

Categorical Permission Alteration Description – 6. Ditches and Canals

The categorical permission covers the construction, modification, and filling of ditches and canals that meet certain terms and conditions. All ditches must be located outside the projected levee embankment. Ditches and/or canals may be a maximum length of 1000 linear feet. The requester should prepare a geotechnical analysis including seepage (through and underseepage) analysis and stability analysis to determine an appropriate location and depth proposed for the ditch. Levees must meet requirements of EM 1110-2-1913, *Design and Construction of Levees* following construction of ditches or canals.

The requester must take every precaution to avoid puncturing the impervious layer during construction. If this is not possible, the ditch must be lined with concrete. The concrete should be placed on a drainage layer to prevent it from cracking due to uplift. Weep holes should be added to the concrete lining to relieve any pressure buildup. Other accommodations may be necessary to prevent damage to the levee from underseepage.

Drainage ditches must be maintained to ensure that the ditch is not obscured by heavy vegetation growth or sedimentation. Ditches must be cleared at regular intervals to restore the original channel design, grade and cross section. Concrete-lined canals should be routinely inspected for worn joint seals and damage to the concrete or weep holes to ensure they are functioning as designed.

If a ditch is to be filled, the area must be restored by filling the depression in 4- to 6-inch lifts with compacted material similar to the adjacent soil. The requester is responsible for repairing any damage to the levee caused by removal of the ditch.

Categorical Permission Alteration Checklist – 6. Ditches and Canals

Please note, the following checklist is intended for planning purposes only and reflects information that USACE reviewers will look for when considering a Section 408 request for ditches and canals under the Categorical Permission. To be reviewed under the Categorical Permission, the proposed project must adhere to all requirements of the Categorical Permission, including the full alteration description (see previous page). The plans and narrative project description should reflect this information.

Installation Modification Filling

Maximum length of ditch/canal is 1000 linear feet:

Ditch is located outside of projected levee embankment:

Levee will meet the requirements of EM 1110-2-1913, *Design and Construction of Levees* following construction of the ditch/canal:

Ditch will either avoid puncturing the impervious layer or be lined with concrete: Yes NA

If a ditch is to be filled, the area will be restored by filling the depression in 4- to 6-inch lifts with compacted material similar to the adjacent soil: Yes NA

Any work \leq 300 feet from the levee embankment? Yes No

Hydraulic blockage calculation \geq 1%? Yes No NA

Hydraulic model used for hydraulic analysis? Yes No NA