

Irrigation Land Leveling

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service -practice code 464



DEFINITION

Irrigation land leveling is reshaping the surface of irrigated land to planned grades.

PRACTICE INFORMATION

This practice applies to leveling irrigated land according to a detailed engineering survey, design, and layout. The purpose of land leveling is to permit uniform and efficient application of surface irrigation water without significant erosion, loss of water quality, or damage to soil and crops from waterlogging.

Irrigation land leveling applies to surface irrigated fields where precision is necessary. For other types of irrigated land, such as sprinkler or trickle, land reshaping is done using Land Shaping and Grading or Land Smoothing.

This practice applies to land that is suitable for irrigation and the proposed method of irrigation. In addition, water supplies and irrigation delivery facilities should be sufficient to make irrigation practical for the crops to be grown and the planned water application method.

This practice requires cutting and filling earth material to achieve the designed grades. The earth moving usually damages the topsoil somewhat, but the damage is generally temporary and may be offset by increased crop yields and subsequent increases in organic material returned to the soil. In all cases, following construction, the root zone of the soil must be sufficiently deep to permit satisfactory crop production.

Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.