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# Educational Methods Used in Washington Irrigation Development

*By Arthur J. Cagle*

In the discussion of this topic, I would like to restrict my comments to the most recent and largest of our irrigation projects, the Columbia Basin Irrigation Project.

## I. Major Public Policy Problems of the Columbia Basin Project

In the Columbia Basin Project, as with most irrigation developments, there have been many public policy problems. Final decisions have been made on some problems, some we have not tried to answer, and others we are working on now. Following are some of the major public policy problems of the Columbia Basin Project that deserve serious consideration:

1. Can we justify development of irrigation projects during a time of farm product surpluses?
2. Should the government subsidize irrigation development?
3. Should farm size be regulated, and if so, how should the proper size be determined?
4. Should all farmers pay the same per-acre water charge?
5. Should owners of large acreages be required to sell at a set price?
6. How can roads be developed? Who should pay for them?
7. Who is responsible for teaching new settlers how to farm?
8. Is a special credit agency needed for the newly developed irrigation areas?
9. How should the education of children be financed in view of the low assessed valuation per child?

## II. Brief Description of Columbia Basin Project

The project is one of the largest developments of its kind ever undertaken. It includes an area 80 miles long and 60 miles wide, or about 2,500,000 acres. Land classification studies show 1,029,000 acres suitable for irrigation. Approximately 600,000 acres are to be under irrigation on 8,000 new farms by 1960. This will about double the irrigated acres in the state.

At present, about 400,000 acres of the 1,029,000 acres has been withdrawn from project development. A large area near the Atomic Energy Commission has been withdrawn for security reasons and

about 300,000 acres of wheat land has been withdrawn at the option of owners. These are important public policy problems.

Farm units generally are established on the basis of land quality and contour rather than on the basis of existing property lines. Farm unit sizes range up to 160 acres and average about 75 irrigable acres. In general, the farm unit size will be from 45 to 80 acres in Class 1 areas, 70 to 100 acres in Class 2 areas, and from 80 to 140 acres in Class 3 areas.

The project is being developed at the rate of 60,000 to 70,000 additional acres under irrigation each year.

### III. Cooperating Agencies

Following are some of the agencies with which the State College of Washington has worked in assisting with the development of the Columbia Basin Project:

1. Bureau of Reclamation.
2. Agricultural Extension Service.
3. Farm and Home Administration.
4. Farm Credit Administration.
5. Soil Conservation Service.
6. Agricultural Conservation Program.
7. Committee on Economic Water Resource Development.
8. Columbia Basin Subcommittee of the Chamber of Commerce.
9. Columbia Interstate Compact Commission.

### IV. Predevelopment Planning

1. Columbia Basin Joint Investigations were conducted, and the findings (28 reports) were published.
2. Size of each farm unit was determined.
3. Each farm was laid out—ownership lines were determined regardless of past ownership lines.
4. A ceiling was placed on the price for which land could be sold—based upon land class and probable type of farming.
5. The per-acre construction charge for each farm was set before the project was started.
6. The per-acre water repayment charges were set according to type of soil.
7. All farms were mapped for soils and topography.
8. Preplanning was done for roads, schools, electrification, towns, and patterns of settlement.

9. Opportunities and needs for rural recreational development and location of sites were determined.
10. Farmers were organized into groups to develop cooperative domestic water supplies.
11. Probable type of farming maps were prepared.
12. Water requirements were mapped.
13. Probable standards and levels of living were carefully studied.
14. Reports were prepared on probable kinds and locations of agricultural processing industries.

#### V. Teaching Methods, Aids, and Materials

1. Thirteen county agents have been employed by the Extension Service and the Bureau of Reclamation to do work solely in settlers' assistance.
2. Three county agents will teach proper handling of irrigation water.
3. Another county agent is in charge of domestic water development. He helps groups of farmers organize to get domestic water from central wells.
4. One county agent serves as leader for farm and home planning in the Basin. The regular county extension staffs cooperate on this project.
5. Development farms were set up in five areas. These farms, which were in full operation before water was delivered in the main canals, were irrigated from wells later used for domestic water supply. They have served as a very good teaching method for almost all phases of settlers' assistance.
6. A farm-in-a-day demonstration was a cooperative project of the Bureau of Reclamation, Extension, industry, labor, etc., to build a farm in one day from sage brush to planted, irrigated fields. The purpose was to demonstrate many things such as good building arrangement, properly planned buildings, field arrangement, land clearing, leveling, fertilization, etc.
7. Special short courses were held on topics such as leases, building arrangement, leveling, care of livestock, etc.
8. A Sears project on visual aids furnishes money for projectors, irrigation models, slides, and motion pictures.

9. Special emphasis is being given to the farm and home planning approach. The irrigation development areas offer a real opportunity to do effective work through this approach.
10. Neighborhood twilight meetings have been conducted by the county agents. This has been an effective means of reaching farmers during the busy season.
11. A marketing association for sheep and wool growers has been organized.
12. The state of Washington now has a committee appointed by the governor to develop a water use policy. The main policy problem is use of water for irrigation, power, and consumption versus use for navigation, industry, and fishing.