ANNUAL REPORT OF THE
STATE MAP ADVISORY COMMITTEE
FOR OREGON
1979

OPEN FILE REPORT 0-79-9

January 1, 1979 - December 31, 1979

John D. Beaulieu, Chairman
State Map Advisory Committee

STATE OF OREGON
Department of Geology
and Mineral Industries

TABLE OF CONTENTS

PURPOSE OF STATE MAP ADVISORY COMMITTEE

The purpose (Executive Order EO-79-06) of the State Map Advisory Committee is, 1) to recognize and pursue mapping goals for the State of Oregon, 2) to promote coordination of programs, policies, and resources of the various agencies making maps, and 3) to bring the benefits of mapping more effectively to the people of Oregon. Through coordinated planning it is the further goal of the Committee, 4) to effectively utilize all mapping resources, 5) to improve mapping services to the state, and 6) to minimize unnecessary duplication of effort.

EXECUTIVE SUMMARY

In view of the inadequate topographic map coverage for the State of Oregon activities of the Committee during 1979 placed top priority on completion of the 7½' topographic map base. Plan development and communications have involved SMAC, USGS (Reston and Menlo Park) the Office of the Governor, and the Congressional Delegation. An eight year plan for completion of the state 7½' topographic map base is included in this report.

At the December 14th meeting state agencies identified topographic mapping priorities in groups and quantities consistent with the eight-year plan, the logistic requirements of regional mapping, and the priorities of federal agencies. These priorities are overlain with federal input in developing mapping strategies for the state.

Other major activities during 1979 included:

- Presentation of mapping functions and services of the U.S. Geological Survey.

- Participation in the pilot computerized map index project of the NCIC of the USGS. All encoding forms have been submitted.

- Brief examination of SLAR imagery with emphasis on its application and limitations.

- Progress toward the completion of a brouchure of map products available to the public from the many agencies in the state.

- Participated in a peripheral manner in the ongoing evaluation of the possible benefits and limitations of computer hardware and software as they relate to more effectively meeting the map needs of Oregon. Primary responsibility for this function resides in the Executive Department.

- Represented the State of Oregon on a regional and national basis in the developing of a topographic map program for Oregon.

Further information on these activities and on other activities of the Committee are provided in the meeting summaries, which are included as a part of this annual report.

MEMBERSHIP

OREGON STATE MAP ADVISORY COMMITTEE

State Agencies and Institutions

Department of Geology and Mineral Industries, 1069 State Office Building, Portland, Oregon 97201 (c/o John D. Beaulieu).

Land Conservation and Development Commission, 1175 Court Street N.E., Salem, Oregon 97310 (c/o Jamns Claypool).

Department of Forestry, 2600 State Street, Salem, Oregon 97310 (c/o George Shore).

Department of Revenue, 213 Public Service Building, Box #2, Salem, Oregon 97310 (c/o Robert Mead).

Division of State Lands, 1445 State Street, Salem, Oregon 97310 (c/o Mark E. Harbert).

Department of Fish and Wildlife, 506 S.W. Mill Street, Portland, Oregon 97201 (c/o George Kernan).

Department of Agriculture, Agriculture Building, 635 Capitol N.E., Salem, Oregon 97310 (c/o James Hollon).

Department of Transportation, Highway Division, 207 Transportation Building, Salem, Oregon 97310 (c/o Rudy Wellbrock).

Department of Transportation, Aeronautics Division, 3040 25th Street S.E., Salem, Oregon 97310 (c/o Gary R. Davis).

Department of Environmental Quality, 522 S.W. 5th Avenue, Portland, Oregon (c/o Glen Carter, P.O. Box 1760, 97207).

Oregon State University, Environmental Remote Sensing Applications Laboratory, Corvallis, Oregon 97331.

Portland State University, Cartography Department, P.O. Box 751, Portland, Oregon 97207.

Oregon State University, Geography Department, Corvallis, Oregon 97331 (c/o Jon Kimerling).

University of Oregon, Geography Department, Eugene, Oregon 97403 (c/o William Loy).

Portland State University, Geography Department, P.O. Box 751, Portland, Oregon 97207 (c/o Richard Lycan).

Soil and Water Conservation Commission, 1015 13th Street S.E., Salem, Oregon 97310 (c/o Terry Bayless).

University of Oregon Map Library, Eugene, Oregon 97403 (c/o Sue Clark).

Water Resources Department, 550 13th Street N.E., Salem, Oregon 97310 (c/o Jerry Holman).

Federal Agencies

U.S. Forest Service, P.O. Box 3623, Portland, Oregon 97208.

Bureau of Land Management, P.O. Box 2965, Portland, Oregon 97208 (c/o Owen Kendall).

U.S. Department of Agriculture, Soil Conservation Service, 1220 S.W. 3rd Avenue, 16th Floor, Portland, Oregon 97204 (c/o Robert Montgomery).

Bonneville Power Administration, P.O. Box 3621, Portland, Oregon 97208 (c/o Kirk Williams).

U.S. Army Corps of Engineers, P.O. Box 2946, Portland, Oregon 97208 (c/o Richard K. Dodge).

U.S. Geological Survey, Water Resources Division, P.O. Box 3202, Portland, Oregon 97208 (c/o Alexander H. Gonslaves).

Completion of the 7½ minute Topographic Map Series for Oregon

-An Eight Year Plan-

The Goal

The mapping priority of the committee is to complete 7½ minute coverage of the state by 1988. Intermediate goals for regions of the state and annual priority requests for specific quadrangles within regions will be defined by SMAC in a manner consistent with this longer goal. Annual priorities requests, in particular should be consistent with the direction of longer term goals and the constraints of mapping logistics.

It is evident that a fragmentary priorities process leading to the identification of 6-10 quadrangles per year is not adequate input by SMAC . Further, it is evident that long term requests by SMAC must address the manner in which maps are produced as well as the preference for given areas.

The Need

The goal is to complete the 7½ minute series by 1988. Timely completion is needed to provide an adequate map base for Oregon's diverse needs, to conform to the national 1987 deadline by the U.S.G.S., to allow increased attention in the future to updates of maps, many of which are already outdated, and to pursue the development of thematic maps.

In spite of the acute interest in natural resources in Oregon, U.S.G.S. map coverage in the 7½ minute series in Oregon is among the worst in the nation with only 40 percent coverage. Approximately 850 sheets are completed. Of the more than 1000 remaining sheets, approximately 750 have not even been started.

The needs for 7½ minute topographic base maps are too numerous and varied to document at length here. Basically, where land is a consideration to an agency, the need for a 7½ minute topographic quadrangle also exists. Specific needs relate to regulatory duties, management functions, resource inventorying, and planning with regard to natural resources

For Oregon State agencies, the priority areas of 7½ minute topographic quadrangle mapping attention are those areas with one or more of the following characteristics:

(1) High or increasing population

(2) No map presently available

(3) Significant natural resources

Major areas of priority concern to Oregon State agencies include the Northwest Oregon Coast Range, West Central Oregon Coast, South Oregon Coast, Western Cascades, Klamath County, unmapped Southeastern Oregon, unmapped Central Oregon, and urban areas including Grants Pass, Medford, Eugene-Cottage Grove.

In very general terms, the level of effort in the next 9 years must greatly exceed the level of effort in the past 25 years if the 7½ minute topographic map series is to be completed in a reasonable period. Oregon needs <u>250</u> map starts for the years 1981, 1982 and 1983.

In addition, it needs continued support and attention to assure completion of all of the maps by 1988, the U.S.G.S. target year for completion of the 7½ minute base for the nation.

The Role of SMAC

The State Map Advisory Committee has clearly addressed the coordination responsibilities of a large scale mapping effort at the state level. After 8 months of study, however, it is clear to the Committee that increased resources for Oregon on the part of the U.S.G.S. are needed to complete the mapping.

Development of a long term statement of topographic base map needs in the 7½ minute series by state agencies is advantageous for a variety of reasons:

(1) It will allow identification in prioritized order of large blocks of quadrangles in need of attention.
(2) It will facilitate effective planning and coordination with Federal requests and mapping programs.
(3) It will allow formulation of requests consistent with the 4-5 year turn-around time for the development of base maps.

On the state level, increased effort is needed to meet our share of the responsibility in assuring that all possible options for utilizing private as well as government mapping capabilities are addressed. This may include the establishment of a resident cartographer, shared cost cartographic work, or both. Experience to date indicates that establishment of a resident cartographic manager is critical to the successful completion of the project.

Through these actions we can assure that the basic need for 7½ minute maps in Oregon is properly defined and that mechanisms for completion are systematically and efficiently addressed. Nationally we must communicate to the Congressional Delegation the basic need for increased mapping capacity within the Topographic Mapping Division of the U.S.G.S. for Oregon. Concurrently we must encourage the U.S.G.S. to incorporate specific requests within their projected budget.

Objectives

1) Take full advantage of the Federal Priorities Program
   - Include federal agencies in SMAC to coordinate state requests with federal requests.
   - Identify with the help of the U.S.G.S. the federal priorities prior to making final decisions on state priorities.
   - Identify state priorities which do not overlap with federal priorities. This will help assure the maximum number of total priorities.
   - The allocation of 6-10 annual SMAC priorities should be viewed as a minimum request.
   - State 2nd priorities should duplicate federal first priorities to assure high ratings relative to the rest of the nation.

2) Take full advantage of Cooperative Program
   - Maintain program with a purchase this biennium.

- Pursue option of applying cooperative funds (with federal monies included) to private contractor for front end mapping activities to standards.
- Possible lower cost per product
- Delivery of part done product to survey for cartography and printing prompts more attention by Congress and possibility greater productivity on the part of the survey.

3) Develop long term plan for more effective communication and planning.
   - Synthesize agency long term requests, in terms of agency priorities and with ownership.
   - Develop statement of long term needs as means of providing direction to shorter term priorities.
   - Use request as communicating tool with U.S.G.S. and with Congressional Delegation relate map request to real needs.
   - Publicize long term plan to enable U.S.G.S. to commit projected excess capacity if and when it develops.
4) Secure, if possible, a State Cartographer for the State of Oregon with a specific mission which shall include promotion of completion of the 7½ minute topographic series through means which shall include the following:
   - Identification of cooperative funds in A-16 federal agencies
   - Development of coooperative mapping projects and interagency mapping agreements of federal and state agencies with the U.S.G.S.

- Development of cost share agreements for cartographic services between agencies and the U.S.G.S.
- Promotion of closer communication and cooperation with the local government with the purpose of coordinating mapping activities where appropriate.
- Identify private contractors capable of meeting U.S.G.S. standards in the preparation of topographic base map material. Pursue the possibility of subcontracting services with private contractors; prepare appropriate proposals.

Implementation
(New Starts)

As part of the successful completion of the eight year plan 632 topographic maps must be initated and completed. In addition 453 maps now in progress must be brought to completion.

The State Map Advisory Committee identified areas of common interest using the overlay method and at the December 14, 1979 meeting, made final deliberations on the sequence of initiation of maps in the 7½' series. Priorities are assigned as a function of population pressure, availability of other maps, and resource considerations. In order of priority the areas are as follows:

Western Cascades	130 quads	1981
Southwest Oregon	64 quads	1981
South Oregon I-5	44 quads	1981-2
Jackson-Klamath	92 quads	1982
Central Oregon	160 quads	1983
Northeast Oregon	112 quads	1984

In addition the committee requests that areas now mapped to a scale of 1:62,500, but having survey data of a scale of 1;24,000 be processed as soon as possible.

Consistent with these long goals the Committee submits as its top priority the initiation of the following 12 7½ topographic quadrangles:

North half of Snowpeak Quartzville, and Detroit 15' quadrangles.
South half of Lyons, Mill City, and Battle Ax 15' quadrangles.

These quadrangles lie directly north of additional quadrangles financed in part with Cooperative State money through the Department of Geology and Mineral Industries for federal fiscal 1979-1980.

(Maps in Progress)

The 453 maps in progress include about 20 separate projects varying in size from 4 to 66 quadrangles. Given the fact that these quadrangles have been started and have probable completion times of 4 years the real issue from the standpoint of the Committee is that adequate annual progress be made. The Committee has no specific input with regard to schedule changes.

The Committee requests that priorities on maps in progress be maintained, that projected completion dates be met, and that mapping capacity not be diverted from these quadrangles. The 8-year plan, 1980 SMAC map request, and subsequent requests are based on the assumption that these conditions will be met.

(1:100,000 Series)

The planimetric look series will be complete in 2 years and a contour series is in progress with anticipated completion later. The Commmittee views this series as highly desirable, but reaffirms top priority for the 7½' series.

Within the 1:100,000 series the committee assigns general priority to maps west of 121° W longitude with particular emphasis on the following maps:

Nehalem

Vancouver

Yamhill River

Oregon City

Corvallis

Stayton

Eugene

McKenzie River

This request is consistent with priorities for the 7½' series.

The Committee also places priority on last years priorities (S.W. Hoquiam, N ½ of Pendleton and N.W. Grangeville), which have not been initiated.

(As of March 31, 1978)

	Sq. Mi.	Published Maps % 7½-min.	15-min.	Total
Alabama	51,682	75.3	16.4	91.7
*Alaska	590,066	1.0	83.1	84.1
Arizona	113,991	49.7	44.8	94.5
Arkansas	53,214	77.1	22.6	99.7
California	158,616	57.1	42.9	100.0
Colorado	104,111	81.3	7.3	88.6
Connecticut	5,012	100.0	----	100.0
Delaware	2,043	100.0	----	100.0
Florida	58,462	98.2	1.8	100.0
Georgia	58,914	93.3	5.7	99.0
Hawaii	6,447	96.0	4.0	100.0
Idaho	83,579	65.5	28.5	94.0
Illinois	56,337	52.8	47.2	100.0
Indiana	36,180	100.0	----	100.0
Iowa	56,278	58.6	12.3	70.9
Kansas	82,280	86.0	6.0	92.0
Kentucky	40,411	100.0	----	100.0
Louisiana	47,711	50.2	49.5	99.7
Maine	33,218	17.5	82.5	100.0
Maryland	10,444	100.0	----	100.0
Massachusetts	8,267	100.0	----	100.0
Michigan	58,692	52.8	47.1	99.9
Minnesota	84,403	84.6	15.4	100.0
Mississippi	47,684	55.4	41.8	97.2
Missouri	69,714	71.2	28.4	99.6
Montana	147,033	63.3	17.4	80.7
Nebraska	77,331	73.9	17.7	91.6
Nevada	110,564	36.5	45.9	82.4
New Hampshire	9,281	26.5	73.5	100.0
New Jersey	7,790	100.0	----	100.0
New Mexico	121,595	66.1	25.6	91.7
New York	49,108	89.0	11.0	100.0
North Carolina	52,666	70.9	25.1	96.0
North Dakota	70,704	78.1	2.7	80.8
Ohio	41,315	100.0	----	100.0
Oklahoma	69,956	77.5	22.5	100.0
Oregon	97,074	40.9	45.7	86.6
Pennsylvania	45,309	100.0	----	100.0
Rhode Island	1,209	100.0	----	100.0
South Carolina	31,104	61.2	38.8	100.0
South Dakota	77,112	67.4	1.3	68.7
Tennessee	42,121	100.0	----	100.0
Texas	266,760	81.6	16.9	98.5
Utah	84,880	57.5	39.5	97.0
Vermont	9,613	47.0	53.0	100.0
Virginia	40,595	100.0	----	100.0
Washington	68,078	57.1	42.9	100.0
West Virginia	24,229	99.3	0.7	100.0
Wisconsin	56,138	55.4	43.7	99.1
Wyoming	97,814	74.8	19.6	94.4
49 States (*not incl. Alaska)		70.0	23.9	93.9

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GOVERNOR

Department of Geology and Mineral Industries
ADMINISTRATIVE OFFICE
1069 STATE OFFICE BLDG., PORTLAND, OREGON 97201 PHONE (503) 229-5580

STATE MAP ADVISORY COMMITTEE — May 17, 1979

Participants

John Beaulieu	DOGAMI
Gene Napier	U.S.G.S.
Glen Carter	DEQ
George Kernan	Fish & Wildlife
Bob Montgomery	S.C.S.
Sue Trevitt-Clark	Map Library/U.of O.
Jerry Greenberg	USGS/NCIC
Ron Citton	P.S.U Geography
Mark Harbert	Division of State Lands
Dick Dodge	Corps of Engineers
Jim Francis	Corps of Engineers
Larry Warnick	Environmental Remote Sensing App. Lab.
Robert A. Mead	Department of Revenue
Denny Miles	Office of the Governor
Rudy Wellbrock	Oregon Dept. of Transportation, Highway Division
George Shove	Forestry
Jim Claypool	DLCD
Herman C. Kuppler	U.S.F.S.
Jerry Holman	W.R.D.

Introductory Comments

The purpose of the committee was discussed in general, and includes the facilitation of more efficient mapping through longer range planning and systematic record keeping. To promote meaningful communication, agenda items will emphasize presentation of programs by various mapping agencies and descriptions and presentations for significant mapping and remote sensing systems. Long term direction and major goals will be developed in the first few meetings.

USGS Program Presentation

NCIC

Jerry Greenberg described microform options for use in the NCIC System as a means of dealing with the more cumbersome aspects of the raw computer printouts developed by the NCIC indexing program. Use of microforms would allow storage of the total record in a small space, but would require availability of a microform reader for users. Jerry reviewed some of the finer

points for filling out the encoding forms. Updated instruction sheets are being developed and will be distributed when available. Jerry expressed a desire to have the State Map Advisory Committee develop a list of priorities for sorts of NCIC index map data (see attachment).

The committee selected October 1, 1979, as the deadline for input on the NCIC system. Agencies that have already submitted data are Water Resources, Fish and Wildlife, and Transportation. Agencies yet to submit data are Soil Conservation, Oregon Forestry, the University of Oregon, and Geology. Additionally, Fish and Wildlife has more forms to submit.

The need for a general map directory was briefly discussed. It is being developed by Sue Clark of the University of Oregon. Jerry Greenberg will send her examples from other states.

USGS Mapping Activities

General

1) Map stock clearing policy: a desire by the USGS to dispose of one-half of topographic map stock. A decision by SMAC is desireable. With cooperation and encouragement of the Governor's Office, I am seeking a creative means of taking advantage of this offer.

2) Topographic Maps: -- Future policy will be to distribute topo maps folded. General reaction of the SMAC Committee was negative.

3) Topo map options in need of input by SMAC.
   - 7½' x 7½' English Contours (Standard flat)
   - 7½' x 7½' Metric
   - 7½' x 7½' Metric

   Strong recommendation of the committee was to retain the present 7½' x 7½' English System Format.

4) National High Altitude Photography Program

   - Coordinated Federal Agency effort to supply high altitude photography for the nation on a 3-year cycle beginning this September 1. Without State financial assistance, the realistic cycle is 4½ years. Scales include 1:80,000 B&W and 1:58,000 color infrared. The U.S.G.S. will administer the contract.

Selected Land Information Analysis (LIA)

LIA is an office of the Director of the USGS and serves a coordination and communication role.

Missions:

1) Natural science and geographic data technology
2) Standard land use maps nationwide (Geography)
3) Other (RALI, EIA, EROS)

A pamphlet (LIA) and Land use map example were distributed.

Under item 2, above, maps are to be developed along with digital statistical treatment which follows. For Oregon, complete map coverage will eventually be available. Statistical treatment follows in about 2 years. Time frames vary with expressed local interest.

National deadline for maps is 1983. Eventual 1:100,000 treatment is planned. Present scale is 1:250,000.

Handouts were distributed describing EROS, The USGS, and digital terrain tapes.

General Comments

- Desire of the USGS to contract with states for selected map services consistent with base map development to USGS standards.

- Desire to set up a resident cartographer. This will be a future agenda topic.

- National Mapping Coordination Meeting: Option to do away with multistate planning and to pursue individual state efforts. A meeting of whatever format would be best in November for USGS.

Pacific Northwest Mapping Coordination Workshop

George Shore distributed an excellent summary handout of the meeting.

ATTACHMENT 1

Dear SMAC Member:

As indicated by Jerry Greenberg (USGS) at the May 17, 1979 meeting of the State Map Advisory Committee, it is possible to have entries into the NCIC index sorted according to desired priorities. Check the 3 most significant priorities in your best judgement and return to me.

____ Agency

____ County

____ Scale

____ City

____ Region

____ Subject

____ Date

____ Series

____ Grid

____ Author

____ Reproduction characteristics

Thank you.

John D. Beaulieu
Deputy State Geologist

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Department of Geology and Mineral Industries
ADMINISTRATIVE OFFICE
1069 STATE OFFICE BLDG., PORTLAND, OREGON 97201 PHONE (503) 229-5580

May 22, 1979

Dear State Agency SMAC Member:

Through the State Map Advisory Committee, the State of Oregon has the opportunity to acquire copies of 7½ minute topographic maps for all covered parts of Oregon.

If the volume of maps requested statewide justifies reasonable effort to distribute them, we will make arrangements for shipment by the U.S. Geological Survey.

The maps are not to be used for sale, and they are not to be used for purposes that compete with any private suppliers. If your agency has need for the available maps, please notify me of the total number you wish to receive within 30 days.

Sincerely,

John D. Beaulieu

John D. Beaulieu
Deputy State Geologist

JDB:mc

MEETING SUMMARY
STATE MAP ADVISORY COMMITTEE

Thursday, July 26, 1979

Governor's Conference Room
State Capitol

Participants

Name	Agency
John Beaulieu	Geology
Gene Napier	U.S. Geological Survey
Jim Ulven	Oregon State Highway Division
Tom Jackson	Bonneville Power Administration
Bob Montgomery	Soil Conservation Service
Bill Reed	Forest Service--R-6
Herman Kuppler	Forest Service--R-6
Jim Claypool	Dept. of Land Conservation & Dev.
Richard Lycan	Portland State University
Kris Brooks	Oregon State University
Mindy Gray	Exec. Dept., Data Systems
Jim Stembridge	Soil & Water Conservation Comm.
Barry Schrumpf	ERSAL
Jim Francis	Corps of Engineers
Dick Dodge	Corps of Engineers
Rudy Wellbrock	Oregon State Highway Division
George Kernan	Fish and Wildlife
Jon Kimerling	Oregon State University
George Shore	Forestry
Kirk E. Williams	Bonneville Power Administration
Robert Mead	Department of Revenue

The primary purpose of this meeting was to initiate discussion of long term goal definition for $7\frac{1}{2}$ minute topographic mapping and to view the Aerial Photo Summary Records System (APSRS) from the vantagepoint of state participation.

1. Goal Definition

   a) The $7\frac{1}{2}$ minute topo map coverage need of the state is addressed through two programs.
      1) The requests of federal agencies and SMAC are overlayed and weighted on the basis of need and other national priorities. In our region cooperation between Federal Agencies and SMAC is encouraged.
      2) In the cooperative program funding by the USGS is matched with funding by the state on a 50-50 basis. Oregon's present position of poor coverage can be attributed by low levels of state funding historically.

      To properly address the 1987 planned completion date for national mapping the SMAC must make long range plans in both programs. Factors to consider are level of funding, possible federal responsibility to map federal land, communication of long range priorities to appropriate personnel and others.

      Gene Napier (USGS) noted that annual progress reports on mapping will be developed for the state and that aerial photog for future mapping is presently receiving emphasis.

   b) Aerial Photo Summary Records System (APSRS): George Shore described this computer indexing system and noted that within Forestry he had tentative approval to convert to this system through encoding from the old system of manual in-house indexing. All federal agencies are already in the system. State, county, and private producers will be included upon approval. Those not approving will continue to be tracked manually. An implementation plan will be presented to SMAC at a later meeting.

      Concerns at the moment are for use of a larger indexing scale by APSRS and restrictions imposed by the $7\frac{1}{2}$' indexing base.

2. Special Issues and Projects

   a) Comment on the information source catalogue was postponed for a later meeting.

   b) Gratis topographic map distribution by the USGS--respondents indicated the total need of 215 sets for Oregon to be used in-house (not sold) for maps that otherwise would be purchased from the USGS. Clarification is being sought regarding the possibility of separate shipments to each requestor and the manner in which shipping charges will be handled. Cost of shipment will approximate 1% of the value of the maps.

   c) A coordinated forward looking approach is needed to properly identify state need for automated mapping and computerized data retrieval. Role of SMAC is to provide information on user need and to comment on the direction and findings of other efforts. The official role of SMAC emphasizes maps. Unofficially each member agency will assist in evaluating data retrieval needs for lack of a counterpart group with such a charge.

The Executive Department will survey members on broad concerns of policy such as budget, access, configuration, and role of local government and the Legislature.

Kris Brooks under contract to the Forestry Department (PNRC grant) will address short and long term data needs of agencies and the manner in which computer systems may meet these needs. As the two surveys proceed (Executive and Forestry) periodic reports will be made to SMAC at appropriate times.

d) In response to inquiry by Gene Napier (USGS) it was conveyed that for the purpose of topical map index access the scales of 1:5000, 1:12,000, and 1:20,000 were desireable in addition to standard USGS map scales.

Looking forward to the State-Federal Mapping Coordination Meeting, the need for a date, an agenda, and possibly a workshop were noted by Gene Napier.

Regarding automated mapping, Gene suggested the possibility of cooperation with the USGS in terms of joint funding and proper interfacing of programs.

MEETING SUMMARY
State Map Advisory Committee

Thursday, October 4, 1979

Governor's Conference Room
State Capitol

Participants

R.W. McKay	Portland State University
George Shore	Oregon Forestry
Robert A. Mead	Oregon Department of Revenue
Jerry Holman	Water Resources Department
Rudy Wellbrock	Highway Division
George Kernan	Fish and Wildlife
William Loy	University of Oregon
Susan Trevitt-Clark	University of Oregon
Denny Miles	Governor's Office
Kris Brooks	Oregon State University-Geography
Jim Claypool	DLCD
Jim Francis	Army Corps of Engineers
Norm Gamble	U.S.F.S. R-6 Portland
Bob Montgomery	S.C.S. Portland
Tony Lewis	E.R.S.A.L. OSU
Gene Napier	U.S.G.S. Menlo Park
John Beaulieu	D.O.G.A.M.I.

The purpose of the meeting was to define in a general way the long range goals of the state for 7½' topographic mapping, to review various strategies towards that end, to review on-going activities of interest to the group, and to discuss radar imagery. These items are part of the larger purpose of the committee to set and pursue other mapping goals, to promote coordination of mapping efforts and to bring the benefits of mapping more effectively to the people of Oregon.

1) Completion of 7½' topographic map series

Gene Napier briefly reviewed the structure of the standard mapping program to which SMAC submits priorities annually, and the cooperative program to which the state contributes matching dollars to specified mapping objectives in the state. The December meeting of SMAC will be aimed in part at coordinating the SMAC request and the cooperative request with requests from federal agencies. Gene pointed out that 6 quadrangles in the Cannon Beach area indicated as top priority last year by the committee are presently being mapped. He also stated that orthophoto quads and intermediate scale maps on the scale of 1:000,000 are in preparation and that there is a need for greater coordination with local mapping efforts.

The mapping priority of the committee is to complete 7½' coverage of the state by 1988. Intermediate goals for regions of the state and annual priority requests for specific quadrangles within regions must accommodate this goal. Given the four years completion time for individual quadrangles it is evident that 250 maps must be started each year for a period of 3 years beginning in the year 1980. This compares with a historic average of 35. It is also evident that a fragmentary priorities process leading to the identification of 6-10 quadrangles per year is not adequate input by SMAC. Further, it is evident that long term requests by SMAC must address the manner in which maps are produced as well as the preference for given areas. Thus, priorities should be developed in coherent blocks and hopefully should be coordinated with high altitude aerial photography programs.

A variety of other options aimed at accelerating map production were discussed including cost sharing for cartographic functions performed in state, and the benefits of a resident cartographer with the specific mission of pursuing increased cooperative mapping, maximization of private resources, and on-going involvement in mapping activities of agencies. It was the general sentiment of the group that this necessary activity was beyond the realistic scope of involvement of the members of the group. Members expressed satisfaction with the concept of resident cartographer. The State Geologist and the chairman of SMAC will visit with Don Zoller, resident cartographer for the State of Washington, to more thoroughly pursue the success of the program in Washington.

2) Activity Updates

A) NCIC map index: October 1 was the deadline selected by the committee (July meeting)for submittal of forms to Jerry Greenberg. Those unable to meet the deadline should contact Jerry directly. Preliminary computer output may be available in the spring.

B) The Oregon maps brochure will be ready for preliminary review at the December meeting at which time the SMAC will decide on the appropriate manner for reproducing it.

C) Geoprocessing Symposium: Sponsored by the PSU urban studies center this symposium was designed to familiarize public managers with the benefits of geoprocessing and to promote communication within the field. Next years meeting will be at the University of Washington.

D) The USGS, NOAA and LCDC are sponsoring a coastal mapping workshop November 14-16 at the Sheraton Hotel in Portland. Contact person in state is Ken Hansen (378-2978) of LCDC. Purposes of the meeting are:

- o to provide an opportunity for all of those involved in coastal mapping (users, producers, others) to better understand the needs capabilities, and activities of the others (at federal, state and local levels)
- o to explore the state of the art technical capabilities and opportunities in mapping
- o to develop through better understanding - - closer working relationships throughout the system to insure that needs are met effectively and cooperatively and to insure maximum compatibility and minimum duplication of efforts
- o to outline technical mapping assistance, and supporting funding assistance, available to states and local government at the federal level, and discuss how it can be made available

E) USGS gratis 7½ topographic maps:

The USGS is committed to distribute the maps to educational institutions. They request a statement describing the types of institutions and how the maps will be used. Distribution will begin January 1, 1980; freight charges must be covered by the state; delivery will be to one address only, and the maps will not be collated into sets. Inasmuch as all agencies that previously submitted requests do qualify under these stringent guidelines we will pin down some logistic details and proceed toward delivery. The continued efforts of Gene Napier to finalize this exercise are greatly appreciated.

3) December federal-state coordination meeting of SMAC:

   Possible agenda topics
   - Interagency agreements for cooperative mapping
   - Computer tricks
   - Presentations by major map making agencies
   - 8 year plan for 7½' topographic map completion
   - Orthophoto map program
   - 1 year and intermediate term priorities for 7½' topographic map completion

4) The principles and relative benefits of radar imagery for topography oriented analysis and uses were reviewed by John Beaulieu using examples of application employed by the Oregon Department of Geology and Mineral Industries. Tony Lewis (ERSAL) further outlined the technical limitations of the systems and the need to properly apply and interpret the imagery. Growing encouragement is being directed at the USGS to further explore radar imagery. Although the characteristics of the systems favor terrain analysis applications, somewhat unique capabilities with regard to poor weather imaging also favor use for other more mundane purposes. For example, emergency services applications include surveying flood damage immediately after a flood, but while poor weather conditions and low visibility still persist.

STATE - FEDERAL MAPPING

COORDINATION MEETING FOR

OREGON

Meeting Summary

State Capitol

Dec. 13, 14, 1979

Participants

NAME	AFFILIATION
James E. Chamberlain	U.S.G.S. Menlo Park California
Gene C. Napier	U.S.G.S. Menlo Park California
Paul Staub	Department of Geology & Mineral Industries
Larry Bright	Oregon Dept. of Fish and Wildlife
George Kernan	Oregon Dept. of Fish and Wildlife
Donnel L. Stelling	USDA-SCS Portland Cartography Staff
Bob Montgomery	USDA-SCS
William G. Loy	University of Oregon
Richard Huxley	U.S. Fish and Wildlife
Jim Francis	Corps of Engineers
Tom Jackson	Bonneville Power Administration
Susan Trevitt-Clark	University of Oregon Map Library
Joanne M. Perry	Oregon State University Map Library
Tony Lewis	ERSAL/OSU
Jerry Holman	Water Resources Department
Michael Donley	Michael Donley Association
Liz Svwijn	Michael Donley Association
Ted Albert	Bureau of Indian Affairs
Herb Lloyd	Water & Power Resources Service (Boise)
Ig Gruenwald	Water & Power Resources Service (Sacramento)
Bill Reed	U.S. Forest Service Region 6
Owen Kendall	Bureau of Land Management
George Shore	State Forestry Department
Jon Kimerling	Oregon State University Geography Department
Kris Brooks	Oregon State University Geography Department
Bill Albee	U.S.G.S. Menlo Park California
Rudy Wellbrock	Oregon State Highway Division
John Beaulieu (Chairman)	Department of Geology & Mineral Industries

1) National Mapping Program and Cooperative Agreements were reviewed by Jim Chamberlain, Head of Planning and Development, National Mapping Division, Menlo Park, USGS. An outline of his comments is attached. Additional comments as follow:

   - In 1978 USGS expenditures for all categories of mapping in Oregon was $2.2 million. For 1979 the figure was $3.6 with 43% going to the 7½' topographic map program.

   - The A-16 federal priorities process is undergoing revision to better address non-federal interests and other factors.

   - Present turnaround time for base maps by the USGS is 8-12 weeks. The time goal is 21 days.

2) It was emphasized that Cooperative Agreements are needed to proceed with mapping in times of tightening budget. The USGS policy is to consider joint funding for activities consistent with the direction of the National Mapping Program. For example the High Altitude Photo (HAP) program is susceptible to cooperative funding. Coverage is at 40,000 feet with 6" B+W panchromatic film and 8½" color IR. These products can lead directly into 7½' topo revisions. A rough estimate for total cost of coverage for Oregon is $720,000 assuming $400 per quadrangle.

   Other cooperative arrangements for consideration include cost-sharing for specific products, topographic map cost sharing, resident cartographer and geographic names file maintenance.

   - The bureaucratic status of EROS of Souix Falls is unclear with the probability of assignment to NOAA in the Department of Commerce. Major concerns of SMAC are availability of imagery and the effectiveness of the operation in the future.

   - The concept of NCIC affiliates was introduced to serve as a map information source at the State level. Written material distributed by the USGS enumerated the benefits of such an arrangement. This concept will be pursued further by SMAC as an option to consider in an overall effort to develop better mapping service for the state.

3) Digital Mapping of topographic maps was discussed with Bill Albee of USGS Menlo Park. He emphasized:

   - The need for people with digital map interests to communicate with survey people having experience in the field.

   - The geographic emphasis adopted by the USGS.

   - The large time demands required to digitize the topo data if done manually (except for the contours) and the need for technological breakthroughs particularly in storage (nonmagnetic) Digitized base material is 5-15 years in the future.

- The need to properly select and fully understand attributes in digitizing maps and deriving maximum benefit from them.

- The need for digital programs at the state level to have potential for interacing with digitized federal data. Computer compatability is yet another aspect to interagency cooperation and coordination.

4) The states 8-year plan for completion of the 7½' topographic map coverage was reviewed by John Beaulieu. A copy of the plan has been distributed to State members of SMAC. A complete copy including annual numerical goals will be distributed as part of the forthcoming annual report of the committee.

The basis of the plan is the concept that complete coverage by 1988 is the goal. All annual goals and priorities must lead to this goal. Further, map requests must recognize the logistics of map development as well as agency need.

5) Mapping Activities of State Agencies were briefly summarized with discussion of the NCIC map index program and distribution of a draft brochure for use by the public in seeking map products in state. Sue Trevitt-Clark of the University of Oregon Map Library has been preparing the brochure and will foreward final copy to Rudy Wellbrock for final layout shortly.

Bill Reed, USFS, underscored the concept of cooperative agreements with emphasis on aerial photography in national forest lands. Agencies with schedules of future flights should coordinate their missions to avoid duplication and cut costs.

6) Mapping priorities of the State Map Advisory Committee were defined and are included as part of the 8-year plan presented in the annual report. Basic conclusions were as follows:

- Top priority is given to completion of the 7½' topo series by 1988. Blocks of maps were identified and assigned priorities for starts consistent with this goal, with logistics of mapping and with blocks identified by the USGS.

Priority	Number	Year
Western Cascades	130	1981
Southwest Oregon	64	1981-2
Southern Oregon I-5	44	1982
Jackson-Klamath	92	1982
Central	160	1983
Northeast	112	1984

Twelve quads were selected as top priority in the Western Cascades.

- For maps in progress (453) covering approximately 20 parcels the committee requests adequate annual progress with the understanding that completion on 4 year turnaround times is the USGS intent.

- For the 1:100,000 series the Committee places priority on maps west of 121° W longitude with particular emphasis on the 8 quads of northwest Oregon.

- The Committee strongly endorsed the concept of resident cartographer with the understanding that his tasks would include:

    - Technical Assistance
    - Product Assistance
    - Emphasis on priority programs
    - Coordination of Cooperative Agreements
    - Ready accessibility to State Agencies

NATIONAL MAPPING PROGRAM

J. R. Swinnerton, Chief
Western Mapping Center
U.S. Geological Survey
12/10/79

STATUS/OVERVIEW

1. Reorganization - National Mapping Division
   - Consolidation in USGS of mapping, printing and distribution functions.
   - Expanded scope of mapping program.
   - Single focal point for all mapping re - contacts with other organizations.
2. Reorientation - maps to digital
   - Data base - produce, manage, manipulate and distribute
   - Automate mapping
3. Complete 7½' Topo. Maps in U.S. - 1988*
   - Use all USGS Mapping centers.
   - Use other outside capability - govt. & pvt.
   - Involve local, state and fed. agencies in planning & program development.
4. Revise 7½' Topo Maps on Required (5-10 yr.) Cycle by Late 1980's.
5. Initiate Large Scale (about 1:10,000) Mapping* Program Over Selected Areas.
   - Coord. with state and local agencies.
   - Coop. funding
   - Produced primarily by pvt. contractors.
6. Expand Information Services.

   Three National Cartographic Information Center & affiliated organizations.
   - Including access to all useful cartographic products from Fed., State and pvt. sources.

7. Coordinate Mapping and Related Activites.
   - Federal and State
   - Planning, program development and production.
8. Expand Technical Assistance*.
9. Contracting - expand use of pvt. firms.
10. Cooperating/using and capability of other agencies.

INTERAGENCY AGREEMENTS WITH USGS

Maps

7½' Topo, new - Washington (pending)

7½' topo, revision - Washington, USFS, Sacramento, CA.

Orthophoto Quads - Washington, USFS, SCS, BLM.

1:100,000 - new - Washington (pending Fed-State BLM, DOE ownership)

Related Cartographic Data Acquisition/Production

Aerial Photography - Washington, USFS, SCS

Geodetic Control - Calif. counties, NGS

DRAFT/Napier
12/10/79

NATIONAL MAPPING DIVISION

"Technical Assistance"

What Does Technical Assistance Include?

- NCIC
- Loan Cartographic Manpower
- Contract Assistance
- Guidelines and Specifications
- Workshops and Training Sessions
- Audiovisual Shows
- Digital Assistance

Who Is Eligible To Receive Technical Assistance?

- Federal agencies requiring cartographic data in support of their mission.
- State, county and city agencies requiring cartographic data.
- Grant recipients/contractors requiring cartographic data in support of Federal legislation.
- Regional organizations (includes Council of Governments, A-95 Clearinghouses, VIMS, Woods Hole, etc.)
- International agencies and organizations.
- Public and private organizations and individuals.

FOR ADDITIONAL INFORMATION CALL THE WESTERN MAPPING CENTER (415) 323-8111 EXTENSION: 2163 or FTS 467-2163.

State of Oregon

OFFICE OF THE GOVERNOR

EXECUTIVE ORDER NO. EO - 79 - 06

REORGANIZING STATE MAP ADVISORY COMMITTEE

IT IS HEREBY ORDERED THAT:

1. The State Map Advisory Committee is reorganized with a representative of each of the following map-making agencies, to serve in a decision-making capacity and to be appointed by the chief executive officer of that agency:

a. Forestry Department.

b. Department of Revenue.

c. Department of Water Resources.

d. Department of Fish and Wildlife.

e. Department of Geology and Mineral Industries.

f. Department of Transportation.

2. Each of the following map-using agencies shall serve in an advisory capacity, and a representative of each shall be appointed by the chief executive officer of that agency:

a. Land Conservation and Development Department.

b. Division of State Lands.

c. Department of Environmental Quality.

d. Oregon State University, Environmental Remote Sensing Application Laboratory.

e. University of Oregon, Geography Department.

f. Portland State University, Cartography Department.

g. Oregon State University, Cartography Department.

h. University of Oregon, Cartography Department.

i. Portland State University, Cartography Department.

3. The Assistant to the Governor having primary responsibility for Natural Resource issues shall solicit the participation of the

following federal agencies in the activities of the State Map Advisory Committee as requested:

a. U. S. Forest Service.

b. U. S. Bureau of Land Management.

c. U. S. Soil Conservation Service, Department of Agriculture.

d. U. S. Army Corps of Engineers.

e. U. S. Geological Survey.

4. The duties and responsibilities of the State Map Advisory Committee shall be as follows:

a. To define and coordinate basic policies, procedures and resources of state agencies and federal agencies with regard to generation of map products, including topographic maps, aerial photos, and other imagery including:

A. Establishment of long- and short-term goals for the prioritized and timely completion of necessary topographic base map coverage for the State of Oregon.

B. Identification of map products issued by state agencies and development of recommendations for sharing of efforts and resources for the purpose of reducing costs or increasing availability.

C. Investigation, insofar as practical, of needs and resources with regard to remote sensing imagery, data manipulation, data reproduction hardware and software as they relate to map needs of the State of Oregon.

b. To summarize, insofar as possible, long-range needs of map-making state agencies with regard to map products and the manner of their availability including topographic maps, aerial photos, and other imagery.

c. To prepare and maintain an inventory of mapping resources available from state and federal agencies and prepare for publication an index of these resources.

d. To represent the State of Oregon on a regional and national level in developing mapping programs affecting Oregon.

e. To perform such other tasks with respect to mapping as the Governor directs.

5. Overall coordination for the inventory of mapping, ordered above, and the responsibility for serving as a repository for the materials prepared and accumulated by the State Map Advisory Committee, is vested in the Department of Geology and Mineral Industries.

6. Each state agency shall supply data regarding its map products to the Department of Geology and Mineral Industries for transmittal to the U.S. Geological Survey.

7. The Committee and the Department shall develop a cooperative program with the U.S. Geological Survey, under the terms of which the U.S.G.S. will process these data into a computerized catalog of maps.

8. The Governor shall designate the chairperson of the State Map Advisory Committee, from the staff of the Department of Geology and Mineral Industries, who shall develop the work program and meeting agendas of the Committee.

9. Executive Orders EO-77-11 and EO-78-22 are rescinded.

GOVERNOR

ATTEST:

SECRETARY OF STATE