

WATER USE RESULTING FROM MODIFICATION OF  
 NAVAJO INDIAN IRRIGATION PROJECT PLAN

An analysis of water use resulting from the change of location of lands in the development of the project plan for Navajo Indian Irrigation Project was made. The original plan contained approximately 34,000 acres of land west of the Chaco Wash located in scattered fingers and over a wide surface area. These lands were replaced by lands to the east of the Chaco and contiguous to the lands located in this area in the original plan. In reviewing where the return flows would drain, the following analysis was made:

<u>Location</u>	<u>Original Planned Acreage</u>	<u>Present Planned Acreage</u>
Chaco		
from West Side	29,000	---
from East Side	25,000	47,000
Gallegos	31,000	40,000
Ojo Amarillo	20,000	23,000
Shiprock	<u>5,000</u>	<u>---</u>
Total	110,000	110,000

In the present planning of the project, several factors affecting the return flow are as follows:

1. Interceptor drains will be utilized to carry the return flow directly to the major drainage courses in lieu of utilizing the numerous small drainage courses.
2. The use of pipe for the distribution systems is being considered in lieu of numerous open laterals.
3. The use of sprinklers is being considered for many acres of the project.

Although the lands now included in the project are more desirable for irrigation, our studies do not indicate any change in the consumptive requirement of these lands over those contained in the original plan.

Therefore, based on the above analysis, it is apparent that by consolidating the project irrigable areas, the water courses over which the return flow is to travel will be shortened; and, due to the utilization of pipelines and sprinkler lines, losses will be reduced, thereby resulting in the depletion by the project being equal to or less than originally computed.

Data Source: Reappraisal Report - NIIP - Rev. May 1965  
Re-evaluation Report - NIIP - dated July 1966  
Rev. August 1966