'their' land. Through interpreters, I am beginning to know some of their problems, their feelings, and generally their needs and desires. Thank God, thank you and thank the Navajo people for allowing me this opportunity to learn something about living and about the world we live in."[91] Parrill's enthusiasm soon waned somewhat as bureaucratic reorganization within the Navajo Nation stripped the budget and staff for natural resources and provided stumbling blocks to the final referendums on district formation.[92] Despite these problems, once the bureaucratic upheaval had settled, the process continued to move forward. By January 1981, Parrill reported "everywhere we go and everyone we come in contact with is truly concerned about a conservation program....Although interest, attitude, and concern are not reportable progress items; [*sic*] they do represent a rewarding type of progress."[93] Parrill had succeeded, through long effort, in building the mutual respect and human relationships necessary to function effectively in the Navajo Nation.

The same month that Parrill wrote that optimistic note, the first Navajo conservation district, Little Colorado River SWCD, held its first official Board meeting, signing their memorandum of agreement with the USDA, electing their officers, and becoming the first Indian conservation district organized under tribal law. Little Colorado River was followed the next year by Navajo Mountain, Chinle, and Fort Defiance SWCDs.[94] The fifth and final district was created in 1983 at Shiprock in the northeast corner of the Reservation, bringing the total amount of land in the Navajo SWCDs to 13,346,675 acres.[95]

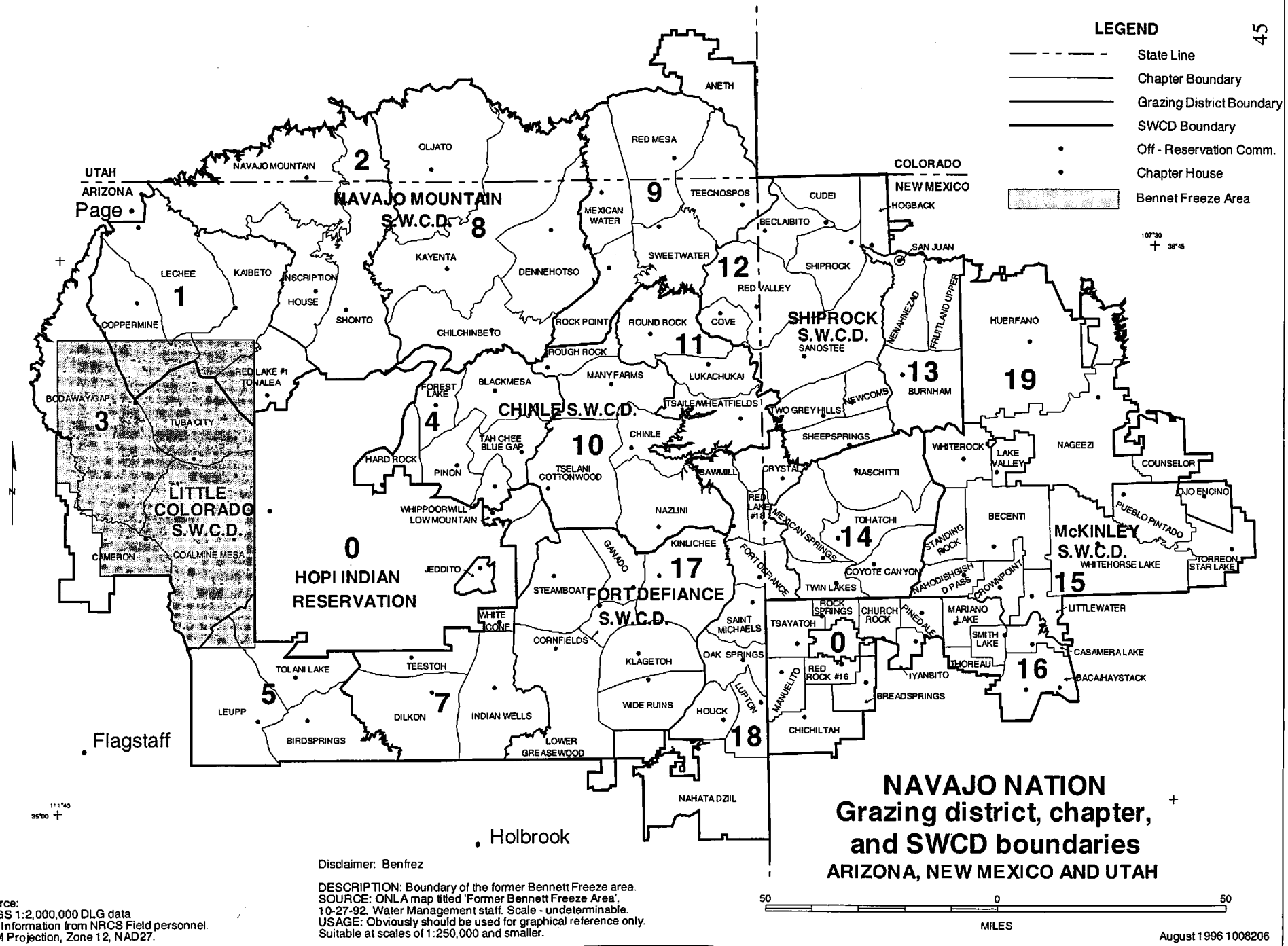
[91]Memo, Parrill to Rockenbaugh, su: Monthly Report - June 1979, 19 June 1979; Navajo—Monthly Narrative Reports April 1979-June 1982; NAC-SW.
[92]See esp. Monthly Reports for June and September 1980; Ibid.
[93]Monthly Report, January 1981, Ibid.
[94]The file "Navajo—Monthly Narrative Reports April 1979-June 1982" in the files of the Southwestern American Indian Coordinator details the process of district formation from Parrill's perspective. An interesting note, in February 1981, Parrill was selected as one of the Navajo Nation Division of Natural Resources 35 outstanding employees.

With the resumption of their work on the reservations, the SCS found that the condition of the natural resource base of the Navajo Nation had improved little from the 1930s to the 1980s. In 1983, there was still an ongoing problem with overgrazing and erosion. Though infrastructure, education, and social services had improved since the 1930s, according to the "summary of proposed realignment of Navajo Nation-USDA relations," the Navajo Nation continued to face social and economic conditions similar to those during the Great Depression which had facilitated the original SCS work on the reservation. Though the economic base of the Nation had diversified and expanded since the Depression, more than fifty years later Navajos suffered from an unemployment rate of over 60%, more than 60% of homes on the reservation lacked electricity or running water, and erosion continued to ravage the Nation's land and water resource base.[96] Despite the five offices and sub-offices SCS established on the Navajo Nation from 1980-1983, long-term planning for the reservation was hampered by problems of coordination between the local field offices and state offices.[97] However, Navajo tribal commitment to conservation increased exponentially with the introduction of SCS offices on the reservation. Between 1980 and 1983 the Nation's annual budget for conservation projects increased from less than $100,000 to $1.3 million a year. Despite this increase in funding, and perhaps because of the lack of an integrated program to build the infrastructure so desperately needed in the Navajo Nation, conditions only worsened throughout the 1980s.

[95]"History of SCS Assistance to the Navajo Nation"; Navajo—SWCDs—General; NAC-SW.
[96] "Summary proposed realignment of Navajo Nation-USDA relations," (n.d.); Arizona folder; NAC-HQ.
[97] Letter with enclosures from Peter Deswood to Peter Myers, Chief of SCS, October 5, 1983; Arizona Folder; NAC-HQ.

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE



NAVAJO NATION
Grazing district, chapter, and SWCD boundaries
ARIZONA, NEW MEXICO AND UTAH

Source:
USGS 1:2,000,000 DLG data
and Information from NRCS Field personnel.
UTM Projection, Zone 12, NAD27.

Disclaimer: Benfrez

DESCRIPTION: Boundary of the former Bennett Freeze area.
SOURCE: ONLA map titled 'Former Bennett Freeze Area', 10-27-92. Water Management staff. Scale - undeterminable.
USAGE: Obviously should be used for graphical reference only. Suitable at scales of 1:250,000 and smaller.

August 1996 1008206

Worsening conditions bred frustrations within the Navajo Nation.[98] SCS programs, though helpful, appeared inadequate to meet the challenges that the conditions on the Reservation posed. This was partially because the SCS relationship with the Navajo Nation was complicated by a number of factors, most significant among these was the lack of coordination and partnership between the various Federal agencies operating (often at odds) on the Navajo Nation. There were also ongoing difficulties in overcoming the Navajo distrust of Federal programs and a basic lack of information on SCS programs.[99] At the same time, the needs of the Navajo Nation went far beyond what the SCS was able to provide. Conservation education, fencing, range management, dam construction, and erosion control were ineffective without a comprehensive approach to solving the human problems of the Navajo Nation.

In 1994, a little more than a decade after the first report on Navajo resource use, the Navajo Nation compiled the *Navajo Nation Rural Development 2000 Plan,* an extensive study of conditions on the reservation and an ambitious plan for their improvement.[100] According to the study, things had improved little if at all since the mid-1980s: unemployment rates ranged seasonally from 36% to 50%; average per capita income was $4106; 56% of the

[98]Letter from Daniel Peaches to Don Gohmert, August 1, 1991; NAC-SW. See also "Report on Assistance to Conservation Districts on the Navajo Reservation," by Donald Gohmert, State Conservationist Arizona, enclosed with letter from William Richards, chief SCS, to Congressman Daniel Inouye, Chairman, Senate Select Committee on Indian Affairs; NAC-SW.

[99] For example, even after 14 years servicing the Navajo Reservation, SCS has been unable to effectively communicate the goals and structure of its programs to the Navajo people. Many of the cooperators on the reservation don't know what types of assistance are offered, don't understand the self-help aspect of the programs, and have trouble understanding the technical concepts which are necessary to implement conservation practices. This failure, so uncommon outside the Indian communities, points to a continued problem understanding the human component of conservation on the reservation and to the need for a far greater commitment to education, outreach, and training than has existed thus far. Interview with Jerry Thompson, SCS, DC, St. Michaels Field Office, Navajo Nation.

[100] The fate of the *Development 2000 Plan* is illustrative of another obstacle to coordinated, long-term development planning in the Navajo Nation: frequent leadership changes and accompanying purges of the bureaucracy result in discontinuity in policy from one Administration to the next. The current Manager of Natural Resources for the Navajo Nation was unaware of the *Development 2000 Plan,* as were many of the SCS personnel and other people at the annual meeting of the Navajo Conservation Districts.

population lived below the poverty line; three-quarters of the population went without plumbing, kitchens, and/or telephones. The entire reservation had only 18,000 miles of paved road, only three banks, and insufficient local schools, public buildings, and medical facilities. The Navajo Nation's population was living in conditions one normally associates with the poorest nations of the third world, not with late twentieth century America.

The report was important because in it the Navajo performed the type of survey and planning for themselves that TC-BIA had performed in the 1930s. However, because this was a self-diagnosis, it had less of the type of cultural and political bias that complicated early SCS planning and implementation of works on tribal lands, where Federal objectives and priorities were inflicted on the Indian tribes without consideration of their own desires. However, the plan was not free from controversy, due to the diversity of perspectives on development and land use within the Navajo Nation itself. The *Development 2000* plan called for a broad, joint development program by USDA and the Navajo Nation which would provide an integrated approach to addressing the persistent deficiencies in Navajo infrastructure. The SCS and its assistance in improving and managing the potentially rich Navajo natural resource base was the central component. According to the plan, over the previous three years, the Navajo Nation had begun "to develop and institute a *culturally-based*, watershed/ecosystem approach to comprehensive natural resources conservation, restoration and management...working closely with the USDA Soil Conservation Service..."[101] The Navajo Nation was by no means asking for a one-sided commitment from the SCS for developing its natural resources. For the fiscal year 1994, the Navajo Nation invested $7,498,000 in conservation projects. This amount was by far the largest single component of the Nation's budget and almost matched the USDA's $10,000,000 contributions in this field. Unfortunately, this ambitious project was abandoned as the leadership in the Navajo Nation changed.

[101]Navajo Nation, *Navajo Nation Rural Development 2000 Plan*, 34. Emphasis added.

Besides the problem of continuity and the need for infrastructural development, there still existed significant cultural barriers to certain conservation practices. Some of this was a result of the clash between several coexistent and conflicting views on land ownership and use: traditional use-right ownership, the private property-based grazing permit system, and tribal common property conventions.[102] The major problem resulting from this clash in recent SCS work on the Nation has been the persistent resistance to fencing in order to manage the severely depleted range in the grazing districts. One of the most typical inter-district disputes has been conflict over grazing permit area boundaries brought on by individual attempts at fencing. Since grazing permits were issued for ill-defined, for overlapping traditional use areas, and often impractical units of land, traditionally, land users cooperated to share the resources of their permit lands. Over time, as perceptions of land use and ownership changed, conflicts over land use intensified. The following is a brief summary of an actual dispute in Grazing District Nine:

> District Nine grazing permit holders in the Four Corners region coexisted together for years. Permit holders used adjacent grazing permit areas to take advantage of their special physical features, such as watering holes or salt brush patches...Recently a permitee decided to fence his grazing permit area. This precipitated other permit holders to claim exclusive use of their respective permit areas. Permit holder "B" attempted to deny all other permit holders access to the salt brush patches while permit holder "C" wanted to exclude all others from access to water. (Exclusion from a watering hole is prohibited by tribal law.)[103]

Fencing has been problematic on the reservation since the 1930s, yet the SCS and BIA have continued to press it on the Navajo as the only means of range management. The Navajo

[102] Alexander Thal, "Navajo Land Tenure: Obstacles to Navajo Tribal Resource Development," *Southwest Review of Management and Economics* 2, 2 (Spring 1982): 175-206.
[103] Ibid., 190.

culture is opposed to the type of land division represented by fencing. The fence, in Navajo society, is a symbol of the exclusion of neighbors, community, and even family that is completely unacceptable to most people. In the past few years, local resistance to fencing has been so intense as to elicit credible death threats against BIA personnel involved in fencing projects. Alternative solutions that would be more culturally acceptable have not been sought.[104] This failure on the part of the SCS is attributable to a continued lack of sensitivity to and awareness of the importance of the Navajo belief system and its relationship to the land. The continued attempts to impose fencing on the reservation have slowed the conservation of the range and increased tensions between SCS and the Navajo.

While range management continues to be a problem on the reservation, other projects have progressed. One example of the integrated projects being developed in the Navajo Nation is a program called Ecosystem Based Assistance (EBA) which adopts a "holistic" approach to planning. One of the pilot programs is the Asaayi Lake area comprising more than 15,000 acres in New Mexico. This project, initiated by the Navajo Nation and Fort Defiance SWCD, required significant emphasis on social and cultural issues. The project offers a possible model for future integrated development projects on the Navajo Nation.

In addition, a growing appreciation for native farming techniques and native plants has had a wider ranging effect than its initiators imagined: the ancient or traditional crops and techniques of the American Indians are proving not only important for revitalizing local agriculture but valuable in attempts to grow better and more hardy plants globally. The Sustainable Native Agriculture Center (SNAC) in Arroyo Hondo, New Mexico was organized,

[104] One alternative to fencing is managed herding, which, though labor intensive, is culturally acceptable to the Navajo. I have not heard any explanations of why this and other alternatives have not been explored, in fact there seems to be little recognition by field personnel that fencing is inappropriate and impractical on the reservation. Some (not all) treat it as a matter of ignorance or backwardness on the part of the Navajo rather than seeking to find other methods of managing the range.

with the help of the SCS, to address the problems of local farmers trying to earn a living on small farms at high altitudes with limited resources, poor soils, and a short, dry growing season. The Director of the Center began collecting American Indian garden seeds in the mid 1980s, eventually collecting nearly 400 varieties of seeds, all of which flourished in the harsh conditions of mountainous New Mexico and Arizona. For example, some varieties of blue corn which are indigenous to Northern Arizona produce dry land crops on only 4 inches of annual rainfall.[105] The seeds had been passed down from farmer to farmer for centuries, along with the knowledge and techniques of how to cultivate them in this difficult environment. The agricultural problems in the Southwest were very similar to those in many famine-ridden third world countries, and the seeds and cultivation techniques have already proved valuable abroad. The center has sent 22 varieties of plants to China, India and Mexico and is involved in research in Zaire, Egypt, Switzerland, and Kuwait.

[105] William Fuller, "Ancient Seeds Reappear," *Soil and Water Conservation News* 11, 3(June 1990): 8-9.

CONCLUSION: WHY CULTURE COUNTS

Though this paper studied only the Southwest, the same problems of cultural misapprehension persist throughout the country.[106] Even as legislation and presidential proclamations changed the legal relationship of the American Indian tribes to the Federal Government and its agencies, increased legal autonomy for the tribes, and mandated access to Federal rural improvement programs, basic cultural and social issues continued to shape the quality and quantity of aid that American Indians received. Nominally physically accessible field offices staffed with personnel with little regard for or knowledge about the American Indian populations they are there to serve are of liitle use. Conservation programs designed without regard for the beliefs and practices of the human population occupying the land are fruitless at best, and at worst, increase the level of mistrust and misunderstanding that has historically plagued Federal Government-American Indian relations. All of the good intentions of the NRCS and its staff will be for naught if the information they have does not reach the American Indians on the reservations, if the tribal members do not feel comfortable with or capable of approaching the NRCS for assistance, if NRCS programs are not appropriate for the diverse needs of the many American Indian tribes and groups living in the U. S..

While engineers and soil scientists can solve the immediate physical symptoms of poor land use, they cannot diagnose the underlying social, economic, and political causes of

[106] See, for an example of similar problems amongs non-American Indian groups, the recent article by NRCS's Eklhorn Slough Watershed Project Director Daniel Mountjoy, "Ethnic Diversity and the Patterned Adoption of Soil Conservation in the Strawberry Hills of Monterey, California," *Society and Natural Resources* 9 (1996): 339-357. Dr. Mountjoy's article examines the relationship of ethinic identity and knowledge systems of California strawberry farmers of Anglo, Japanese, and Mexican ethnicity to the use erosion control practices.

those symptoms. Nor can they design ways to combat those problems in order to overcome the problems of erosion, overgrazing, deforestation, and siltation. These tasks fall to two groups of people, the tribal members on the reservation and social scientists. The task of the former is to take responsibility for the land in their keeping, and be advocates for its improvement and for their own right to Federal assistance. The task of the latter is two fold: 1) to design the tools necessary to educate the American Indians about the resources available to them and how to get them, and to educate the NRCS staff in how better to provide the American Indians with the assistance to which they are entitled; and 2) to aid the tribal members in defining their needs and goals and the NRCS staff members in determining culturally appropriate ways to meet those needs and goals.

Culture, economics, politics, and the environment are inextricably intertwined. Environmental issues cannot be addressed successfully in isolation, but must be treated as a part of the larger complex of human relationships. Recognition of this has led to a gradual acceptance of the role that studies of culture should play in land use planning. This recognition now needs to be translated into a comprehensive effort to implement the results of these studies in the field. The most recent "integrated" development plans by the Navajo Nation exemplify this by addressing the basic social, educational, economic, and infrastructural needs of the Reservation along with its natural resources. The NRCS, if it wishes to serve the American Indian populations of the U. S., must also make a greater effort to comprehend and use the insights that studies of culture and society can provide.

Appendix A: Human Dependency and Economic Studies Conducted by TC-BIA, 1935-1939

Region 7

Human Dependency and Economic Survey, Lower Brule Indian Reservation, South Dakota, 1938. 114 pp. 1938.

Economic Reconnaissance, Pine Ridge Indian Reservation, South Dakota, 1938. 1939

Wind River Reservation, Wyoming

Economy of the Wind River Indian Reservation, Wyoming. 14 pp. 1938.

History and Present Status of Irrigation and Crop Production, Wind River Indian Reservation, Wyoming. 32 pp. 1938.

History and Social Organization of the Indians of the Wind River Reservation, Wyoming. 138 pp. 1938.

Land Tenure and Land Use, Wind River Indian Reservation, Wyoming. 22 pp. 1938.

Livestock Economy of the Wind River Indian Reservation, Wyoming. 44 pp. 1938.

Region 8

Socio-Economic Report on the Gila River (Pima) Indian Reservation, Arizona. 159 pp. 1936.

Preliminary TC-BIA Summary Report, Uintah-Ouray Indian Reservation, Utah. 39 pp. 1937.

Relations of the Papago in Arizona and Sonora, Mexico. August 1937, revised July 1938.

Report on the Supai Reservation, Arizona. 62 pp. 1936

Socio-Economic Report, Walapai Tribe, Truxton Canyon Agency, Arizona. 405 pp. 1936.

Human Dependency Survey, Papago Indian Reservation, Arizona.

Human Dependency Survey, Mescalero Indian Reservation, New Mexico.

Region 9

Preliminary Report, Human Dependency and Economic Surveys, Fort Hall Indian Reservation, Idaho, 1937-1938. 227 pp. 1939.

Region 10

Human Dependency and Economic Survey, Sacramento Indian Jurisdiction, California, 1936. 100 pp. 1939.

Nye County Shoshone Project, Nevada. 70 pp. 1937.

Ruby Valley Purchase Project, Odger Ranch, Land Utilization Study, Nevada. 12 pp. 1937.

South Fork and Ruby Valley Projects for Shoshones of Northeastern, Nevada. 129 pp. 1937.

Survey of the Beatty-Pahrump Area Located in Southwestern Nevada. 26 pp. 1937.

Survey of the Shoshones and Paiutes, Fallon Indian Reservation,

Nevada 48 pp. 1937.

Washoe Report for Carson Valley Washoes, Nevada and California. 121 pp. 1937.

Yerington Project for Smith and Mason Valley Paiutes, Lyon County, Nevada. 40 pp. 1937.

Human dependency studies were also conducted by the Human Dependency team in Region 8 under the direction of Eshref Shevky. Many of these studies were issued as Regional Bulletins and part of the Conservation Economics Series beginning in 1935. Following are a list of some of those studies which I was able to obtain. There are many more, most of which deal with populations other than the American Indians.

Proposals for the Santa Cruz Area. Regional Bulletin no. 28; Conservation Economics Series no. 1; SCS Region 8, Albuquerque, NM, July 1935.

Preliminary Report on Concho. Regional Bulletin no. 29; Conservation Economics Series No. 2; November 1935.

T*he Importance of Various Types of Income on the Navajo Reservation.* Regional Bulletin no. 30; Conservation Economics Series no. 3; January 1936.

Sociological Survey of the Navajo Reservation: Statement of Purpose. Regional Bulletin no. 32; Conservation Economics Series no. 5, May 1936.

Reconnaissance Survey of Human Dependency on Resources in the Rio Grande Watershed. Regional Bulletin no. 33; Conservation Economics Series no. 6, December 1936.

Inventory of Material on the Rio Grande Watershed (An Evaluation of Surveys and Reports); Vol. I: *Tewa Basin Study.* Regional Bulletin no. 34; Conservation Economics Series no. 7. Volume II: *Section of Conservation Economics*; Regional Bulletin no. 35; Conservation Economics Series no. 8, February 1937.

Appendix B: Suggested Reading for NRCS Field Staff

(These are general works. Full citations may be found in the bibliography.)

- A. T. Andersen, *Nations within a Nation: The American Indian and the Government of the U. S.*.
- Council of State Governments, *Indian Rights and Claims: Environmental Management Considerations for the State*, 1977.
- Douglas Hurt, *Indian Agriculture in America: Prehistory to the Present*, 1987.
- Solon Kimball and John Provinse, "Land Use Management: The Navajo Reservation," in Walter Goldschmidt, ed. *The Uses of Anthropology*, 1979.
- Kimball and Provinse, "Navajo Social Organization in Land Use Planning," *Applied Anthropology* 1(September 1942): 18-25.
- Lawrence Kinney, *A Continent Lost—A Civilization Won: Indian Land Tenure in America*, 1937.
- Gary Libecap and Ronald Johnson, "Legislating the Commons: The Navajo Tribal Council and the Navajo Range." *Economic Inquiry* 18 (January 1980): 69-86.
- Marjorie Snodgrass, *Economic Development of American Indians and Eskimos, 1930-1967: A Bibliography*, 1968.
- Edward Spicer, *Human Problems and Technological Change: A Casebook*, 1952.
- Richard White, *The Roots of Dependency: Subsistence, Environment and Social Change Among the Choctaws, Pawnees and Navajo*, 1983.
- USDA, SCS, Frank Clearfield, National Sociologist, *Working More Effectively with American Indian: Workshop Proceedings, march 7-10, 1988, Phoenix, Arizona*, (Washington DC: USGPO, 1990).
- USDA, Office of Information, Office of InterGovernmental Affairs, *Agricultural Programs and Activities for American Indians* (USGPO, 1986).

Appendix C: Suggestions from the Field

- NRCS needs to **recruit more American Indians** to work in the field offices. This might be accomplished through partnerships with local schools and colleges to establish training, educational, internship, and apprenticeship programs to prepare local youth for careers in conservation with NRCS.

- A **follow-up to the seminar on Working More Effectively with American Indians**. A comprehensive survey of the status of NRCS progress on projects with American Indians needs to be undertaken to determine whether the recommendations of the seminar have been implemented, and to what extent they were effective. This could provide a model for future improvements.

- District Conservationists for American Indian reservations need to be carefully selected. One suggestion is to treat the reservations, since they are sovereign entities, as foreign nations in terms of NRCS personnel assignments. If qualified tribal members are not available, District Conservationists and even lower ranked positions might be **recruited through the international division**; assignment to a reservation should be regarded as a special opportunity and challenge rather than as a hardship assignment or a short-term detour on a career path that leads elswhere. Personnel could be required to undergo a training period before placement on the reservation, during which they would study the language, history and culture of the reservation, just as one would before going to a foreign nation. One DC position might be used as an experiment.

- Because individual relationships established over time are central to effective work on the reservation, there needs to be a career ladder in a single location, and personnel need to have the ability to advance in the field. Current policies force good people to leave the reservations in order to receive promotions. Personnel assignments on the reservations need to be long-term or permanent rather than temporary.

- A **training program** for personnel working with American Indians should be mandatory. The program might have two parts. The first would be a general sensitivity training like the Harmony Workshops. The second part would be reservation-specific and developed in cooperation with each tribe. This would include basic instruction on the Government and decision-making process of each reservation, the social conditions, the behavioral norms, and the specific needs and resources of the reservation or community. Through this training, NRCS personnel would also be instructed in past NRCS work on the reservation and introduced to the members of the community and the tribal Government with whom they need to work. In addition, NRCS should provide **language classes** for NRCS field personnel working primarily with the reservations. This might be arranged with the assistance of the tribal Governments and the Indian CCC.

- NRCS needs to **increase the amount and effectiveness of its outreach** to American Indian communities.

- NRCS field offices working with Indian communities and reservations need to be able to provide **alternative information sources** to the Indian communities. **Videos**, in the language of the reservation, explaining NRCS programs available on the reservations would be of great benefit. For example, on the Navajo Reservation, many of the people do not have electricity, phones or direct mail service, many do not have reliable transportation. Most of their business (mail pickup, phone messages, community meetings) are conducted at the chapter houses. Most of the chapter houses have Satellite dishes, Televisions, and VCRs. If NRCS could provide a video about NRCS programs to each chapter house, the local community could watch it when they wanted to, as often as they wished. This would make information about NRCS program accesible to far more people, particularly to those older people who have difficulty with English.

- In additional to informational videos, **working scale models** of basic conservation works, like catchment systems, would help the field personnel. Small working models would demonstrate the principles behind the technical plans and would help in convincing people to implement their conservation plans.

- NRCS needs to make a **sociologist** available to help the field personnel on the reservations address the social and cultural issues that affect their conservation programs. This position might also take the form of a cultural liaison to each tribe or in each state, this person should be formally and primarily trained in sociology or cultural anthropology as well as knowledgeable in conservation. A program should be developed with the National Sociologist to determine the specific duties of this position.

- Each reservation needs a **staff person for educational and outreach** work. This person should be fluent in the local language and preferably a member of the community. This person would also be responsible for acting as a **coordinator** or liaison between NRCS, the tribal Government, and the various USDA agencies working on the reservation. The salary costs of this positition might be shared by the tribal Government.

- Since the conditions on the reservations vary so drastically from the rest of the areas on which NRCS works, the field personnel need to be allowed **greater flexibility** in conservation planning and greater autonomy in decisionmaking in order to determine appropriate local priorities.

- There is a serious lack of **basic information** needed to do conservation on the reservations. Comprehensive **soil maps, resource inventories**, and information on **range sites** needs to be compiled. (Even the Navajo Nation, where NRCS has been most active, lacks these basic elements of conservation planning)

Bibliography

PUBLIC RECORDS

Records of the Soil Conservation Service, Record Group 114. National Archives II, College Park, MD.

Records of the Bureau of Indian Affairs, Record Group 75. National Archives, Washington DC.

General Correspondence of the Secretary of Agriculture, Record Group 16. Washington National Records Center, Suitland, MD.

Files of the American Indian Coordinator, Headquarters, Natural Resources Conservation Service, USDA, Washington, DC.

Files of the American Indian Coordinator, Southwest Region, NRCS, Arizona State Office, Phoenix, AZ.

INTERVIEWS

Charmichael, Steve. Former American Indian Coordinator, Southwest Region, Soil Conservation Service.

Sellers, Doug. Indian Liaison, Soil Conservation Service, 1984-1989. Telephone interview, August 25, 1995.

Seronde, Jacques. Former Director, Agricultural Resources, Navajo Nation.

BOOKS AND PERIODICALS

Anders, Gary. "Theories of Underdevelopment and the American Indian." *Journal of Economic Issues* 14, 3(September 1980): 681-701.

Andersen, A. T. *Nations Within a Nation: The American Indian and the Government of the U. S.*. [U.S. Congress] American Indian Policy Review Committee/Union Carbide Corporation, 1976.

Arizona, Office of the Governor. Office of Economic Planning and Development. *Critical Issues in Indian-State Relations*. Phoenix, 1981.

Boyce, George Arthur. *Primer of Navajo economic problems*. Window Rock Arizona: U. S. Department of the Interior, Office of Indian Affairs, Navajo Service, 1942.

Calkins, Hugh G., Regional Conservator, USDA, SCS. *Proposals for the Santa Cruz Area*. Regional Bulletin No. 28; Conservation Economics Series No. 1; Soil Conservation Service, Region 8. Albuquerque, NM, July 1935.

_____. *Preliminary Report on Concho*. Regional Bulletin No. 29; Conservation Economics Series No. 2, November 1935.

_____. *The Importance of Various Types of Income on the Navajo Reservation.* Regional Bulletin No. 30; Conservation Economics Series No. 3; January 1935.

_____. *Sociological Survey of the Navajo Reservation: Statement of Procedure.* Regional Bulletin No. 32, Conservation Economics Series No. 5; May 1936.

_____. *Reconnaissance Survey of Human Dependency on Resources in the Rio Grande Watershed.* Regional Bulletin No. 33, Conservation Economics Series No. 6, December 1936.

_____. *Inventory of Material on the Rio Grande Watershed (An Evaluation of Surveys and Reports)*; Vol. I: *Tewa Basin Study.* Regional Bulletin No. 34; Conservation Economics Series No. 7. Vol. II: *Section of Conservation Economics.* Regional Bulletin No. 35;

Conservation Economics Series No. 8. February 1937

_____. *Tijeras Canyon - Moriarity Area.* Regional Bulletin No. 39; Conservation Economics Series No. 12, May 1937.

_____. *Village Dependence on Migratory Labor in the Upper Rio Grande Area.* Regional Bulletin No. 47; Conservation Economics Series No. 20, July 1937.

Checchio, Elizabeth and Colby, Bonnie. *Indian Water Rights: Negotiating the Future.* Tucson, AZ: Water Resources Research Center, The University of Arizona College of Agriculture, June 1993.

Council of State Governments. *Indian Rights and Claims: Environmental Management Considerations for the State.* State Environmental Issue Series. Lexington, KY: Council of State Governments, 1977.

Dobyns, Henry. "Experiment in Conservation: Erosion Control and Forage Production on the Papago Indian Reservations in Arizona." in Spicer, *Human Problems in Technological Change*, pp. 209-224.

Dorroh, J. H. *Certain Hydrologic and Climatic Characteristics of the Southwest.* University of New Mexico Publications in Engineering, number one. Albuquerque: University of New Mexico Press, 1946.

"Focus on Diversity—American Indians," *Soil and Water Conservation News* 13, 4(Winter 1992): 11-14. This is a series of brief articles on ongoing SCS projects with American Indians.

Fonaroff, L. S. "Conservation and Stock Reduction on the Navajo Tribal Range." *Geographic Review* 53, 2(April 1963): 200-223.

Fuller, William. "Ancient Seeds Reappear." *Soil and Water Conservation News* 11, 3(June 1990): 8-9.

Hack, John T. *The Changing Physical Environment of the Hopi Indians of Arizona.* Reports of the Awatovi Expedition, Peabody Museum, Harvard University, Report no. 1. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, Vol. XXXV, No. 1. Cambridge, MA: The Museum, 1942.

Hays, S. *Conservation and the Gospel of Efficiency.* Cambrudge, MA: Harvard University Press, 1959.

Hill, W. W. *The Agricultural and Hunting Methods of the Navajo Indians*. New Haven, CT: Published for the Department of Anthropology, Yale University by Yale University Press; and London: Humphrey Milford, Oxford University Press, 1938.

Hurt, R. Douglas. *Indian Agriculture in America: Prehistory to the Present*. Lawrence, KN: The University Press of Kansas, 1987.

Kelly, Lawrence. "Anthropology and Anthropologists in the Indian New Deal." *Journal of the History of the Behavioral Sciences* 16 (1980): 6-24.

_____. "Anthropology in the Soil Conservation Service." In *The History of Soil and Water Conservation*. Douglas Helms and Susan Flander, editors. Washington, DC: The Agricultural History Society, 1985.

Kimball, Solon T. "Land Use Management: The Navajo Reservation." In Walter Goldschmidt, ed. *The Uses of Anthropology*. Washington, DC: American Anthropological Association, 1979.

_____ and Provinse, John H. "Navajo Social Organization in Land Use Planning." *Applied Anthropology* 1(July-September 1942): 18-25.

Kinney, J. P. *A Continent Lost—A Civilization Won: Indian Land Tenure in America*. Baltimore: Johns Hopkins Press, 1937.

La Farge, Oliver. "Notes for Hope[*sic*] Administrators." Unpublished report, February, 1937. Hopi Material. Files of the National Historian, NRCS.

Lange, C. H. "The Role of Economics in Conchiti Pueblo Culture Change." *American Anthropologist* 55(December 1953): 674-694.

Libecap, Gary and Johnson, Ronald. "Legislating the Commons: The Navajo Tribal Council and the Navajo Range." *Economic Inquiry* 18 (January 1980): 69-86.

Maes, Ernest. *Three Hundred Years of European Settlement in New Mexico: A Study in Two Populations*. A speech delivered before the 8eenth annual meeting, Southwestern Division, American Association for the Advancement of Science. Soil Conservation Service, Section of Human Surveys, Region 8, April 28, 1938.

McNickle, Darcy. "Anthropology and the Indian Reorganization Act." In Walter Goldschmidt, ed. *The Uses of Anthropology*. Washington, DC: American Anthropological Association, 1979.

Meriam, Lewis, et al.. *The Problem of Indian Administration*. Report of a Survey made at the request of Honorable Hubert Work, Secretary of the Interior, and submitted to him, February 21, 1928. Institute for Government Research, Studies in Administration Series. Baltimore: The Johns Hopkins Press, 1928.

Mountjoy, Daniel C. "Ethnic Diversity and the Patterened Adoption of Soil Conservation in the Strawberry Hills of Monterey, California." *Society and Natural Resources* 9 (1996): 339-357.

Navajo Tribe. *Minutes of the Navajo Tribal Council held at Fort Defiance, Arizona, March 12 and 13, 1934*. Washington, DC, 1934.

_____. Proceedings of the meetings of the Navajo Tribal Council and the Executive Committee, Window Rock, AZ, January 17, 18,19,20, 1938. Window Rock, AZ: U. S. Department of the Interior; Office of Indian Affairs; Navajo Service, 1938.

Punce, A.C. "Some Economic and Social Problems of Soil Conservation." U.S. Soil Conservation Service. *Soil Conservation* 5, 4 (October 1939): 73-76, 82.

Ruffing, Lorraine Turner. "Navajo Economic Development Subject to Cultural Constraints." *Economic Development and Cultural Change* 24(April 1976): 611-621.

Sasaki, Tom. "Agricultural Practices Among the Navaho [sic] Indians of New Mexico." in Spicer, *Human Problems in Technological Change*, pp. 97-112.

Snodgrass, Marjorie P., ed. *Economic Development of American Indians and Eskimos, 1930-1967: A Bibliography*. U.S. Department of the Interior, Bureau of Indian Affairs. Departmental Library Bibliography Series. Washington, DC, September 1968.

Sorkin, Alan L. *American Indians and Federal Aid*. Brookings Studies in Social Economics. Washington, DC: The Brookings Institution, 1971.

Spicer, Edward, editor. *Human Problems in Technological Change: A Casebook*. New York: Russell Sage Foundation, 1952.

_____. "Sheepmen and Technicians: A Program of Soil Conservation on the Navajo Indian Reservation." in *Human Problems and Technological Change*, pp. 185-208.

Thal, Alexander. "Navajo Land Tenure: Obstacles to Navajo Tribal Resource Development." *Southwest Review of Management and Economics* 2, 2(Spring 1982): 175-206.

Underhill, Ruth. *The Papago Indians of Arizona and their relatives the Pima*. Washington, DC: Education Division, US Office of Indian Affairs, 1940.

U. S. Bureau of Indian Affairs. *Graphic Summary of the Tewa Basin Summary by the Indian Research Unit in cooperation with U. S. Forest Service and Soil Conservation Service.* Albuquerque, NM. 1935.

U. S. Congress. Senate. Committee on Indian Affairs. *Survey of Conditions of the Indians in the U. S.: Hearings Before a Subcommittee of the Committee on Indian Affairs*. Part 6, January 21, 1930. 71st Cong., 2nd Sess.. Washington, DC: USGPO, 1930. CIS mircrofiche S545-2-B (pre-1935 supplement).

U. S. Congress. Senate. Committee on Interior and Insular Affairs. *Navajo and Hopi Indians*. Hearing before a subcommittee of the Committee on Interior and Insular Affairs. Washington, DC: GPO, 1948.

USDA. Civil Rights Action Team. *Civil Rights at the United States Department of Agriculture: A report by the Civil Rights Action Team*. February 1997.

USDA. Soil Conservation Service. *Statistical Summary: Human Dependency Survey Navajo & Hopi Reservations*. Section of Conservation Economics, Navajo Area, Region 8. August 1938; Revised May 1939.

_____. *Flood Plain Management for the Kayenta Community, Navajo County, Arizona*. Phoenix, AZ, 1988.

_____. *Inventory of Navajo Irrigation Projects*. Flagstaff, AZ, 1986.

_____. *Navajo District Annual Report, 1936-1937*. Soil Conservation Service, Region 8, 1937.

_____. *Navajo District Annual Report, 1937-1938.* Soil Conservation Service, Region 8, 1938.

_____. *Tewa Basin Study, 1935.* Volume I: *The Indian Pueblos.* Volume II: *Spanish-American Villages.* Soil Conservation Service, Southwest Region, Albuquerque, NM, April, 1939.

U. S. Department of the Interior. Office of Indian Affairs. Technical Cooperation—Bureau of Indian Affairs, Soil Conservation Service, USDA. *Human Dependency Survey, Sacramento, California, Indian Jurisdiction, 1936.* Denver, May 1939.

U. S., Navajo Soil and Water Conservation Experiment Stations, Mexican Springs, NM *Soil and water conservation investigations; progress report 1934-1939.* Washington, DC, 1941.

Weber, Anslem. *The Navajo Indians: a statement of facts.* St. Michaels (?), Arizona, 1914.

White, Richard. *The Roots of Dependency: Subsistence, Environment and Social Change Among the Choctaws, Pawnees and Navajo.* Lincoln, NE: University of Nebraska Press, 1983.

A

Allotment Act, 1
Asaayi Lake, 46

B

Bennett, Hugh Hammond, 9, 13, 14, 15, 17
Bergland, Bob, Secretary of Agriculure, 38
Blackfeet Indians, 20

C

Calkins, Hugh, 13, 17, 26
Chinle SWCD, 40
Civilian Works Administration, 12
Climatic change, 3
Collier, John, 7, 13, 23
Conservation districts, 30, 31, 32, 38, 39, 40
Council for Tribal Employment Rights, 36

D

Department of the Interior, 2, 29

E

Ecosystem Based Assistance, 46
Erosion, iii, 2, 3, 4, 7, 8, 11, 14, 19, 20, 21, 22, 25, 26, 27, 41, 43, 49

F

FACT Act, 36
Fort Defiance SWCD, 40

G

Grazing districts, 23

H

Harmony Workshops, 37
Harper, Allan, 9, 20, 25, 26
Human Dependency Studies, 8, 12, 16, 17, 18, 20, 21, 23, 25, 26, 27, 35
Human Dependency Survey, 23, 26

I

Indian Reorganization Act, 14

K

Kimball, Solon T., 23, 29, 38

L

Little Colorado River SWCD, 40
Lower Colorado River Indian Tribes, 30

M

Mekeel, H. Scudder, 9, 10, 13

N

Navajo, iii, iv, 1, 3, 7, 12, 13, 16, 17, 19, 23, 24, 29, 30, 32, 34, 38, 39, 40, 41, 43, 44, 46, 49
Navajo Land Use Community, 23
Navajo Mountain SWCD, 40
Navajo Nation Rural Development 2000 Plan, 43
Navajo SWCDs, 41

O

Overgrazing, 2, 3, 22, 23, 41, 49

P

Papago, 7, 20
Parker Valley Soil and Water Conservation District, iv, 30, 32
Parrill, Frank, 38, 39, 40
Pearmain, John, 14, 20
Progressive Era, 1
Project for Technical Assistance to the Office of Indian Affairs, 9
Provinse, John, 13, 23, 24, 29
Pueblo Indians, 7

R

Rancherias, 20, 22, 38
Resettlement Administration, 22
Round Valley Reservation, 21

S

Sacramento, California, 20, 21
Santa Cruz, 19
Seasonal labor, 22
Shevky, Eshref, 13, 17, 26, 27
Shiprock SWCD, 40
Social studies, 11
Socio-economic studies, 12, 25
Socio-Economic Survey, 8, 12, 14, 25. *See* Human Dependency Survey
Sociological Survey of the Navajo Reservation, 16
Soil Erosion Service, 7, 8
Southwest, 1, 2, 3, 8, 16, 35
Spicer, Edward, 23
Stock reduction program, 2
Stock-raising, 2
Sustainable Native Agriculture Center, 46

T

Technical Coopertion-Bureau of Indian Affairs, 1, 7, 8, 9, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 27, 30, 44
Tenant farming, 22
Tewa Basin Study, 17, 18

U

Underhill, Ruth, 26

W

White, Max, 3, 8, 11, 21
Woehlke, Walter, 13, 14, 15, 25