

Agricultural -
Tours

Allen Linn

745-3236

3/24/78

Tenn
Henn

Primarily from an determination
for as a ... + formula
did not consider other
competing factors - e.g.
use for residential development

✓ Joe
F. Agri

NOTES ON TELCON WITH ALLAN LINN RE SB 14 - 2-23-78

Linn confirmed that neither he nor the Division of Agriculture was involved in drawing up the criteria for the formula which the Division of Lands devised for the classification of agricultural lands under the bill. Nor was he actively involved in the classification process itself for the lands.

He pointed out that the Division of Lands has the responsibility for land classification and that the Division of Agriculture does not have the funding to carry out such a classification process. Linn said that he had no problems with the agricultural criteria set up by the division of lands, but noted that his expertise and involvement lay in the direct agricultural assessment, not in determining the applicability of access, other potential land uses, transportation facilities, state policies on d-2, etc.

Ben Harding

LINN COMMENTS RE CSSB 14 am IMPLEMENTATION

Linn said that the classification of state agricultural land had not been carried out by his office (the Division of Agriculture) but by the Division of Land.

He said he was not specifically aware of how much of the 650,000 acres called for in CSSB 14 had been classified, but he recalled the following general figures:

first year - 85,000 acres - scattered in the Susitna valley, Nenana, the Chena river valley, and possibly Kenai.

2nd year - 125,000 acres - primarily in the Delta area for the barley project.

He was not directly aware that any "formula" had been used to classify agricultural land under CSSB 14. He did say, however, that the Division of Land had developed a process in which a number of factors were quantified and weighed to evaluate whether lands should tentatively be classified as agricultural or not. He said he could not rule out the possibility that Division of Land people might have used this weighing process to select land under CSSB 14, although he said he was aware it was being used for the state's agricultural selections under d-2. He also mentioned that "access to transportation" was one of the factors that was used in the process.

He assumed, however, that the classification of agricultural land has been completed for CSSB 14.

The state is using data compiled by the USDA Soil Conservation Service to estimate its total potential agricultural land. The SCS figure is 17.5 million acres, which Linn said has been revised upwards, since the SCS estimates are deliberately low. Linn said that the SCS is the only agency which has been involved in field work to select agricultural land. The state has not been, and Linn asked for \$200,000 in his budget to be used as a contribution to the SCS work. That amount, he said, was deleted in the administration's budget.

Ben Harding
3-14-78

D. Hanson Interview

3/23/78

SB 14
the land

432 K in detailed survey by USGS
56 K reconnaissance "

87 K done since statehood - much sold
170 K " " passage of act

only 130 K more is all that is possible (if G. Johnson full time)
throughs upper; ~~difficult~~ smaller blocks

G. J. been working w/SCS - since bill (14) passed

some ~~is~~ state matching funding for SCS -
DH will find out \$

G. J. worked w/SCS on land from suitability

"small" areas
dropped

{ Rec area - Ft. Ker - 4-6 K acres
{ Ft. C. " - Smitna - ~30 K acres

in Valley pattern area

FY 77 - ? fiscal note?

FY 78 & 79 - in DNR budget?

acquir of info - recon survey cost?

~~recon~~
relative value & farmability

Dir Ag - criteria

" - weighting

" - rating scales

" - quant. input for each area of land

maps - SCS maps & ESCUPC maps

weighting of criteria

DNR COMMENTS REGARDING THE IMPLEMENTATION OF CSSB 14 am

Summary

At this time, 165,144 acres have been classified for agricultural use under the bill, according to Gary Johnson, Planning and Research Section, DNR. Another 479,185 acres have been identified, but not classified, for agricultural potential. "Things look tight" for the classification of 650,000 acres by the end of the three year deadline in CSSB 14. Additional funds and manpower could ensure that the minimum acreage figure could be classified. Although some land between Circle and Fort Yukon has been tentatively applied for by the State from the BLM, the decision was apparently made by the State not to request agricultural land in the heart of the Yukon Flats, even though this is the best contiguous farming land in Alaska, because of the d-2 situation.

Location and Amount of Land Classified

Johnson gave the following breakdown of the 165,144 acres so far classified:

Jan. 1977	Kenai area	6,798	acres
" "	Mat-Su area	33,638	"
" "	Fairbanks	4,393	"
" "	Nenana/Tolchaket	42,119	"
Nov. "	Delta (barley project)	78,205	" (est.)

An additional 479,185 acres have been identified as potentially classifiable into an agricultural use category.

Johnson also believes that further agricultural acreage could be found in the following areas:

Delta	50,000	acres
Nenana/Tolchaket	25/30,000	"
Nenana (elsewhere)	120,000	"

He said that there is significant agricultural potential for land in the Susitna valley, but that insufficient funds and land data have so far prevented its identification and classification.

Johnson said that "things look tight" for meeting the 650,000 acreage figure set by CSSB 14 am within the three year time frame. He said, however, that he could not say that it was impossible but indicated that with increased funding and manpower it was more likely that sufficient land can be found and surveyed for agricultural use. At this time, the State has no capability to perform soil surveys in the field. The USDA Soils Conservation Service is the only agency doing such work and the State is using this data. Johnson thought that \$50,000 had originally been considered for a matching grant to the SCS to carry out additional soil survey work but he did not know whether the money was still in the administration's budget.

Agricultural Potential of the Yukon Flats and D-2

According to Johnson, the Yukon Flats and the Delta area contain the greatest amount of contiguous, good quality agricultural land in Alaska. Of the two areas, the Yukon Flats is the best. The State has tentatively applied for land with the BLM between Circle and Fort Yukon, but Johnson said that the decision was apparently made for the State not to apply for land "in the heart" of the Yukon Flats because of d-2 considerations. He estimated that of the approximately 18 million acres of potential agricultural land in Alaska about 40% would be

withdrawn under HR 39. Of that, he estimated as much as 7 million acres in the Yukon Flat of potential farm land would be withdrawn under the d-2 proposals.

Elsewhere in the state, Johnson said that there is no doubt that enough agricultural use land exists to meet the 650,000 acre figure; it's only a matter locating it through soil surveys or through more general reconnaissance.

Formula for Determining Agricultural Classification

Johnson said that a formula was devised with the Division of Agriculture for classifying state land for agriculture. He described the formula as one of locating "core areas" of a minimum of 90 acres (he noted that much farm land in the state was scattered in small patches among muskeg bogs). Then minimum 10 acre adjacent areas were located, along with minimum 40 acre areas lying within 10 chains of the core area. Johnson explained that the formula was essentially "to identify land in blocks large enough to have agricultural usefulness" for farmers in the future. Another criterion was for the land to contain 50 percent or more Class II or III soils.

Initially Johnson said that such factors as transportation facilities, access to the land, or nearness to population centers were "not really considered" in the formula. Later on he indicated that, to some extent, these factors were taken into consideration

He also noted that before the land was classified for agricultural use, it underwent an "interagency review" which consisted of the Department of Fish and Game, the Department of Community and Regional Affairs, and the eight divisions within the Department of Natural Resources. This review had resulted in the deletion of three areas initially included in the agricultural classification: the area adjoining the capital site in Willow, a very important moose habitat, and an area near Fairbanks that had been used for recreational purposes

Knowledgeable persons in the USDA SCS, Johnson said, were Wayne Long, Ted Freeman, or Bill Fibbish (sp?), all of whom could be reached at 276-4246. The author of an upcoming SCS soils survey is Sam Reiger in Palmer.

Ben Harding

3-15-78

213-825 = 2824 Lippman

213-825 = 4726 Waity

Ex. loc.

Reason = sufficient

Detail =

20 - 20 J, T. cm


to the contracts w/ DVR

500K / 1000000 "all the way
200K DJ "not complete"

to Army

ERTS by 7/1 then could

at 2 ... = deficit order

( ...)
(80% kind of money)

Switna & ...

about ~ 150K acres from the
650K total

need meeting w/ SCS, DVR & Stinger
~ 80K with monthly liabilities act

IS BEN HARDING THERE?

GOT JNU
OK

GEOPH INST FBK
ZCZC 022 FAIRBANKS AK MAR 27
ATTN: SENATOR ORSINI
ET

IN RESPONSE TO YOUR INQUIRY REGARDING USE OF LANDSAT IMAGERY TO MAP LANDS FOR AGRICULTURAL CLASSIFICATION, I HAVE THE FOLLOWING OBSERVATION:

THE SOIL CONSERVATION SERVICE HAS MAPPED MUCH OF THE STATE IN TERMS OF SOILS AT VARIOUS LEVELS OF SPATIAL RESOLUTION AND SOIL CLASSIFICATION DETAIL. THESE MAPS ARE, OF COURSE, THE PRIMARY DATA SOURCE FOR ANY PROCEDURE FOR CLASSIFYING LANDS FOR AGRICULTURAL PURPOSES.

WE HAVE WORKED WITH THE SOIL CONSERVATION SERVICE ON A NUMBER OF PROJECTS AND ALONG WITH THEM COME TO THE TENTATIVE CONCLUSION THAT BROAD CATEGORIES OF SOILS CAN BE INFERRED FROM LANDSAT IMAGERY. THE BEST EXAMPLE OF THIS IS A RANGE AND SOIL SURVEY PERFORMED JOINTLY IN THE SEWARD PENINSULA. THIS WORK WAS DONE TO IDENTIFY AND MAP REINDEER RANGE FOR THE NANA CORPORATION. THESE RESULTS APPEAR TO BE QUITE SATISFACTORY.

THE SATELLITE DATA IS BASED ON LIGHT REFLECTED FROM THE SURFACE COVER OF THE EARTH. GENERALLY, THEN, ATTRIBUTES ARE IDENTIFIED THROUGH SPATIAL RELATIONSHIPS AND IDENTIFICATION OF SURFACE MATERIALS. IN ALASKA THE SURFACE MATERIALS ARE USUALLY VEGETATION. HENCE, SOILS MAPPING WOULD DEPEND LARGELY ON RECOGNITION OF PATTERNS (MORAINES, ABANDONED STREAM CHANNELS, DUNES, ETC.) AND VEGETATION TYPES AND THE ASSOCIATION BY INFERENCE OF THESE ATTRIBUTES WITH THE UNDERLYING SOILS.

WE HAVE NOT YET PERFORMED A FEASIBILITY ANALYSIS TO DETERMINE WHETHER THE KIND OF RESULTS FOUND ON THE SEWARD PENINSULA CAN BE OBTAINED IN THE REGIONS OF ALASKA WHERE AGRICULTURAL SOILS ARE FOUND. HOWEVER, WE AND MEMBERS OF THE SOIL CONSERVATION SERVICE HAVE SUSPECTED THAT BROAD ASSOCIATIONS CAN BE MADE.

THE AGRICULTURAL CLASSIFICATIONS TO DATE HAVE PROBABLY BEEN MADE ON THE BASIS OF "DETAILED" SOILS MAPS. I BELIEVE SCS HAS MAPPED A MUCH LARGER AREA OF THE STATE ON A "RECONNAISSANCE" LEVEL. PERHAPS THESE "RECONNAISSANCE" LEVEL MAPS COULD BE USED WITH LANDSAT IMAGERY AND TOPOGRAPHIC MAPS TO CLASSIFY OTHER AREAS. THE ACCURACY AND DETAIL OF PREVIOUS CLASSIFICATIONS COULD NOT BE MATCHED. THE SMALLEST MAP UNIT WOULD PROBABLY BE ON THE ORDER OF 360 ACRES.

I WOULD ENVISION SUCH AN ANALYSIS TAKING PLACE ALONG THE FOLLOWING LINES:

THE "RECONNAISSANCE" MAP WOULD IDENTIFY THE GENERAL AREA WITH THE DESIRED SOILS. TOPOGRAPHIC MAPS WOULD BE USED TO ELIMINATE STEEP SLOPES AND OTHER AREAS OBVIOUSLY NOT SUITED TO AGRICULTURE. FINALLY THE LANDSAT IMAGERY WOULD BE USED TO ELIMINATE POORLY-DRAINED AREAS, AND LANDFORMS GENERALLY NOT SUITABLE FOR AGRICULTURAL USE. THIS WOULD BE FOLLOWED BY A SHORT AERIAL (WINDOW) SURVEY TO MAKE SURE GLARING ERRORS HAD NOT BEEN MADE.

THESE ARE MY THOUGHTS. CERTAINLY THE SOIL CONSERVATION SERVICE SHOULD BE QUESTIONED ON THIS. THEY ARE THE EXPERTS. SHOULD THEY BE INTERESTED IN PURSUING THE MATTER WE WOULD BE HAPPY TO WORK WITH THEM. OVER THE NEXT FEW DAYS WE WILL LOOK A LITTLE DEEPER INTO THIS MATTER AND SEND YOU FURTHER INFORMATION.

BILL STRINGER
ASST. PROF. APPLIED SCIENCE
NNNNEND

JUST SEC

ZCZC 022 CONTINUED

ATTN: ORSINI

THE FOLLOWING IS MY OPINION ONLY AND IS BASED ON ASSUMPTION OF OUR INVOLVEMENT. IT WOULD TAKE A MAXIMUM OF TWO MONTHS AFTER FUNDING TO COLLECT THE NECESSARY MATERIALS AND DO THE PRELIMINARY GROUND WORK. FOLLOWING THAT THE AREAS WITH A POTENTIAL FARMING CLIMATE COULD BE ANALYZED AT 1:250,000 SCALE WITHIN FOUR MONTHS TO ESTABLISH GENERAL FARMING POTENTIAL AREAS. RESULTS WOULD BE IN TERMS OF TWO TO FOUR SQUARE MILE SECTORS. FOLLOWING THIS SELECTED AREAS COULD BE ANALYZED AT 1:63,360 SCALE (INCH TO MILE) WITH RESULTS IN TERMS OF 1/2 SQUARE MILE SECTORS. THIS SECOND PHASE WOULD TAKE ANOTHER FOUR MONTHS. THIS INCLUDES BASIC AERIAL RECONNAISSANCE.

TOTAL TIME FROM INITIATION: 10 MONTHS. ASSUMING SCS AND DIV. OF LANDS COOPERATION, OUR TOTAL COST WOULD BE \$50,000 FOR PHASE I (1:250,000 SCALE) AND \$35,000 FOR PHASE II (1:63,360 SCALE). A FINAL FIELD CHECKING PHASE MIGHT BE ADVISABLE PERFORMED BY SCS WITH OUR PARTICIPATION. ESTIMATED COST FOR OUR PART: \$15,000.

BILL STRINGER

TLX 35414

NNNNEND•

GOT JNU

R U GOING TO SEND MSG?

DEN HARDING THERE????

ANYONE THERE?

V

ACKNOWLEDGE RECEIPT. MANY THANKS.

DEN HARDING

DO YOU RECEIVE?

GOTY

JNU

YES WE REC'D IS THAT ALL?

ROGER.

GEOPH INST FBK

))))