

Appendix B

Floodplain Management Eight-Step Documentation

EXECUTIVE ORDER 11988
FLOODPLAIN MANAGEMENT – CHECKLIST (44 CFR Part 9)

TITLE: Kalamazoo River Hazard Mitigation Project

PROPOSED ACTION: Stabilize the eroding eastern bank of the Kalamazoo River adjacent to and below the North American headquarters of Perrigo, at 515 Eastern Avenue, Allegan, Michigan

APPLICABILITY: Actions which have the potential to affect floodplains or their occupants, or which are subject to potential harm by location in floodplains.

YES NO

The proposed action could potentially adversely affect the floodplain.

Remarks: Project involves both cut and fill within the 100-yr floodplain.

YES NO

The proposed action could potentially be adversely affected by the floodplain.

Remarks:

IF ANSWER IS NO, REVIEW IS COMPLETED, OTHERWISE CONTINUE WITH REVIEW.

Mark the review steps required per applicability: 1 2 3 4 5 6 7 8

CRITICAL ACTION:

YES

Review against 500 Year floodplain

NO

Review against 100 Year floodplain

STEP NO. 1 Determine whether the proposed action is located in the 100-year floodplain (500-year floodplain for critical actions);

Flood Hazard data available (check the box that applies)

- YES** **NO** The project is located in a Floodplain (Zone AE) as mapped by FIRM Panel 260003 0001B, effective date 5/4/1989.
- YES** **NO** The project is located in a 500 Year floodplain as mapped by FIRM Panel No. B, Dated [May 4, 1989](#)
- YES** **NO** The project is located in a floodplain as mapped by a FEMA draft/preliminary study. Name: [Flood Insurance Study: City of Allegan, Michigan, Community # 260003](#) Dated [May 4, 1989](#)
- YES** **NO** The project is located in a floodplain as mapped by the local community. Name _____ Dated _____.
- YES** **NO** The project is located in a floodplain as mapped by another Agency (State, Corps, USGS, NRCS, and etc.) Agency, Name _____ Dated _____.

Flood Hazard data not available

- YES** **NO** The proposed action is subject to flooding based on evaluation from soil surveys, aerial photos, site visits and other available data. Evaluation material used in determination:
- YES** **NO** FEMA assumes the proposed action is subject to flooding based upon on previous flooding of the facility/structure.

IF ANY OF THE ANSWERS ARE YES, CONTINUE WITH THE FOLLOWING STEPS, OTHERWISE REVIEW IS COMPLETE.

STEP NO. 2 Notify the public at the earliest possible time of the intent to carry out an action in a floodplain, and involve the affected and interested public in the decision-making process.

- Notice was provided as part of a disaster cumulative notice.
- Project Specific Notice was provided by: FEMA
Type of Public Notice:
 - Newspaper, ([Allegan County News](#))
 - Post Site, (location: _____)
 - Broadcast, (station: _____)
 - Direct Mailing, (area: _____)
 - Public Meeting, (dates: _____)
 - Other:

Date of Public Notice: [The Allegan County News: September 15, 2016](#)

STEP NO. 3 Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the floodplain, FEMA must locate the action at the alternative site.

Alternative Options

- YES NO Is there a practicable alternative site location outside of the 100-Year floodplain? Project is a slope stabilization and there is no practicable alternative to location in a floodplain.
Site location:
- YES NO For Critical Actions, is there a practicable alternative site location outside of the 500-Year floodplain?
Site location
- YES NO Is there a practicable alternative action outside of the 100-Year floodplain that will not affect the floodplain?
Alternative action:
- YES NO Is the NO Action alternative the most practicable alternative?

IF ANY ANSWER IS YES, THEN FEMA SHALL TAKE THAT ACTION AND THE REVIEW IS CONCLUDED.

STEP NO. 4 Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains and the potential direct and indirect support of floodplain development that could result from the proposed action. 44CFR Part 9.10

- YES NO Is the Proposed Action based on incomplete information?
- YES NO Is the proposed action in compliance with the NFIP? See MDEQ permit in Appendix C
- YES NO Does the proposed action increase the risk of flood loss? See analysis in EA narrative and H&H analysis in Appendix G
- YES NO Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures?
- YES NO Does the proposed action minimize the impact of floods on human health, safety and welfare?
- YES NO Will the proposed action induce future growth and development, which will potentially adversely affect the floodplain?
- YES NO Does the proposed action involve dredging and/or filling of a floodplain? See project scope in EA analysis
- YES NO Will the proposed action result in the discharge of pollutants into the floodplain?
- YES NO Does the proposed action avoid long and short-term adverse impacts associated with the occupancy and modification of floodplains?
- YES NO Will the proposed action result in any indirect impacts that will affect the natural values and functions of floodplains?

NOTE: If wetlands are near or potentially affected, refer review to the Environmental Section.

YES NO

Will the proposed action forego an opportunity to restore the natural and beneficial values served by floodplains?

YES NO

Does the proposed action restore and/or preserve the natural and beneficial values served by floodplains?

YES NO

Will the proposed action result in an increase to the useful life of a structure or facility?

STEP NO. 5

Minimize the potential adverse impacts and support to or within floodplains to be identified under Step 4, restore and preserve the natural and beneficial values served by floodplains.

YES NO

Were flood hazard reduction techniques (see technical bulletins) applied to the proposed action to minimize the flood impacts if site location is in the 100-Year floodplain?

If No, Identify Flood Hazard Reduction Techniques required as a condition of the grant:

YES NO

Were avoidance and minimization measures applied to the proposed action to minimize the short and long term impacts on the 100-Year floodplain?

If no, identify measures required as a condition of the grant:

YES NO

Were measures implemented to restore and preserve the natural and beneficial values of the floodplain.

If no, identify measures required as a condition of the grant:

If any answer is no, explain why: See conditions provided in MDEQ permit in Appendix C

STEP NO. 6

Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain unless it is the only practicable location.

YES NO

The action is still practicable at a floodplain site in light of the exposure to flood risk and ensuing disruption of natural values;

YES NO

The floodplain site is the only practicable alternative.

YES NO

There is no potential for limiting the action to increase the practicability of previously rejected non floodplain sites and alternative actions.

YES NO

Minimization of harm to or within the floodplain can be achieved using all practicable means.

YES NO

The action in a floodplain clearly outweighs the requirement of E.O. 11988.

STEP NO. 7

Prepare and provide the public with a finding and public explanation of any final decision that the floodplain is the only practicable alternative.

Final Notice was provided as part of the floodplain notice. See EO 11988 checklist.

Notice was provided as part of a disaster cumulative notice.

Project Specific Notice was provided by: FEMA

Type of Public Notice:

Newspaper, (name: [Allegan County News](#))

Post Site, (location:)

Broadcast, (station:)

Direct Mailing, (area:)

Public Meeting, (dates:)

Other:

Date of Public Notice: [September 15, 2016](#)

After providing the final notice, FEMA shall, without good cause shown, wait at least 15 days before carrying out the proposed action.

STEP NO. 8

Review the implementation and post - implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

YES NO

Was Grant conditioned on review of implementation and post-implementation phases to insure compliance of EO 11988?