SB

306

TESTIMONY OF RUSSELL W. CAHILL, DIRECTOR

ALASKA STATE PARKS

ON SENATE BILL 305

"CABINS IN STATE PARKS"

Murkowski
Sen. Poland
needs copies
Put in log

Mr. Chairman, Members of the Committee, the Department of Natural Resources believes this legislation is superfluous. Division of Parks has full authority to construct cabins in State Parks at this time. The master plans for Denali Park and Kachemak Park call for public use cabins. However, during the public process of producing a bond bill and bond issue for the ballot in 1976, we heard nothing from either the public or the Legislature which would have indicated that public use cabins were in the high priorities for State Park development.

Those of you who were here in the last session may recall that the request for capital funds for State Parks was cut in half by this Committee before it ever reached the Finance Committee of the House. The development needs passed on to us in legislative and public meetings were for campgrounds, auto access, sanitary facilities, and trail access to the back country: not cabins. Our proposed projects reflected those needs and are now law.

There is a letter of intent which was passed by the Senate with this bill and which not only instructs the Division to build the cabins, but tells us where to put them. It seems to me that the Senate Resources Committee, which has been reluctant even to hold hearings on any new park proposals, now wants to manage the existing Park System.

Considering the issues here, I believe this bill doesn't have any substance and is unnecessary. The Senate cut our district operations budget by more than $100,000 this year. The Free Conference Committee version of that budget still includes a $79,000 cut in district operations. The majority of that money was for garbage pickup in the State Park System and yet, funds to implement this cabin legislation (approximately $135,000 of general fund expenditures the first year), are nowhere to be found in the '78 fiscal budget.

Finally, this legislation calls for the Division of Parks to consult with local organizations to minimize the costs associated with this construction. In my experience, these groups then receive a preference right for the use of the cabins. Indeed, in many cases, such as the Sierra Club's former lodge in Yosemite National Park and many others, the cabins become a bone of contention between the general public and the organizations. In addition, this bill suggests that primary consideration be given to potential use of trails, rivers, lakes, and seashore by residents of Alaska. If you look at status plats around most of the lakes in southcentral Alaska and around the coast of Kachemak Bay State Park and several other coastal areas of Southcentral, you will find that the State, under the "open to entry" program, turned over much of the lakeshores and rivershores of the State to private ownership for recreation purposes. We have no quarrel with that use, however, we have found that the public has been effectively cut-off from many of these lakeshore areas by this allocation of land. We in the Division of Parks and I in particular feel that some of these lakes and rivers should be left open to continued public use without cabins or other structures. I believe

you would be surprised to find the number of people who wish to canoe and kayak along the few lakeshores that are in the State Park System and To camp in a place where there are no cabins.

I suggest that if this legislature wishes to have public cabins in State Parks, it should pass a small bond issue in 1978 and go to the voters with it. Unless the funds are provided to do this work, passage of this bill is tantamount to handing a hungry person a photograph of a meal and asking that person to eat the picture.

Second Session - Ninth Legislature

I. REQUEST

Bill No. S.B. 306

Title: Cabins Within State Parks and State Game Refuges

Requested by: Senator Croft Date: 5/4/77

Return Date Requested: 5/4/77

Agency: Natural Resources Program: Parks and Recreation

II. FISCAL DETAIL

Budget Request Unit(s) Affected: 10-46-7-02-00-00 District Operations
10-46-7-03-00-00 Park Management

A. EXPENDITURES: (Thousands of dollars)

| | OBJECT | FY 76 | FY 77 | FY 78 | FY 79 | FY 80 | FY 81 |
|---|---|---|---|---|---|---|---|
| 100 | PERSONAL SERVICES | | | 26.4 | 29.0 | | |
| 200 | TRAVEL | | | 4.0 | 4.4 | | |
| 300 | CONTRACTUAL | | | 5.0 | 5.5 | | |
| 400 | COMMODITIES | | | 6.0 | 6.6 | | |
| 500 | EQUIPMENT | | | 10.0 | 2.0 | | |
| 600 | LAND & STRUCTURES | | | 95.0 | | | |
| 700 | GRANTS, CLAIMS, ETC. | | | | | | |
| | TOTAL | | | 146.4 | 47.5 | | |

B. FUNDING: (Thousands of dollars)

| | | | | | | |
|---|---|---|---|---|---|---|
| GENERAL FUND | | | 146.4* | 47.5 | | |
| FEDERAL FUNDS | | | | | | |
| OTHER | | | | | | |

C. POSITIONS:

| | | | | | | |
|---|---|---|---|---|---|---|
| PERMANENT/TEMPORARY | / | / | 2/ | 2/ | / | / |
| MAN MONTHS (P./T.) | / | / | 20/ | 20/ | / | / |

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

See attachment.

*As indicated on the fiscal analysis form (attached), potential Federal funds are obligated through FY 79. If the program were not implemented until FY80, then 50 percent of the cost for constructing the cabins (50% of 95.0) could come from Federal funds rather than general funds.

IV. ATTACHMENTS

V. DATE: 5/4/77 PREPARED BY: Russell W. Cahill

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)

H/S 50

# FISCAL ANALYSIS

| DEPARTMENT | SPONSOR (PRINCIPAL | BILL NO. |
|---|---|---|
| Natural Resources | Croft | SB 306 |
| **DIVISION POSITION** | **CO-SPONSORS OR COMMITTEE SPONSORS** | **DATE LAST AMENDED** |
| Cautious neutrality | Huber | |

| DIVISION DIRECTOR | DATE | COMMISSIONER | DATE |
|---|---|---|---|
| Russell Cahill | 4/15/77 | LeResche | |

## FISCAL EFFECTS OF BILL

(1) CHANGES IN PERSONNEL

Add 10 man months Park Ranger I
10 man months Trades Helper WG VII

(2) CHANGES IN GOVERNOR'S PROPOSED BUDGET

(3) CAN COSTS BE ABSORBED

No

(4) REVENUE/EXPENDITURE CLASSIFICATION AND FUND — SOURCE (GENERAL FUND/BUDGET, FEDERAL FUNDS, BONDS, SPECIAL APPROPRIATIONS)

| | | |
|---|---|---|
| Add: | Personal Services - annually | 26.4 G.F. |
| | Travel | 4.0 G.F. |
| | Contractural Services | 5.0 G.F. |
| | Commodities (repairs & maintenance) | 6.0 G.F. |
| | Equipment - 10.0 the first year and 2.0 per year thereafter | |
| | Capital costs - 9 cabins one time | *FY78 95.0 G.F. or bonds |
| | | *FY80 47.5 G.F. or bonds<br>47.5 Federal funds |

COMMENTS:

*Federal funds would be available in FY80. State has them obligated through FY79. State funds could be obtained through a general obligation bond in 1978 if this becomes law.

V. DATE: 5/4/77 PREPARED BY: ____

# BILL ANALYSIS

ASSIGNMENT DATE_____

UNASSIGNED_____

| DEPARTMENT | SPONSOR (PRINCIPAL) | BILL NO. |
|---|---|---|
| Natural Resources | Croft | SB 306 |

DEPARTMENT POSITION

Cautious Neutrality. If decision regarding placement of cabins is left in the hands of DNR or ADF&G, the Department is supportive. Fiscal Impact is adverse and cannot be absorbed by existing programs.

| DIVISION DIRECTOR | DATE | COMMISSIONER | DATE |
|---|---|---|---|
| Russell Cahill | 4/15/77 | LeResche | |

GOVERNOR'S OFFICE USE

☐ POSITION NOTED ☐ POSITION APPROVED ☐ POSITION DISAPPROVED

BY: DATE:

SUMMARY

(1) RELATED BILLS (SIMILAR OR CONFLICTING) None

(2) a. ORGANIZATIONAL SUPPORT FOR BILL

Unknown

(2) b. ORGANIZATIONAL OPPOSITION TO BILL

Unknown

(3) PROGRAM EFFECTS OF BILL

If cabins are constructed in very remote areas, the costs in manpower and materials for maintenance are normal. If close to roads, they are inordinately high. Cabins attract high vandalism levels and are places for very high visitor conflict levels. Cost of operations are much higher than equal camping site costs. Reservation system will be costly to operate.

(4) FISCAL IMPACT: ☐ NONE ☒ FISCAL ANALYSIS ATTACHED

(5) AMENDMENTS PROPOSED:

Page 1 - line 10, delete (each State Park) and replace with State parks. Page 1 - lines 12 & 13, delete (each state game refuge) and add State Game refuges. Page 2 - line 10, after "reservation" add and fee

(6) COMMENTS:

Director of Parks is cautious on this. Hundreds of private cabins exist on state leased lands. Often the only undeveloped shore accessible to the public is in state parks. Initial development would require 9 cabins in Parks and Refuges. Fees should be charged. Director considers letter of intent an attempt by legislature to run program. No funds available to do this job in FY78 budget. Would require new appropriation or 1978 bond issue.

# Alaska State Legislature

## House

HOUSE RESOURCES COMMITTEE

Alvin Osterback, Chairman

Pouch V, State Capitol
Juneau, Alaska 99811
(907) 465-3715

18 May 1977

The Honorable Hugh Malone
Speaker
Alaska State House of Representatives

Dear Representative Malone:

The following is the intent of the House Resources Committee with the passage of HCS for SB 306.

During Fiscal Year 1978 this Act shall be administered as a pilot program, with nine cabins to be constructed in the following state parks and game refuges.

(1) One cabin in Chugach State Park;

(2) one cabin in Kachemak Bay State Park;

(3) one cabin in Denali State Park;

(4) one cabin in Susitna Flats State Game Refuge; and

(5) five cabins in other state parks and state game refuges, to be chosen by the Commissioner of Natural Resources with the concurrance of the Commissioner of Fish and Game.

Sincerely,

Alvin Osterback

Alvin Osterback
Chairman
House Resources Committee

AO:jn

SB
337

STATE of ALASKA

# MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF THE COMMISSIONER

TO: Bob Palmer, Special Projects
Phil Hubbard, Commissioner of Commerce
Mike Smith, Assistant Commissioner
Ted Smith, Director of Lands
Allan Linn, Director of Agriculture

DATE : April 15, 1977

FROM: Bob LeResche
Commissioner

SUBJECT: Delta Agricultural Action Plan

The feasibility report by the Ad Hoc Delta Barley Group, has been completed and reviewed by the Division of Policy Development and Planning. In addition, the Delta Land Management Planning Study is essentially completed. All three of these studies have been very well done, and fit together very well as a guide to future action. The purpose of this memorandum is to establish an action plan for aggressive accomplishment of the recommendations in these three studies.

I am requesting those indicated below to move with all practical speed to accomplish the tasks outlined:

TANANA LOOP AREA: In accordance with the Delta Land Management Planning Study, the Division of Lands should proceed to lay out, plat, and make available for sale around 5,000 acres of land for small farmsteads. This land should be in approximately half-section parcels, and should be an agricultural rights sale. The Division of Lands should work closely with the Division of Agriculture and the University of Alaska, to lay out this land disposal, and to derive the procedure by which it shall occur. Hopefully, disposal can begin by January, 1978.

GENERAL ADMINISTRATIVE TASKS:

1. Definition of "agricultural rights." The Division of Lands should immediately get together with the Department of Law and draw up an acceptable definition of agricultural rights to be included in any sale or lease of these rights. The Division of Agriculture should be consulted during this process. This definition might well contain identification of permitted uses, and the covenants/easements to sale, as well as provisions for recreational access and liability against crop depredation. The Department of Fish and Game should be consulted concerning the latter.

The Director of Lands should report progress to me on this item on June 1.

045.3

2. Appraisal policy for "agricultural rights." The Division of Lands, the Department of Law, and Division of Agriculture should get together once a working definition of agricultural rights is established, to consider principles whereby these rights will be appraised precedent to sale or lease. These agencies should consider whether potential economic viability of a specifically stated farming venture on the land should be an overriding factor in appraisal. The Director of Lands should report to me on this on July 1.

3. Resolution of potential statutory conflicts regarding how much land can be transferred to an individual. The Department of Law and the Division of Lands should work together to resolve these conflicts as they affect conveyance of agricultural rights. The Director of Lands should recommend action to me by July 1.

4. Determination of appropriate method of disposal of agricultural rights. The Division of Lands and Division of Agriculture should derive a set of principles from which decisions can be made in individual cases whether to offer agricultural rights for purchase, lease, or lease-purchase. In addition, they should establish the principles under which future decisions should be made regarding whether leases or purchases should be by bidding, lottery, or negotiation. The Director of Agriculture should make recommendations to me in this regard by July 1.

5. Classification of agricultural lands in the Delta Land Management and Planning Study area. The Division of Lands should complete classification of lands designated as agricultural by the Delta Land Management Plan.

"DELTA BARLEY PROJECT" :

1. Lay out of project. The Division of Lands and the Division of Agriculture shoudl prepare a final project lay-out plan, using the recommendations of the Ad Hoc barley project group, the Delta Land Management planning Study, and the Division of Policy evelopment and Planning report. This final layout should be reviewed by all concerned parties, including especially those who had active involvement with the three above studies. I hope that the project layout can be finalized and accepted by all parties by July 1. The Director of Lands should report progress in this regard to me on July 1.

2. Platting the Division of Lands should proceed rapidly with platting the area pursuant to the approved layout plan. On July 1, the Director of Lands should give me a schedule under which platting will occur.

3. The Division of Parks should initiate an archaeological and historical survey, pursuant to AS 41.35.070, as soon as the final development plan for both the barley project area

and the Tanana Loop area is available. The Director of Parks should let me know as soon as possible a reasonable time schedule for completing this survey.

4. Test plot clearing. The Division of Agriculture, with cooperation from the Division of Lands should arrange for clearing a half-section or full section test plot. The purpose of this clearing will be to test clearing methods, to test moisture retention and blowoff tendancies, and to test barley production. The Division of Agriculture should ensure that representatives of the Department of Fish and Game, Department of Environmental Conservation, the Ad Hoc Group and the University all have ample opportunity to help design the test procedures, and to be present and participate in the actual clearing and manipulation of the test plot as well as any subsequent measurements they may wish to undertake. The Director of Agriculture should give me an action plan and schedule for this test clearing, as well as for all test procedures to be undertaken during fiscal year 1978, by June 1.

5. Design of environmental studies. The Division of Lands should immediately contact the Departments of Fish and Game and Natural Resources, as well as interested members of the Ad Hoc Committee, and request that they design by May 15 specific environmental studies that will be necessary in order to evaluate clearing methods, prepare the final project layout plan, and assist in development of the conservation plan. These studies should be designed in detail and costed out so that we may proceed to implement them without delaying the project unnecessarily.

6. Soil conservation plan. The Division of Agriculture, Division of Lands, Department of Environmental Conservation and the Soil Conservation Service, should begin preparation of a soil conservation plan for the entire Delta Clearwater area. This plan should at least cover soil conservation and erosion control, pesticide use, herbicide and fertilizer use, and water quality. In addition, the plan may consider such things as energy conservation, suggestions for clearing and farm management practices. The Director of Agriculture should give me by June 1, a schedule for completion of this soil conservation plan.

7. Funding alternatives. The Division of Agriculture and the Department of Commerce and Economic Development should assist Mr. Palmer as much as possible in his quest for non-State funds that may be available to finance the Delta Barley project. Hopefully, some specific avenues of approach should be available to us by July.

In addition, Bob Palmer and I are presently preparing a supplemental budget for accomplishing the other directives

included in this memorandum. All interested parties should telephone me by May 1 with specifics regarding any additional funding they will need to accomplish these directives during fiscal year 1978.

8. Timber sales. The Division of Lands should make announcements as soon as possible offering timber within areas planned for clearing to local residents at a minimal fee, to cover at least the cost of administration of timber removal. These announcements should be in compliance with the final project layout to be derived above, and should be offered if possible by August 1.

9. Local government and farmers cooperative. The Division of Agriculture, Department of Community and Regional Affairs and Department of Commerce and Economic Development should develop an active program of contact with the City of Delta Junction and local farmers, designed to clarify the long-term role of local government and any potential farmers cooperative organizations in future agricultural development in the Delta area. I would suggest it would be very beneficial for the State to provide a similar level of aid to Delta farmers, including both those involved in the Tanana Loop "small" acreage farms and in the Delta Barley project, as we are currently providing to fishermen interested in nonprivate, nonprofit aquaculture projects. I would suggest that the Department of Commerce and Economic Development review the contract that the Division of Policy Development and Planning has with the Southeast aquaculture Organization and consider creating a similar relationship between the State and Delta farmers.

10. The Division of Agriculture, Division of Lands, Department of Commerce and Economic Development should together prepare a draft of qualifications for those who will qualify to purchase or lease large tracts of agricultural rights in the Delta barley area. These criteria should follow those discussed by the Ad Hoc Group and the Division of Policy Development and Planning, and should include experience factors, financial qualifications, and other factors. I would suggest that these criteria be derived solely on the basis of maximizing the probability of success of the Delta farming venture, and not on the basis of insuring that enough qualified farmers will be immediately available. The Director of Agriculture should give me a draft list of criteria by July 1.

I feel if we can accomplish all of the above on approximately the time scale outlined, we will have made a very positive step toward achieving a new and viable renewable resource industry in Alaska, planned and endorsed by local residents, financially responsible, and environmentally sound. Upon our accomplishment of all of the above, and upon qualification of the requisite number of potential private participants (i.e., upon sufficient showing of private demand by qualified

individuals) I would intend to make approximately 50,000 acres of land available for barley production in the Delta area as outlined by previous plans.

I sincerely hope we all can work together compatibly in pursuing this exciting prospect.

cc: Governor Jay S. Hammond

BL:lb

The primary purpose of this land clearing operation is to test an alternative method of clearing land when the vegetative cover consists primarily of heavy moss cover and black spruce timber.

Technicians of the U.S. Soil Conservation Service have devised this system and believe that it has a number of significant advantages over the conventional method of bulldozing all material--including the top soil that adheres to the roots of the vegetation--into large "berm piles". Those berm piles are then burned or allowed to decompose over the next 20 years or so.

The clearing process proposed is explained in some detail in the accompanying correspondence from Mr. Burt Clifford, U.S. Soil Conservation Service.

Recent estimates for clearing and breaking costs received from Mr. Dennis Green, heavy equipment contractor in Delta Junction and generally recognized in that area as one of the most qualified and reasonable land clearing contractors, yield the following cost data regarding the clearing method to be tested:

| | |
|---|---|
| Clearing | $100/acre |
| Clean-up of burn residue | $20/acre |
| "Breaking | $30/acre |
| TOTAL | $150/acre |

Mr. Green recently completed clearing 2,000 acres of somewhat similar timber for a private individual, using the conventional "berm pile" method. His charges were $338,000.

It is hoped that the alternative method of land clearing that will be used on the test plot will result in a number of advantages:

1. No loss of top soil since the vegetation and any soil adhering to the roots will only be moved the width of a bulldozer blade;

2. No berm piles to inhibit farming operations, reduce acreage available for production and provide an eyesore;

3. Lower costs--since the vegetation will be moved to a much shorter distance than with the conventional methods of clearing land.

Contractors in the Fairbanks-Delta Junction area who are expected to bid on the large clearing project (60,000 to 70,000 acres), if the legislature ultimately approves such a project, recently stated to Dr. C. E. Lewis, Agricultural Economist, University of Alaska, that at least 2,000 acres should be included in the test plot. They stated that anything less would not yield significant data on which they could base contract bids.

Enclosure

# LAND CLEARING
## SHEAR AND BURN METHOD

Burton L. Clifford - Resource Conservationist
USDA - Soil Conservationist

The method of shearing stands of woodland and removal of the woody materials by fire is not a new method. It has several distinct advantages for clearing large blocks of agricultural lands which include speed, low cost, and nutrient retention.

### STANDARD CLEARING METHOD

Land clearing is done with large crawler tractors equipped with angle blades, bulldozing the vegetation after the ground is frozen. The vegetation (woods and moss) is dozed into long berm rows, normally running lengthwise of the field. The berms, depending on vegetation and snow conditions will be 150 to 200 feet apart. Width ranges from 30 to 45 feet, height approximately 20 feet. If a good job of dozing is completed, the newly cleared area between the large berms can be broken (plowed). If not, hand labor is needed to remove remaining sticks and small logs before breaking. Approximately 20-25 percent of the field will be under berms.

The berms are allowed to dry through the summer. After the fire season they are set ablaze. The residue is generally rebunched and reburned. Any soil residue in the berm piles is scattered or disbursed in the field. The process of berm removal is slow, usually requiring 2 - 3 years to dispose of the debris. It is expensive costing three to four times per acre over the original clearing method.

A disadvantage of this clearing method is that the berms hinder farm operations. The area between the berms is generally irregular. The area under the berms cannot be farmed. By the time the berms are removed, and the soils under them planned, five to six years have been spent developing this 25 percent of the field. This method is slow and expensive. Total costs including berm removal is running approximately $150+ per acre for the complete clearing job.

Another disadvantage is that the operator must be skilled in clearing methods. An unskilled operator generally includes a high volume of top soil in the berm rows, adding to both cost and time for removal. Land clearing by this method is a specialized art.

This has become the "standard" method in Alaska. This is largely due to restrictions about burning during the dry season. Fire has an important role in development. Homesteading started in the late fifties in the Clearwater because of old wildfire burns. These burns removed the moss ground cover, stripped the boughs from the spruce trees, and allowed the remaining standing residue to dry. With only dry tree stems left, clearing was easy. The bulldozed residue burned clean in the berms. Clearing cost ran about 50% below unburned areas. These areas have now been developed and all future agricultural lands will be developed from mature woodland stands.

In summary, the main disadvantages of this present method are:

1. Slow and costly - In unburned areas, approximately 1/2 to 3/4 of an acre can be cleared per tractor hour. At $60 per hour, costs would be $80 to $120 per acre for the initial bulldozing. With berm removal included, costs will run $150 to $200 per acre.
2. Berms are created. They have a considerable amount of moss and green plant materials in their composition. Any snow included is slow to thaw, and berms remain wet for long periods of time. Assuming that berms only have vegetation materials, it takes an average of three years for final removal. Berms and berm removal also seriously affects the establishment of windbreaks.
3. Snow conditions - Heavy snow conditions not uncommon to the Clearwater, rapidly increase cost, place berms closer together, increase size, and decrease their removal rate.
4. Operators - Operators inexperienced in agricultural clearing tend to place too much soil in the berms. Operators are generally experienced in construction clearing where cost and soil removal are not major factors.

SHEAR AND BURN CLEARING METHOD

This method was used in the Fairbanks area in the late 1950's with considerable success. An old Army surplus D-8 caterpillar tractor with an angle cable dozer was used for the shearing operation. Used grader blades were welded flat at the base of the dozer to form a knifelike blade that would float over the frozen soil, shearing the vegetation. The blade was angled and the tractor operated around a field, much the same way as cutting hay. The blade sheared the vegetation and rolled it into small compact dirt free windrows.

The field was allowed to dry part of the summer then a fire was set around the entire perimeter. The resulting fire thoroughly burned the dryed vegetation, leaving the field almost completely cleared and ready for the breaking process with little additional dozer work. This work was done on permafrost soils with black spruce and deep moss ground cover. The dry moss was necessary to provide fuel to burn the large trees. The method was fast and cheap, but was discontinued with the inability of farm operators to obtain fire permits for burning during summer months.

Modern tractors equipped with hydraulically controlled angle blades can shear better than the above described blade. They have the advantage of "down" pressure, where the older cabled blades had to "float". The hydraulic blade provides positive control that allows an operator to shear vegetation with ease. He can easily control the blade for depth of cut.

The shear and burn method of land clearing is briefly:

1. To shear the vegetation at the soil surface from its root or ground support, and roll into small (4' to 6' diameter) windrows.
2. Dry the vegetation to a low enough moisture content that the materials would be totally consumed in place by fire.
3. Burn in predesigned fuel cells based on vegetation type and compartment size at a time that total consumption of the materials will occur.

It is proposed that the shear and burn method be used in all large scale clearing operations. On a project level adequate fire control can be provided to burn residues during the dry summer months.

The vegetation would be sheared on frozen soil conditions with angled blade to form the vegetation into windrows. In the black spruce areas, this, because of the frost conditions, could extend well into the summer months.

The windrows, small and close together, would range from approximately 10' to 20' apart. Width depends on clearing method (figure 1.). The merits of each method needs to be examined, for both ease and speed of clearing, drying capabilities, and burning capabilities.

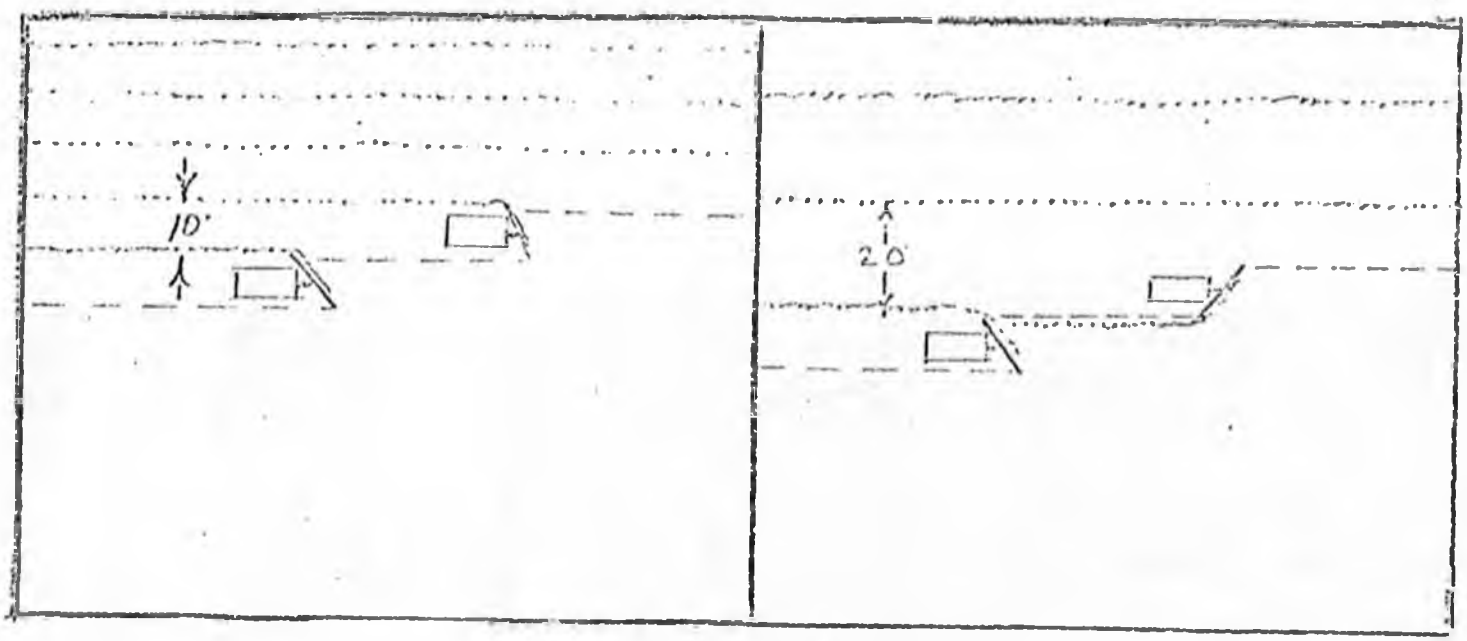



Figure 1: Two tractors are working together - on the left, they are working around a field making single windrows. On the right the tractors are combining two into a single windrow. The advantages and disadvantages of each need evaluation.

All woodland can be cleared by this method. The main difference would be burning dates. Total cosumption of the materials should occur in black spruce and heavy moss ground cover the first summer following clearing. Hardwoods would require a second season for drying. In both cases, the date of the burn should be determined by the dryness (moisture content) of the largest tree stems in the proposed burn. Fuel cells will be formed in compartments for (1.) the type of vegetation to be burned and (2.) the size of the desired burn. It is most important to restrict all burning before and after clearing until the cell has dried to provide the maximum burn efficiency. The more vegetation present, the hotter and cleaner the burn. The large tree stems must be consumed completely during the burn for maximum efficiency of time and money. In case some stems were not completely consumed by the burn, clean up would be relatively fast and economical. Burning can be conducted when favorable atmospheric conditions prevail causing little likelihood of local smoke problems. Dry materials create less smoke.

In summary, the shear and burn clearing method has the following advantages:

1. Low cost - The ground is covered much faster. One operator noted he thought he could maintain three miles per hour. At this rate, 3.6 acres per hour would be covered 3 $60/hour = $17.00 per acre. At two miles per hour, 2.42 Ac/Hr = $25.00 per acre; at one mile per hour, 1.2 Ac/Hr = $50.00 per acre. In all of the above, the cost is far below standard methods, and no berms are created. Without the necessity of berm removal land clearing costs are reduced far below the "standard" clearing method. Allowing cost for burning and some clean up, it is suggested with good operators that the cost may be well below $100.00 per acre.
2. Less soil disturbance - Soil would not be pushed into large berms. Any soil that is disturbed would not be piled. Breaking and farming methods would level any disturbed situations.
3. Operators without clearing experience can be used. Again any soil disturbance created by such an operator can easily be remedied. The ground fire would do an excellent cleanup of small sticks and broken stems normally left on the ground.
4. Heavy snow conditions presents no major problems. The material is only to be sheared and rolled. The snow would not be a load factor under these conditions. It would melt rapidly and thoroughly during break up.
5. Excellent fire control - With the clearing residue rolled and fuel cells delinated, excellent control can be maintained during burning.
6. The land can be cropped earlier. Dr. Wooding, Agronomist, Alaska Experiment Station, suggests that this method would save a full year during the development stage by eliminating the need for decomposition of organic material on the soil surface, normally a problem when "standard" clearing methods are used.

7. Scarification for new forestation - Windbreaks could be developed from natural regeneration of the woodland. Fire acts as a scarifier for this new start. Areas formally burned in the Clearwater have excellent stands of hardwoods with a spruce understory.

Questions and Concerns:

1. The materials must be burned during the warm dry summer months which is the peak fire season. Will agencies with fire management responsibilities cooperate so the burn can be carried out with reasonable safety and still attain maximum effectiveness?
2. Methods to determine ideal time to burn for naximum benefits are needed. This involves the moisture content of the vegetation, and design and construction of the fuel cells.
3. Actual costs - It would be well to demonstrate this method on the conditions found in the Clearwater to determine the true results. At present, contractors do not fully understand this concept, and do not have a feel for costs.
4. The advantage (if any) of a single versus double blade windrow relating to speed of clearing, burning efficiencies, and fire control is needed.

It is suggested that a trial be started immediately on the two predominant vegetation types found in the Clearwater area, black spruce and hardwoods. Two 160 acre tracts are proposed as a minimum, one in each vegetation pattern.

The layout should be such that each tract is a mile long. On 160 acre tracts, this would amount to four 40 acre tracts end to end - 1320' x 5280'. The mile run is needed to test travel time rates. In the actual clearing process, it is envisioned that the runs would be very long between turns. The 40 acre tracts might be ideal for fuel cells for trial burning this summer.

One technique that has surfaced is chaining the vegetation before clearing. This process mainly orientates the vegetation. The question is if it is necessary, or could a heavy roll bar frame be attached to the top of the tractor blade achieve the same purpose. A roll bar would eliminate one operation (chaining) saving time and money. This is necessary information on both vegetation types.

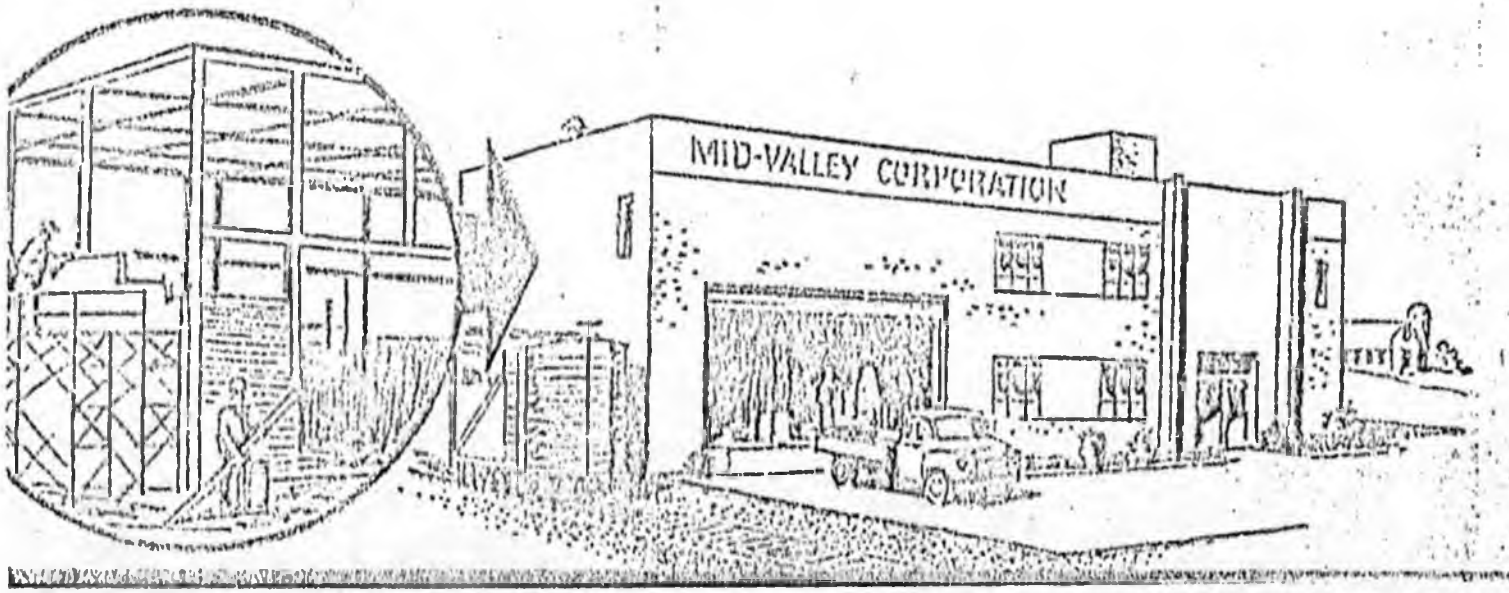
Such a trial would place the Delta barley proposal on a much firmer footing relative to clearing costs. This is a major aspect of the proposal, and should be verified. It would create a demonstration for contractors to observe, putting them on a more competitive bid basis. If this is a viable method, it would serve as a pattern to plan all future agricultural development in interior Alaska.

, Nevada, New Mexico, and Utah) is underway to mine the cost of producing and marketing crops and tock on irrigated lands in the Southwestern States. This mation will afford a sound basis for planning and ilishing agri-businesses in these areas with special lits for American Indians, Mexican-Americans, and r low-income people.

erative work with a national consulting firm and try has determined factors which motivate industries stablish plants in nonmetropolitan areas, the role of munities in plant establishment, and the reaction of tudied communities to new plants. This work is im- ng communities' opportunities to attract branch plants.

operative project (Economic Development Adminis- n, Montana State University and Agricultural Ex- iment Station, and Economic Development Association astern Montana) has determined the feasibility and of producing, processing, and marketing livestock from n Montana. This will, hopefully, upgrade returns to tana stockmen, who are currently producing livestock d at over $600 million annually, and may provide tional employment to as many as 200 people, including rican Indians.

rogram is available to all persons without regard to race, creed, , sex, national origin, or political affiliation.




Address inquiries for assistance to:
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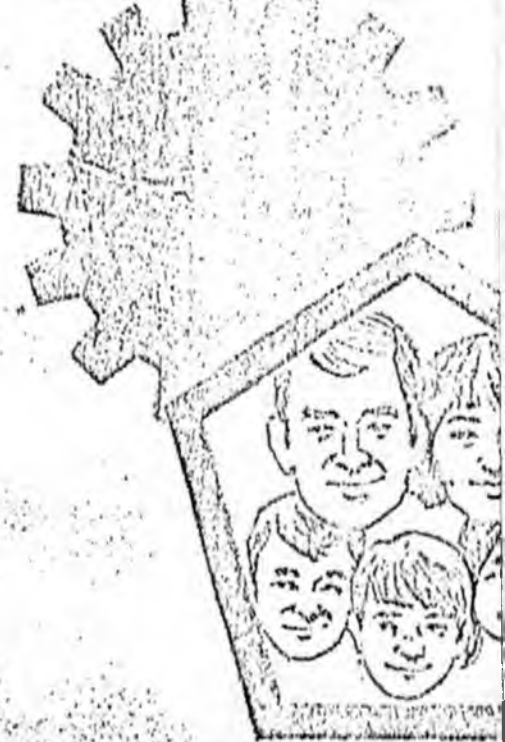
Washington, D.C. Issued August 1972

Agricultural Research Serv

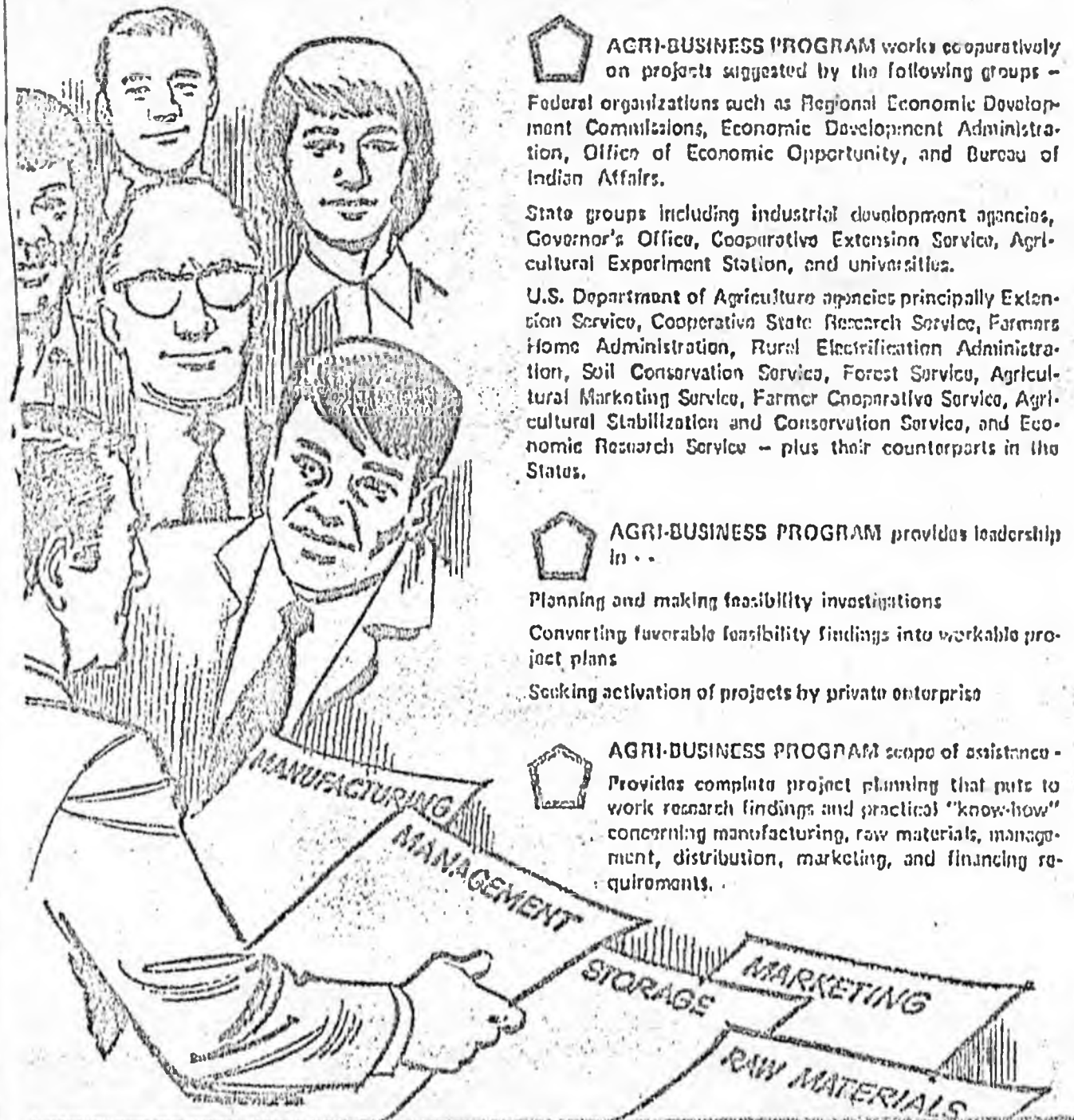
# AGRI-BUSINE PROGRA



U.S. Department of Agric

# AGRI-BUSINESS PROGRESS — AGRICULTURAL RESEARCH SERVICE

AGRI-BUSINESS PROGRAM helps plan and establish profit-making businesses that provide jobs for loans. The aim is more jobs and higher paying jobs for rural people. This is the key to helping rural s themselves -- and the basis for giving people pride, hope, and a desire to keep trying. It will mean more people finding rural America the most desirable place to live.




AGRI-BUSINESS PROGRAM works cooperatively on projects suggested by the following groups --

Federal organizations such as Regional Economic Development Commissions, Economic Development Administration, Office of Economic Opportunity, and Bureau of Indian Affairs.

State groups including industrial development agencies, Governor's Office, Cooperative Extension Service, Agricultural Experiment Station, and universities.

U.S. Department of Agriculture agencies principally Extension Service, Cooperative State Research Service, Farmers Home Administration, Rural Electrification Administration, Soil Conservation Service, Forest Service, Agricultural Marketing Service, Farmer Cooperative Service, Agricultural Stabilization and Conservation Service, and Economic Research Service -- plus their counterparts in the States.

AGRI-BUSINESS PROGRAM provides leadership in . .

Planning and making feasibility investigations

Converting favorable feasibility findings into workable project plans

Seeking activation of projects by private enterprise

AGRI-BUSINESS PROGRAM scope of assistance -

Provides complete project planning that puts to work research findings and practical "know-how" concerning manufacturing, raw materials, management, distribution, marketing, and financing requirements.

manifest practical time ... livestock, soils, water ... new products and processes, human nutrition, ... needs, and marketing facilities and techniques).

Assists in production of commodities and materials, ... facturing, distribution, warehousing, selling, servicing ... ations, construction, and related activities.

Expedites needed research-development to bolster ... ising projects.

Commercializes new products, operations, and ... through demonstration projects rather than through ... range development channels.

AGRI-BUSINESS PROGRAM has given ... assistance in all 50 states and Puerto Rico on ... than 2,000 projects -- concerning installatio... more than $1 billion of agri-business facilities ... generate annual returns of over $3 billion. Ty... examples --

Cooperative investigations (Four-Corners Regional ... mission, Arizona Department of Economic Planning ... Development, and USDA Forest Service) have sh... feasibility for establishing a Southwestern pine stum... plant which would produce products valued above ... million and employ more than 300 people, incl... many American Indians.

Cooperative work (National Broom Council, Econ... Development Administration, and Texas Agricultural ... periment Station) is developing a mechanical broom ... harvester that will stabilize a $40 million industry, main... broomcorn farmers in depressed areas, and give employ... to several hundred Negroes and handicapped people in ... 30 States.

Cooperative assistance (Vincennes University, Purdue ... versity, Economic Development Administration, and U... Farmers Home Administration) to depressed area... Indiana for the first commercialization of crambe (o... oilseed) is giving added income to over 100 farmers ... employment to more than 150 people.

Commercialization of newly developed quick-cooking ... bean products is being realized from a cooperative st... (Four-Corners Regional Commission, Colorado State ... versity, USDA Economic Research Service) of the ma... potential for these products. Will increase returns to ... bean growers and provide additional jobs.

# DELTA AGRICULTURE PROJECT

## An Approach to Baseline Surveys and Research

A well designed and coordinated series of studies would contribute to the success of the proposed farming project and related resource uses in the Delta Project area and would permit improved planning for later agricultural developments elsewhere. Delta baseline studies would assess hydrologic, meteorologic, soil, vegetation, and wildlife resources in the project area and in nearby, similar, undisturbed areas, both before and during project implementation.

Many state and federal agencies and units of the University of Alaska have the talents, equipment, and other resources to accomplish the varied elements of these ecosystem studies. None of these agencies presently has the funds to put these resources to work. Moreover, no means has been identified to assure that individual agency studies are part of a systematic program designed to meet objectives efficiently.

The following approach is proposed:

1) The Legislature should be asked to appropriate $150,000 for baseline studies critically needed in May-June 1977 (see attached list A).

2) The FY 78 budget should contain $90,000 for state share of baseline studies and project coordination in FY 78 (see attached list B and C)

3) The supplemental and FY 78 monies should be appropriated to the Department of Natural Resources for redistribution to state agencies as per lists A, B, and C.

4) The School of Agriculture and Land Resources Management should be designated as coordinator of research design, research activities, and reporting.

additional research participation and additional funding from appropriate federal agencies such as ARS, SCS, USGS, FS, and others (List C).

List A. Critical projects for May-June 1977.

1) Meteorologic data collection, especially wind force and direction, evaporation rates, ground temperatures (DNR) $4,000

2) Hydrologic studies: spring runoff patterns, water quality in Delta-Clearwater (DNR) $3,000

3) Spring mammal and bird population and distribution; fish distribution (ADFG) $3,000

TOTAL FY 77 $10,000

List B. FY 78 Baseline research

*1) Hydrologic studies (DNR) $20,000

*2) Soil characteristics, chemical residue levels (DEC) $15,000

3) Water quality Delta-Clearwater (DEC) $ 5,000

*4) Meteorologic studies (DNR) $20,000

*5) Vegetation mapping (DNR) $ 5,000

*6) Fish and wildlife populations (ADFG) $15,000

List C. FY 78 Coordination

1) Salary, travel, services $10,000

TOTAL FY 78 $90,000

*Studies to be done on Delta project area and control area.