(b) In any action by a card issuer to enforce liability for the use of a credit card, the burden of proof is upon the card issuer to show that the use was authorized or, if the use was unauthorized, then the burden of proof is upon the card issuer to show that the conditions of liability for the unauthorized use of a credit card, as set forth in subsection (a), have been met.

"(c) Nothing in this section imposes liability upon a cardholder for the unauthorized use of a credit card in excess of his liability for such use under other applicable law or under any agreement with the card issuer.

"(d) Except as provided in this section, a cardholder incurs no liability from the unauthorized use of a credit card.

"§ 134. Fraudulent use of credit card

"Whoever, in a transaction affecting interstate or foreign commerce, uses any counterfeit, fictitious, altered, forged, lost, stolen, or fraudulently obtained credit card to obtain goods or services, or both, having a retail value aggregating $5,000 or more, shall be fined not more than $10,000 or imprisoned not more than five years, or both."

(b) The table of contents of chapter 2 of the Truth in Lending Act is amended by adding at the end thereof the following:

Sec. 503. The amendments to the Truth in Lending Act made by this title become effective as follows:

(1) Section 132 of such Act takes effect upon the date of enactment of this title.

(2) Section 133 of such Act takes effect upon the expiration of 90 days after such date of enactment.

(3) Section 134 of such Act applies to offenses committed on or after such date of enactment.

TITLE VI—PROVISIONS RELATING TO CREDIT REPORTING AGENCIES

AMENDMENT OF CONSUMER CREDIT PROTECTION ACT

Sec. 601. The Consumer Credit Protection Act[55] is amended by adding at the end thereof the following new title:

"TITLE VI—CONSUMER CREDIT REPORTING

55. 15 U.S.C.A. § 1601 et seq.

"§ 601. Short title

"This title may be cited as the Fair Credit Reporting Act.

"§ 602. Findings and purpose

"(a) The Congress makes the following findings:

"(1) The banking system is dependent upon fair and accurate credit reporting. Inaccurate credit reports directly impair the efficiency of the banking system, and unfair credit reporting methods undermine the public confidence which is essential to the continued functioning of the banking system.

"(2) An elaborate mechanism has been developed for investigating and evaluating the credit worthiness, credit standing, credit capacity, character, and general reputation of consumers.

"(3) Consumer reporting agencies have assumed a vital role in assembling and evaluating consumer credit and other information on consumers.

"(4) There is a need to insure that consumer reporting agencies exercise their grave responsibilities with fairness, impartiality, and a respect for the consumer's right to privacy.

"(b) It is the purpose of this title to require that consumer reporting agencies adopt reasonable procedures for meeting the needs of commerce for consumer credit, personnel, insurance, and other information in a manner which is fair and equitable to the consumer, with regard to the confidentiality, accuracy, relevancy, and proper utilization of such information in accordance with the requirements of this title.

"§ 603. Definitions and rules of construction

"(a) Definitions and rules of construction set forth in this section are applicable for the purposes of this title.

"(b) The term 'person' means any individual, partnership, corporation, trust, estate, cooperative, association, government or governmental subdivision or agency, or other entity.

"(c) The term 'consumer' means an individual.

"(d) The term 'consumer report' means any written, oral, or other communication of any information by a consumer reporting agency bearing on a consumer's credit worthiness, credit standing, credit capacity, character, general reputation, personal characteristics, or mode of living which is used or expected to be used or collected in whole or in part for the purpose of serving as a factor in establishing the consumer's eligibility for credit or insurance to be used primarily for personal, family, or household purposes, or (2) employment purposes, or (3) other purposes authorized under section 604. The term does not include (A) any report containing information solely as to transactions or experiences between the consumer and the person making the report; (B) any authorization or approval of a specific extension of credit directly or indirectly by the issuer of a credit card or similar device; or (C) any report in which a person who has been requested by a third party to make a specific extension of credit directly or indirectly to a consumer conveys his decision with respect to such request, if the third party advises the consumer of the name and address of the person to whom the request was made and such person makes the disclosures to the consumer required under section 615.

"(e) The term 'investigative consumer report' means a consumer report or portion thereof in which information on a consumer's character, general reputation, personal characteristics, or mode of living is obtained through personal interviews with neighbors, friends, or associates of the consumer reported on or with others with whom he is acquainted or who may have knowledge concerning any such items of information. However, such information shall not include specific factual information on a consumer's credit record obtained directly from a creditor of the consumer or from a consumer reporting agency when such information was obtained directly from a creditor of the consumer or from the consumer.

"(f) The term 'consumer reporting agency' means any person which, for monetary fees, dues, or on a cooperative nonprofit basis, regularly engages in whole or in part in the practice of assembling or evaluating consumer credit information or other information on consumers for the purpose of furnishing consumer reports to third parties, and which uses any means or facility of interstate commerce for the purpose of preparing or furnishing consumer reports.

"(g) The term 'file', when used in connection with information on any consumer, means all of the information on that consumer recorded and retained by a consumer reporting agency regardless of how the information is stored.

"(h) The term 'employment purposes' when used in connection with a consumer report means a report used for the purpose of evaluating a consumer for employment, promotion, reassignment or retention as an employee.

"(i) The term 'medical information' means information or records obtained, with the consent of the individual to whom it relates, from