

FOURTH ANNUAL REPORT
OF THE STATE MAP ADVISORY COMMITTEE
FOR OREGON
1982

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State Map Advisory Committee

State of Oregon
Department of Geology & Mineral Industries

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EXECUTIVE SUMMARY

The purposes of the State Map Advisory Committee (Executive Order 79-06) are: (1) to recognize and pursue mapping goals for Oregon, (2) to promote coordination of programs, policies, and resources with the intent of maximizing opportunities and minimizing duplication, and (3) to bring benefits of well directed mapping more effectively to the people of Oregon.

To accomplish these aims, the State Map Advisory Committee includes representation from Federal agencies, State agencies, and universities. Major accomplishments noted below are detailed in the body of this report. General progress in the past four years is presented under Activities and Accomplishments for 1982 are enumerated below.

- 1) The State Map Advisory Committee promoted effective coordination in mapping through the planning and sponsorship of two meetings of the Committee.
- 2) The Oregon Department of Geology and Mineral Industries continued a cooperative agreement with the U.S. Geological Survey to support a Resident Cartographer to the State of Oregon whose major tasks now include: (1) the identification and linking of mapping capabilities through cooperative agreements, (2) promotion of more effective product dissemination, (3) elimination of unnecessary duplication of effort, and (4) technical assistance in matters of mapping and coordination. His annual report is included in this report.
- 3) The State Map Advisory Committee pursued cooperative completion of fundamental map bases for the State through effective planning, prioritized goal setting, and consistent communication with the U.S. Geological Survey. Progress is tabulated below:

<u>Product</u>	<u>Published 1979</u>	<u>Published 1980</u>	<u>Published 1981</u>	<u>Published 1982</u>	<u>In work 1982 end</u>
7.5' topographic maps (1,827 total units)	10	46	76	50 ^{/2}	408
7.5' orthophotoquads (1,827 total units)	2	36	1492 ^{/1}	154 ^{/1}	267 ^{/1}
1:100,000 base maps (planimetric or topographic) (70 total units)	-	-	34	32	4
7.5' map digitized land net (1,827 total units)	-	-	227	261	334
7.5' map digital elevation model (1,827 total units)	-	-	594	40	242

1/ prepublication format

2/ In work increased 32 in 1982; Denver Center Mapping has been transferred to the mid-continent office

- 4) A quadripartite cooperative agreement has been developed and implemented to centralize information on availability of map products information in the State Library. Cooperators are the U.S.G.S.-National Map Division, State Library, State Dept. of Forestry, and State Dept. of Transportation.
- 5) Significant Progress has been made by individual agencies towards completing a family of thematic Oregon maps at a scale of 1:500,000. Cooperation available through SMAC has aided in the completion or progress on map depicting Geothermal Energy Resources, Congressional Districts, Planimetric Detail, Land Ownership, Renewable Resources, and RBV imagery.
- 6) A multistate Digital Map workshop involving agencies and private industry from the northwestern States was co-sponsored in May, 1982. The workshop targeted government needs and addressed program directions as well as technological advances.

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STATE RESIDENT CARTOGRAPHER - OREGON
SIGNIFICANT ACTIVITIES
1982 ANNUAL REPORT

In the second year as State Resident Cartographer for Oregon the position has grown to be a recognized focal point. As the agencies' budgets have been reduced, more emphasis has been put on coordination and cooperation. The SRC, whose job it is to promote mapping coordination, has become a point of reference to the agencies seeking assistance in coordinating their activities with other agencies.

Several of the noteworthy accomplishments of the past year has included the Cartographic Workshop in March; the establishment of a USGS District Mapping Office in Grants Pass; and the joint coordination of several agencies to produce a 1:500,000 scale State and Federal Lands Map of Oregon.

A Work Plan has been made up for the SRCs activities from State and Federal input. Several of the key elements in this 1983 Work Plan include producing a Directory of Mapping Information for Oregon; contact with the non-mapping agencies to assist them in their map requirements; and to develop an index of State/Federal planned aerial photography to avoid duplication.

The following items are selected highlights in this year's activities:

- o Coordinated a Workshop on Map Production and Reproduction. This workshop was held in conjunction with the ASP Pacific Northwest Conference. The workshop was attended by 61 paying participants. The SRC discussed the availability of Base Map Information covering the sources and means of acquiring State and Federal mapping information. USGS NMD products were highlighted with a 9-page sample packet of reproducible materials given to each participant. The workshop was self-supporting and WMC was reimbursed fully for the materials provided. Income from the workshop amounted to \$2605; expenses came to \$1545; and the remainder was transferred to the Columer River Region ASP for their sponsorship.

- o Organized and held a meeting of State and Federal agencies concerning the making of a 1:500,000 scale State and Federal Lands Map for Oregon. Agencies agreed to work cooperatively on this project. Five agencies were identified to contribute land-ownership information. Six categories of ownership will be submitted at 1:100,000 scale. The BLM will prepare the 1:500,000 scale separates for publication. A report was submitted to WMC concerning the project.
- o The 1982 State-Federal Map Coordination Meeting was held on February 11 at the State Capitol Building, Salem. Bruce McKenzie, Acting Chief Program Management, WMC, and Lee Aggers, Chief, Planning and Coordination, WMC, presented the USGS NMD's long range plan, provisional and digital mapping programs. Reports of mapping activities were made by the various state and federal agencies. Fifty-eight participants attended the meeting.
- o Received the 23 separates of the new 1:500,000 scale state map from Western Mapping Center. Coordinated the use of these separates by the state and federal agencies. The first agency to use the separates will be the Environmental Remote Sensing Applications Laboratory (ERSAL) located at Oregon State University. ERSAL will be using the separates as a base for Landsat RBV image map of the state.
- o Work was begun on a directory of mapping information for Oregon. This directory will identify the various agencies and their mapping activities within the State of Oregon. Two levels of information are being considered; one level for the public, describing the availability of mapping, and another level for agency use identifying key contacts and special products.
- o Assisted in the planning of a State Mapping Advisory Committee (SMAC) Meeting which was held October 28th. The meeting was attended by 23 people representing 19 agencies. Items on the agenda included:
 - + SMAC Chairman's report concerning the Fifth Regional Mapping Coordination Meeting.
 - + Resident Cartographer summary of activities.
 - + Progress and uses of the 1:500,000 State Base Maps.
 - + Status of the Geographic Names Information Systems.
 - + State Forestry's specialized mapping activities.
 - + City of Salem Digital Map Presentation.

- o Attended two SRC Coordination Meetings at Western Mapping Center Headquarters in Menlo Park, CA in April and November. A briefing of the past six month's activities was given to the senior WMC staff. Special orientations were held for the SRCs in the Digital and Geographic Investigations areas. Performance appraisals were conducted with input from the State's point of view.
- o Contacted the Director of the State Department of Economic Development through a referral from the SMAC Chairman. The SDED is looking into the development of an inventory which will identify land available for industrial development. The USGS LUDA System will be examined to see if its classifications will meet the agency's needs. A representative from the SDED attended the State-Federal Map Coordination Meeting. The agency's needs will be identified to the USGS Branch of Requirements.
- o Coordinated activity between USGS Water Resources Division, Oregon District, and the National Mapping Division, Western Mapping Center, in the production of the 1:100,000 scale Mount Hood and Vicinity Map. WMC, Cartometrics, had reached a point in the map production that required essential input from WRD. WRD has decided to have the map portray land ownership instead of timber coverage. On the back of this map will be a 1:24,000 scale map of the area showing more detail in the immediate vicinity of Mt. Hood.
- o The SRC has been active in obtaining various forms of information for the WMC Regional Office, Vancouver District Office, and the field crews.
 - + Obtained microfiche of the BLM cadastral notes and plats for the Regional Office and Vancouver Office.
 - + Acquired section corner coordinate data for the Mill City and Mt. McLoughlin Projects from USCE.
 - + Investigated for FSIS a boundary change between Marion and Yamhill Counties.
 - + Obtained boundary information for FSIS concerning the Warm Springs Indian Reservation.
 - + Provided Edit Section with up-to-date highway alignment for the State Base Map.
- o Gathered pre-field information for the Grants Pass and Roseburg 1982-83 winter projects. Data was gathered from the BLM and U.S. Army Corps of Engineers. The data

consisted of section-corner coordinate values and records of new surveys within the project areas.

- o Obtained, plotted and forwarded to the Western Mapping Center, U.S. Representative District boundary information for portrayal on the 1:500,000 scale State Map Series. This information will be used to produce a limited edition for distribution to members of Congress and other special purposes. The acquisition and plotting of these boundaries involved use of U.S. Census maps and a whole new terminology of enumerating districts, census tracts and block boundaries. The color proof of the boundary plot was returned to the SRC for verification with the Oregon Secretary of State. This map is now available by special request.
- o Forwarded to Chief, Plans and Coordination, WMC, reports and examples of Oregon State Forestry Department's Forest Protection Series of Maps and their orthophoto-line maps. The $\frac{1}{2}$ " = 1 mile Protection Series maps use the NMD 100 K as base which has been updated by the OSFD using Landsat RBV imagery. The OSFD orthophoto-line map combines the two NMD products by using line spreading or halo effect to make the line work stand out from the ortho image.
- o Conducted a survey for the State Mapping Advisory Committee (SMAC) Chairman concerning the state agencies' requirements for bathymetric mapping.

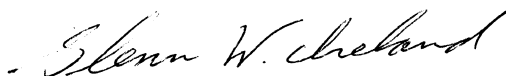
Eight agencies were contacted. Three agencies had a definite need and the remainder had a need only on a site specific basis.

- o BLM cadastral notes and plats, in microfiche form, for the remainder of Oregon, were delivered to the Vancouver District Office and to WMC. These two offices now have complete up-to-date coverage of the Oregon public land survey notes and plats. The provision of the microfiche by the BLM was arranged by the SRC while he was in Denver in March. Arrangements are being made to distribute the fiche which are not in the Vancouver Field Office's jurisdiction, to the Grants Pass Field Office, or to the Mid-Continent Mapping Center.
- o John Beaulieu, Chairman of SMAC, and the SRC met with Archie M. Mustard, Plans and Operations Officer with the Emergency Services Division of the State Executive Department. Mr. Mustard had a requirement for common base emergency maps which could be utilized by all agencies at a time when their efforts needed to be coordinated. The SRC presented products from the USGS and state agencies.

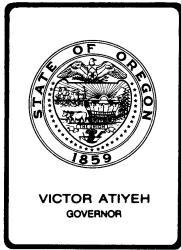
- o Referred a Congressman's request to the WMC concerning complaints that the National Mapping Department was in conflict with private enterprise in the area of large-scale mapping. KVAL - TV news in Eugene interviewed the SRC by phone and reported the matter in the evening news on July 9th. A written report was submitted to the Chief, WMC. A response to the Congressman's inquiry was prepared by the Reston Headquarters.
- o Informed the Chief of the Rocky Mt. Mapping Center of the availability of planned aerial photography in Eastern Oregon. The BLM Baker, Oregon District Manager is planning aerial photography in RMMC Priority One and Two mapping areas. A Denver BLM contact was given to RMMC for further details.
- o Assisted the Oregon Department of Energy (ODOE) in their preparation of an exhibit showing the renewable energy resource locations in Oregon.
- o Coordinated the acquisition of aerial photography of the Malheur and Harney Lake areas. Malheur and Harney Lakes were at an all time high flood stage. It was necessary to obtain the photography within a two-week time frame. The SRC obtained support of the photography from Oregon Water Resources Department (OWRD), USGS Water Resources Division (WRD), U.S. Fish and Wildlife Service (USF&WS), U.S. Soil and Conservation Service (SCS) and U.S. Corps of Engineers (USCE). The SRC then acted as a catalyst in the generation of a letter from the State Emergency Service Division to the USCE asking for emergency action to document the high water level. The USCE used emergency funds to contract the photography and then made a mosaic of the two lakes. Copies of the photos and the mosaic were made available to the agencies.
- o Distributed to county officials an aerial photography cooperative request. This request indicated the locations the NMD would be concentrating its 7½-minute mapping efforts in the next few years in Oregon. Several counties have responded with requests for specific details. There were 140 announcements sent out to county surveyors, planners, assessors and commissioners.
- o Assisted Chief, Data Acquisitions, WMC, in recruiting agencies for participation in the NCIC Cartographic Catalog. An effort will be made to have universities encode the map data from samples supplied to them by the agencies.
- o Coordinated a meeting with Roger Payne, Branch of Geographic Names Investigation, NMD, Reston, VA. The

meeting was attended by eight Oregon Geographic Names authorities. Mr. Payne discussed and demonstrated the Geographic Names Information System (GNIS). There was considerable interest from the Oregon agencies and the Oregon Board of Geographic Names to participate in co-operatively aiding in the completion of Phase II of the Oregon Names Gazeteer. Mr. Payne planned to explore the possibility of a workshare agreement between the Reston Headquarters and the Oregon agencies.

- o Attended the summer and winter meetings of the Oregon Board of Geographic Names. The cooperative participation in the USGS's Geographic Names Information System was a principal agenda item. The Board agreed in principle to support the GNIS and delegated the Interim Board to work out the details.
- o Circulated a preliminary copy of the Environmental Remote Sensing Applications Laboratory image map of Oregon to other agencies and to map dealers for comment prior to publication. The preliminary RBV image map of Oregon was circulated to five agencies and three map dealers to choose a background color for the imagery. This map was published in December, 1982.
- o Conducted a telephone survey of the Federal agencies concerning their large-scale mapping requirements. At the request of Reston Requirements and WMC, eight Federal agencies were queried using a 14-part questionnaire written by Reston. The results of the survey were forwarded to WMC for consolidation into a Mapping Center Report.
- o In the past two years the SRC's office has been identified as a source of mapping information to the state, federal and local agencies, and to the private sector. The SRC has responded to over 200 requests in the past year. The time spent in responding to these requests has impacted the SRC's primary duties. To alleviate this problem, the SRC is currently developing a directory of mapping information which will identify the various sources of mapping data in the state. This directory could be used by USGS personnel as well as other agencies and the private sector.



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MEETING SUMMARY

STATE/FEDERAL MAPPING COORDINATION
MEETING FOR OREGON
STATE MAP ADVISORY COMMITTEE

Room 343 State Capitol
Feb. 12, 1982

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Vi Agnew
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Ray Miller
Joe Feiereisen
Susan Trevitt-Clark
Pete Teensma
Owen Kendall
Tom Jackson
Perry Eng
Wally Zahn
George Green
Dwight Sandlin
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U.S. Forest Service
U.S. Forest Service
Marion County Surveyor
Oregon Emergency Services
Crown Zellerbach
Oregon State Forestry
University of Oregon - Geography
University of Oregon - Map Library
University of Oregon - Map Library
BLM - Portland
BPA - Portland
USDA - Soil Conservation Service
USDA Soil Conservation Service
USDA - Soil Conservation Service
BLM - Portland
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Oregon Dept. of Transportation
Oregon Dept. of Transportation - Highway Div.
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ERSAL - OSU
Oregon Water Resources Department
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Douglas Co. Surveyor's Office
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Alan Donner
Walt Shields
Kris Brooks
Steve Sander
Dave Bascue
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Danna L. Ingram
Sandra Gazeley
Pete McDowell
Leila Cully
Mindy (Gray) Feely
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Bruce McKenzie
Glenn Ireland
John Price
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Benton County Public Works
Benton County Public Works
Department of Economic Development
Data Systems - Executive Department
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U.S. Geological Survey - Menlo Park
State Resident Cartographer
Federal Highway Administration
SMAC Chairman/Oregon Department of Geology

- 1) National Mapping Program: The historic development of the National Mapping Program as a division within the U.S. Geological Survey with the purpose of developing basic map data for the nation was reviewed by Lee Aggers (Attachment #1). The evolution of tangible goals for the completion of the 7½' topographic series has lead to modifications of editing practice and format in the form of the Provisional Map Series as summarized in Attachments 2 and 3.

Within the Provisional Map Program turnaround times for individual maps are reduced from 7-10 years to 3-4 years with the ultimate goal of completing Oregon and the nation in 1989-1990. Menlo Park will handle blocks of maps west of the Cascades and Rocky Mountain will handle blocks of maps east of the Cascades for production purposes. Glenn Ireland will link in-state pre-field capabilities with both centers. Specific comparisons of the P-Map (Provisional) format with the standard 7½' topographic format are provided in Attachment 4.

For the purpose of setting topographic map priorities for areas SMAC no longer will nominate 8 maps per year for starts, but rather may (if it chooses) react to priorities assigned to blocks of quadrangles by the U.S. Geological Survey. Mapping logistics and program consistency are considerations in addition to the importance of various areas.

In other mapping programs of the National Mapping Program it was highlighted that 1) the cost of images in the HAP Program is less for cooperators than for noncooperators, 2) the National Parks Mapping Program includes efforts underway at Crater Lake, 3) the 1:500,000 State Base Map complete with bathymetry will be out in April and will include editorially appropriate corrections previously submitted by SMAC members, and 4) the printing aspects of the orthophoto program are driven by cooperative funding.

- 2) Digital Mapping: The digital mapping effort of the National Mapping Program is presently driven by the orthophoto program, but also responds favorably to cooperative funding (eg. USGS - Ore Forestry - Crown Zellerbach coop in Oregon), and ultimately probably will be user supported on the basis of appropriate price structures. Boundaries and land nets presently are digitized as part of the orthophoto program.

Reaction was sought regarding interest in forming an informal association or group of agencies and other entities involved in digital mapping and geographic information systems for the purpose of sharing experiences and facilitating cooperation and coordination. Such an effort could be patterned after the "Northwest Computer - Aided Mapping Association" now developing in the Puget Sound area. SMAC, through Glenn Ireland, will assist in the initial construction of such a group and will facilitate coordinaion with SMAC and the U.S.G.S. Interest was high.

The National Mapping Program (NMP-USGS) is assuming a leadership role in the development of digital cartographic data within the federal government. Cost recovery programming is anticipated, but a General Accounting Office study of the matter is not yet completed. Current goals and the data base of the USGS digital map effort are summarized on Attachment 5 and a price list is given on Attachment 6. At a future SMAC meeting we will attempt to develop a needs statement for consideration by the U.S. Geological Survey in their digital effort. Cooperative digital efforts are welcomed.

- 3) State Gazetteer: The U.S. Geological Survey is planning to publish a Geographic Names Gazetteer for each state. Current low priority assigned to Oregon on the basis of 7½' topographic coverage is inappropriate in view of the variety of alternative data bases in Oregon and the interest to assist in the effort on the part of several in-state entities including the Board of Geographic Names, the University of Oregon, and several state agencies. The Governor has written a letter to Senator Hatfield expressing concern over this matter and noting the progressiveness of the U.S.G.S. in other mapping efforts in Oregon. Early progress on the Gazetteer could assist pre-field edit aspects of the P-Map effort. Current status of the Gazetteer for Oregon is summarized in Attachment 7.

- 4) General Announcements: The SRC made announcements concerning a Remote Sensing Presentation, a map Production Workshop and an ASP Conference

Gary Shelton of the Environmental Protection Administration will present a 2-hour review of the EPA Remote Sensing capabilities Feb. 19th at 9:00 A.M. in the BPA auditorium. Mr. Shelton will be looking for business from other local, state, and federal agencies.

A Map Production and Reproduction Workshop will be given May 6th in Portland under the sponsorship of the American Society of Photogrammetry and the SMAC. Instructors for this workshop will be Dr. Jon Kimerling, Dr. William Loy, Stuart Allen, and the SRC.

The ASP will hold a conference May 6, 7, & 8th at the Portland Hilton. The focus of the conference is to be geographic information systems, digital data systems remote sensing, orthophoto film mosaicking and high altitude photography.

- 5) Agency Highlights:

State Department of Transportation-Highway Division, Rudy Wellbrock- The Highway Division asked assistance in digitizing their 1:24,000 scale road network for Portland. The digitizing system will have to be compatible with an IBM 370 system. Highway can supply the manpower for the digitizing. U.S. Bureau of Reclamation, Boise, offered assistance and two other possible agencies were noted.

USGS, Dick Dodge - The Forest Service is considering a 1 year cycle in its Transportation Map Series. They are currently on a 6 year cycle. The digitizing and computer plotting of roads as a map revision system is being considered.

U.S. Fish and Wildlife, Bob Ducret - The U.S. Fish and Wildlife has instituted a computer mapping system which uses survey data and prints out the completed map. This has reduced their survey staff from 8 to 3, and their draftsman to 0.

State Library, Candy Morgan - The State Library personnel were trained in the USGS affiliate systems in January. A briefing of the State Forestry and State Highway personnel is planned next week. A training session for SMAC representatives will be scheduled as soon as there is a computer link-up made with EROS Data Center, Sioux Falls, South Dakota.

Bureau of Indian Affairs, Theodore Albert - The BIA has been contributing historical film to the EROS Data Center. BIA is planning a 100 K scale Atlas of Indian Reservation with a land use overlay.

Bureau of Land Management, Dwight Sandlin - Described the BLM digital system in which they digitize 5 layers of information from 1:24,000 scale maps for Environmental Impact Statements. Owen Kendal mentioned that the cadastral build-up on the 1:9600 scale Medford maps had been corrected by their District Office.

Bonneville Power Administration, Tom Jackson - nothing new to report.

Oregon Department of Environmental Quality, Steve Sander - DEQ has contracted ERSAL to do a water quality study on 400 lakes within Oregon. The SRC noted that last year PSU was involved in an inventory and classification of Oregon Lakes. ERSAL will check on this.

University of Oregon, Bill Loy - Bill mentioned that he had received a computer printout of Lane County names by quadrangle from the USGS in Reston, VA. Several agencies and individuals noted that they were having trouble in accessing USGS computer tapes or obtaining documentation concerning USGS computer output. Bruce McKensie, USGS, said that the documentation was in progress, but that he would investigate when he returned to Reston.

Oregon State Department of Forestry, George Shore - OSFD has nine area maps completed and nine in progress. These $\frac{1}{2}$ " = 1 mile maps use the USGS 100 K base.

U.S. Bureau of Reclamation, Herb Lloyd - The USGR is preparing EIS's in NE Washington and western Montana. These areas are under consideration for future water power development.

Oregon Water Resources Division Jerry Holman - OWRD is preparing water right information for the Oregon drainage basins. This tabulation of water rights will yield many new historical names. OWRD is considering some method of digitizing this information.

Environmental Remote Sensing Applications Laboratory, Doug Parker - ERSAL is nearly ready to go to publication of their 1:500,000 scale RBV Image Map of Oregon. Doug will supply the SRC with a list of the State Base Map separates needed to complete the project.

Fifth Regional Mapping
Workshop (Oct. 13-16, 1982)
Tucson, Arizona

- 1) The National Map Division Budget, Expenditures, Regional Summary for the Western Mapping Center, and Summary for Oregon through August of 1982 are provided on succeeding pages. In general terms budget cuts have been less severe than for many other agencies in recognition of the central role and management initiative of the Division, but subcontracted work has been eliminated. The Division is feeling the impact of the "payment for services" philosophy (as opposed to direct appropriations) in budgeting.
- 2) EROS is now a part of the National Map Division in terms of generating map products. A broad memo of understanding between NOAA and NMD in future budgeting will provide for NOAA passing along a negotiated sum of operational money to NMD to generate maps and images; NOAA, in turn, retains the right to keep sales receipts.
- 3) The Digital Mapping effort of NMD is subject to the "cost for services" budget philosophy in the sense that delivered map products, tapes, etc., must pay for themselves. Actual compilation costs need not be recovered, but the cost of digitizing must be recovered. The impact on the cost of digital products will be seen in pricing. An issue which arises is the possible need for copyright laws to apply to the digital products to insure that the NMD is not undercut at the marketplace. Undesireable as this may seem at first glance the tradeoff is simply this. If the "payment for service" philosophy is applied to digital, then copyright is needed to assure the level of payment needed to sustain the service. Without copyright there will be no service.
- 4) Provisional Maps are targeted for completion countrywide by the end of the decade. This does not include the so-called T-maps. The format is broadly accepted and has yielded quicker turnaround times and apparent Congressional approval as an example of necessary innovative management.
- 5) The central role of the National Map Division in the development of digital capabilities in the federal government seems unclear since the Office of Management and Budget is uncertain whether it should go to print with its recommendations to that effect. The indecision rests not on bureaucratic infighting, but rather on the uncertainty of OMB that it has a rule or not in prescribing management direction among federal agencies. Given considerations of program coordination, limited funding, standards, equipment compatibility and uniformity of format it would seem that a lead agency should be designated. Leadership also offers the potential of compatible, complete, and comprehensive data bases as opposed to incomplete single purpose data bases.
- 6) The Orthophoto Program is now shrinking after an earlier surge to produce coverage for all areas not covered by the 7½' series. A revision program is not foreseen except in areas for which there is cooperative funding. The maps are available in reproducible format. Approximately 10% of the national coverage is available in printed form, but it is noted that sales have been generally lean, although at aggressive outlets sales have been brisk.

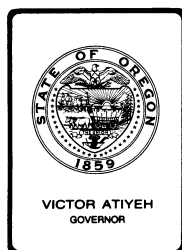
- 7) Funding opens up in the large scale mapping program (1:24,000) in the middle 1980's owing to a relative reduction of workload. Revision is needed particularly for the eastern states and urban areas. As the program shifts to that mode of operation it is timely to rethink the format (Revision will be to the traditional 7½' topo format rather than provisional), the scale, and the potential for spinoff products. If larger scale mapping is required the decision will need to be made soon so that flying elevations etc. can be modified accordingly. Comments are now being systematically solicited nationwide. Pilot projects will be offered for possible program modifications. (Oregon should forward requests for legitimate pilot projects).
- 8) State Caucus Recommendation for 40 percent NMD Budget in 1985 was as follows:

Program (listed in priority order)	Budget (\$M)	% Cut
Primary Quad Mapping	27.8	16
Map Revision	6.6	38
Digital Activities	3.1	20
Orthophotoquads	2.3	62
Modernization	1.9	52
Intermediate Scale Mapping	2.4	65
NCIC	1.4	64
EROS	5.7	53
APTS	0.6	63
Small Scale Mapping	0.25	90
Land Use Mapping	0.1	94

The clear priority of the states is to see completion of 7½' Provisional Mapping (Primary) for the country by 1990. Map revisions should target only high priority areas to accomplish this, if necessary. On the lower end of the scale entire programs should be discontinued to provide funding for other programs and to recognize that levels of funding below a given base level simply don't accomplish much.

- 9) State Caucus Issues: Representatives from the States met separately and developed a set program concerns of high priority which were then relayed to the National Map Division Representatives:
- 1) Where more than one NMD center is mapping a state on a program better is needed. This is true in Oregon on the 7½' series.
 - 2) Priority Missions, such as 7½' mapping should not be delayed in order to explore new possible program directions.
 - 3) The 1:25,000 metric series should be shelved for the time being.
 - 4) The 1:100,000 series should be accelerated.
 - 5) Reproducible orthophotoquad coverage for the entire nation should be completed.
 - 6) If copyrights (spinoff of "payment-for-service" budgeting) apply to future topo maps, then states should have an exemption for topo maps used as base maps in fulfilling their missions.

- 7) In the West Resident Cartographers should be provided where requested.
- 8) NCIC arrangements should be continued.
- 9) Bathymetric mapping offshore is needed to address emerging national need and international need.
- 10) The National High Altitude Photo Program should be more effectively coordinated.
- 11) The NMD National Planning the uniqueness of the west in terms of size, ownership, map coverage status, and need must continue to be recognized.
- 12) Internal NMD digital standards should be released on an information basis. The NMD should presume a leadership role regardless of OMB indecision.
- 13) It was noted that SLAR imagery, although of value, is often oversold as a base map, rather than a source of data to be plotted on base maps.



Department of Geology and Mineral Industries
ADMINISTRATIVE OFFICE

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MEETING SUMMARY
STATE MAP ADVISORY COMMITTEE

Room 357 State Capitol
Oct. 28, 1982

Steven R. Renoud
Paul Habeck
Irv Iverson
Eliz Krebill
Michele Mancuso
Jerry Holman
Ted Albert
Douglas Parker
Tony Lewis
Tom Jackson
Vi Agnew
Rudy Wellbrock
Susan Trevitt-Clark
Jack Herring
Bob Keith
William G. Loy
Lewis L. McArthur
Larry Bright
Dave Smith
Ken Stevens
Keith Walrath
Glenn Ireland
John Beaulieu

Oregon Dept. of Forestry
Dept of Revenue
Dept of Revenue
Dir of State Lands
US Forest Service
Oregon Water Resources Dept
Bureau of Indian Affairs
ERSAL
ERSAL
BPA
USDA Forest Service
Oregon State Hwy Division
Map Library - U of O
City of Salem - Glads -
Bureau of Governmental Research
Geography Dept.- U of O
Oregon Geographical Names Bureau
Oregon Dept of Fish & Wildlife
David C. Smith & Associates - Portland
PP & L
PP & L
USGS/Oregon
SMAC Chairman/State Dept. Geology

1) Fifth Regional Mapping Coordination Meeting

The Fifth Regional Mapping Coordination Meeting was held in Tucson, Arizona in mid October. Attendees included SMAC Chairman from the western states and key program persons from the U.S.G.S.-N.M. Division, including Pete Bermel from Washington, D.C., and Dick Swinnerton from Menlo Park. A summary of highlights is attached to this report.

2) Resident Cartography Summary of Activities

A cooperative 1:100,000 base map involving the NMD and USGS-WRD (Portland) is underway with the help of the Resident Cartographer. It will show land ownership and will have a 1:50,000 scale inset for the immediate Mount Hood area. Target date for printing in Fiscal 1983.

A 1:500,000 land ownership map for Oregon is being pursued by a variety of agencies (BLM, USGS, BIA, USFS, & various state agencies, DSL, Forestry). We can expect a 1984 completion.

The state cartographic catalogue is due for revision and update. It is tentatively planned to solicit student help from the universities to fill in the data sheets. This overcomes the problem of lack of funds to push the program that we noted earlier. Copies of all maps to be input will be required by the participating university. Jerry Greenberg of the USGS-NMD is leading the effort. A workshop is planned for late November. Interested agencies should assemble two sets of each map they want encoded.

The USGS-NMD photo revision budget cut will reduce the Portland area revision by 50%. Agencies were provided an opportunity to prioritize areas involved in the cut.

There is a need to be better informed on the mapping activities of various mapping agencies in the state. Glenn is preparing a directory of mapping information for use by government agencies and the public. Glenn will be contacting appropriate agencies in writing and in person in the coming months. A prototype report will be an agenda topic of a later meeting.

3) Uses for the 1:500,000 state base maps

The 1:500,000 state base map is seeing a variety of new uses in terms of overlays. These include:

- a cooperative land ownership map effort involving numerous agencies as described above.
- a geothermal resources map.
- a Congressional districts map for Oregon, the first of its kind in the nation. There is interest in developing a state election district map for Oregon as well.
- An RBV map is being produced by ERSAL at Oregon State University with the cooperation of various SMAC agencies. Printing will be in November and sales price will be about \$8.00. Numerous outlets are anticipated. The initial press run will be 2,000 brown and 1,000 black copies. It was noted that the original copy is capable of enlargement for larger scale use to about

1:100,000 without loss of accuracy.

4) Geographic Names Information System (GNIS)

Lewis McArthur noted that the Oregon Geographic Names effort is now completed with phase I, an indication of real progress. He also summarized the recent Sixth Meeting of the Regional Geographic Names Board in mid October in October Highlights included:

- the Resident Cartographer Program is effective in the west.
- Name prioritization on various scales of maps were discussed. Historic landmarks are appropriate on larger scale maps.
- Local name authorities need access to pre-field sheets to aid field mapping efforts in a timely manner.
- An active state name correction file is needed for Oregon to consolidate this type of data & to assist mapping efforts.

Bill Loy commented briefly on the GNIS effort. For every topo-graphic quad all names have been coded into the system, although 7½' coverage for the state is far from complete. The total number of locations for Oregon is 32,000; this is phase I. For phase II, which is where we are now, we are looking at ways to systematically enhance this beginning. Other map series and data sets are now appropriate considerations for entry. Special access is available on an area specific bases to a limited extent. Oregon is being done on a cooperative basis unlike some other states that are near completion.

5) State Forestry Specialized Mapping Activities

- Forestry Protection Maps are produced on a scale of 1:100,000. High resolution allows accurate enlargements for specialized purposes.
- Enlarged RBV images (1:100,000) are used as data sources for updating and correcting 1:100,000 base maps.
- For orthophotos knockout techniques are available to remove photoimage colors behind cultural linework to enhance contrast. This technique enhances the use of orthophotos for map purposes.
- A schedule of ½"/mile Fire District mapping was distributed.

6) City of Salem Digital Map Presentation by Jack Herring, Project Coordinator

- Geogrpahic Land and Data System (GLADS) is a joint city-county (Mation) effort to remap the city and county basically from scratch. The greater Salem area is presently receiving emphasis; 60 square miles are mapped at this time. Included are assessor cadastre maps at 1"-100' (1:1,200). Various combinations of data are available on maps. The 1"-400' scale is used primarily for indexing purposes. Various non geographic attributes are

also stored for reference and selective retrieval.

- The program is aimed at tax, assessment, zoning, land use, planning, building permits, building locations and related elements. Benefits are timely updates, accuracy, automated data retrieval etc. It is a digital, local cadastre oriented effort to meet local needs. The maps conform to state standards.
- The national grid system (NGS) is the reference for map construction. About 400 points are identified in the existing map area.

OREGON

Statistical Summary Highlights FY 82

New Mapping

- ° Three types of 7 1/2-minute map coverage are available or will be produced in Oregon. Of the 1827 quadrangles in Oregon:
 - 935 will be completed as standard editions. The remaining quads still in work will be completed in FY 83.
 - 790 will be completed as provisional editions.
 - 102 have been completed as T-maps. The T-maps are being revised and published as standard or provisional maps. Most of the T-map revision will be done after provisional mapping is completed.
- ° The National Mapping Division (NMD) has taken two major actions to complete 7 1/2-minute map coverage of the United States at the earliest possible date:
 1. Initiated the production of provisional edition maps which require less time to produce than standard editions.
 2. Distributed 7 1/2-minute workload among the four mapping centers so that the entire capacity of the NMD can be directed toward areas which have not been completed.

As a result of these actions, all new mapping in Oregon is provisional and 155 of the 790 provisional editions are assigned to Mid-Continent Mapping Center in Rolla, Missouri. Other adjustments to workload among mapping centers may be required through completion of 7 1/2-minute mapping and T-map revision.

Revision

- ° The Deschutes photorevision work-share project with the U.S. Forest Service is now finished. The project consisted of thirty-seven 7 1/2-minute quadrangles updated by the U.S. Forest Service and published by USGS/NMD.

Orthophotoquads

- ° Most of Oregon has orthophoto coverage as a result of cooperative projects with the Soil Conservation Service (SCS) and the U.S. Forest Service.
- ° The Baker (12 orthophotoquads) and Harney North (23 orthophotoquads) were completed for SCS.
- ° The Willamette (40 orthophotoquads) and Umpqua (43 orthophotoquads) work-share projects were completed for the U.S. Forest Service.
- ° Aerial photography has been received and approved for the Crook (9 orthophotoquads), Malheur (76 orthophotoquads) and Wheeler (22 orthophotoquads). These projects should be completed in FY 83.

Intermediate-Scale

- Planimetric 1:100,000-scale quads are no longer being produced. Planimetric versions are being converted to topographic versions, and all new maps will be topographic versions. County format 1:100,000-scale maps will no longer be produced after those currently in work are completed.
- USGS/NMD has entered into a cost-share agreement with USGS/Water Resources Division to prepare a 1:100,000 metric topographic map for Mt. Hood and vicinity. A projected completion date for the map is September 1983.
- In cooperation with the Defense Mapping Agency (DMA), the U.S. Geological Survey, National Mapping Division, has produced a number of 1:50,000-scale metric maps. However, due to budget limitations, DMA may no longer be able to fund this program. No new 1:50,000-scale maps will be started unless DMA funding is available.

Land Use and Land Cover Series

- Land use and land cover (LULC) mapping is currently done at 1:250,000-scale only. Revision at 1:100,000-scale is planned after completion of the 1:250,000-scale LULC series.
- Four land use/land cover maps were completed at 1:250,000-scale and are available as open file reports. Only the land use overlay was completed for each map. The four maps are: Baker, Bend, Crescent, and The Dalles.

Small-Scale and Special

- The topographic and planimetric editions of the 1:500,000-scale state base map was completed and printed in August 1982. Members of the State Map Advisory Committee (SMAC) reviewed the base before publication and provided updated information to USGS/NMD which was utilized in the final printed edition.
- In cooperation with the SMAC, an experimental Congressional District edition map was produced (on the state base) showing the Congressional District boundaries in Oregon. Copies of the map are being prepared for distribution to state/federal agencies for their evaluation.
- Revision of the Crater Lake National Park map (1:62,500-scale) is delayed until completion of 7 1/2-minute provisional maps in the area. Projection completion date for the park map is December 1984.

Digital Products

- Five digital elevation models (Saddle Mountain project) were produced for the Oregon State Forestry Department.
- Seventeen digital elevation models (Molalla project) have been authorized to be done for the Bureau of Land Management.
- The 261 digital line graphs (land net and boundary overlays only) were produced as by-products of new mapping and orthophotography.
- Forty-one digital line graphs (land net and boundary overlays only) have been authorized in the La Grande area.

OREGON STATISTICAL SUMMARY FY 82

PROGRAM	Total No. of Units	Completed to Date		In Work FY 82	
		#	%	#	Completed
NEW MAPPING	1827				
7.5-Minute Standard Topographic	935	932	51%	53	50
7.5-Minute Provisional Edition	790	0	0%	355	0
7.5-Minute T-maps	102	102	6%	////////////////////	
MAP REVISION					
7.5-Minute Photorevision	////////////////	////////////////	////////////////	17	16
7.5-Minute Limited Revision	////////////////	////////////////	////////////////	0	0
7.5-Minute Complete Revision	////////////////	////////////////	////////////////	0	0
ORTHOPHOTOQUADS					
7.5-Minute Orthophotoquad	1827	1666	91%	267	154
INTERMEDIATE SCALE					
1:100,000-Scale Quads Planimetric		30	43%	////////////////////	
1:100,000-Scale Quads Topographic	70	36	51%	32	4
1:100,000-Scale County Plan		7	19%	0	0
1:100,000-Scale County Topo	36	0	0%	0	0
1:50,000-Scale DMA	457	0	0%	0	0
LAND USE AND LAND COVER SERIES					
1:100,000-Scale	65	12	18%	0	0
1:250,000-Scale	19	12	63%	4	4
SMALL SCALE & SPECIAL					
1:500,000-Scale State Base Rev.	1	////////////////	////////////////	1	1
1:250,000 Scale Revision	19	////////////////	////////////////	0	0
National Park Maps	1	1	100%	1	0
DIGITAL PRODUCTS					
Digital Elevation Models (DEM)	1827	227	12%	242	40
Digital Line Graphics (DLG)	1827	594	33%	334	261

STATE MAP ADVISORY COMMITTEE
Activities and Accomplishments
1979-1983

<u>Needs Addressed</u>	<u>Major Elements in Need of Consideration</u>	<u>Accomplishments</u>	<u>Future Directions</u>
Eliminate duplication in mapping; seize opportunities.	Field work. Office compilation. Edit and review. Diverse standards. Diffuse actors, including State, Federal, private and university entities.	Linking of efforts with formal and informal agreements and sequencing of efforts. Acquired Resident Cartographer.	On-going efforts as priority of Resident Cartographer and SMAC meetings.
Get maps to the public.	General map needs. Specific map needs. Technical advice. Knowledge of map availability.	NCIC affiliate. Map maker brochure. Completed MCIS catalogue (computerized)	NCIC affiliate - implementation and expansion. MCIS update.
Finish topographic Base Map series begun in 1906 and 1955.	Poor coverage. Antiquated selection process. Low priority.	Revamped selection process. Revamped format. Upgraded priority.	Follow through on long range plan. Update revisions. Derivative map series. Computer format.
Impacts of Agency Cartographic Budget Cuts.	Impact of reduced efficiency and productivity.	Pursuing cooperation on basic map series including land ownership, urban mapping, and state base map.	Complete specific cooperative agreements. Address map needs of local government.
Possible duplicated efforts or short sighted planning in digital mapping.	Duplication of data base formulation; incompleteness of individual data bases, duplication of software, compability of digital systems.	Ongoing communication with Executive Department CoSponsored Region of Digital Workshop, individual assistance to agencies; assisted in formation of voluntary association of agencies using digital capabilities.	Tap digital resources of local governments; Maximum use of USGS digital capabilities.