Part 520 – Soil and Water Resource Development

Subpart C – Dams

§IA520.23 Classification

C.(1) The reclassification must be recorded in the NRCS Dam Inventory (see §520.21 G.) by the person responsible for reclassification. The District Conservationist is to notify the owner or sponsor and the Iowa Department of Natural Resources (IDNR) of the NRCS evaluated classification change.

§IA520.24 Special Considerations

C. The landowner or sponsor is responsible for obtaining all necessary permits. The application for the permits must include the complete engineering report, plans and specifications and other data deemed necessary by the IDNR or Corps of Engineers. All permits and approvals must be obtained by the landowner or sponsor before the NRCS will provide any construction or contracting assistance.

D. The District Conservationist will be responsible for submitting complete engineering reports, plans and specifications to the landowner or sponsor on all dams. The NRCS Engineer with adequate job approval authority must develop or review and approve all information submitted with the permit.

E. A separate approval from the IDNR is required to temporarily or permanently raise or lower the level of water impounded by a permit-sized dam unless the raising or lowering has been authorized as part of an approved operating plan. Other alterations to the dam or auxiliary spillway also require prior approval from the IDNR. This approval can be secured by an exchange of correspondence. The following additional information must be included in the letter of request:

(1) The date the raising or lowering will be initiated, the level to which the impoundment will be raised or lowered and, if temporary, the anticipated date when the normal water level will be restored.

(2) Evidence that during raising of the water level the required minimum downstream release rate will be maintained.

(3) Evidence that the discharge rate during lowering will not exceed the capacity of the stream channel below the dam.

§IA520.28 Potential Impact Area – Low Hazard Dams of Inventory Size and All Significant Hazard Dams

B. Requirements

(1)(i) Use breach routing procedures for all significant hazard dams.

(ii) For low hazard dams, the individual exercising design approval authority will determine the need for a breach routing. A conservative estimate may be made in place of breach routing. A conservative estimate of the potential impacted area could be determined as follows: The impact area is the area flooded from the dam location downstream to a major receiving stream. Depth of the flood wave is to be two-thirds of the dam height at the upper end and decreasing uniformly to a depth which covers the flood plain at the lower end.

(2)(i) A map such as a USGS topographic map or aerial photograph will be used to show the impact area determined by breach routing.

(ii) When a conservative estimate is made to determine the impact area, a written narrative and a map as required in (2)(i) will be used to describe the impact area.

(iii) The map and a written narrative along with the documentation of the method or thought process used to develop the potential impact area must be included in the design report.

(iv) An engineer with design approval authority will prepare a map and impact letter indicating precautions to further development (see Exhibit A). The impact letter will be signed by the District Conservationist for structures in Job Class I through IV or by the State Conservationist or his/her designee for Job Class V and above. The map and impact letter will then be forwarded to:

1. The owner or sponsor, and
2. The Iowa Department of Natural Resources, and
3. The Soil and Water Conservation District by the District Conservationist for Job Class I through IV, or by
4. The State Conservationist or delegated representative for Job Class V and above.

Exhibit A

September 21, 2011

Mr. Will E. Flood
123 Street Address
River City, Iowa Zip Code

Dear Mr. Flood:

The USDA, Natural Resources Conservation Service (NRCS) has designed a dam for you in the SW1/4 NW1/4 Sec. 16 T71N, R34W on a tributary of the East Nodaway River. Under the Dam Safety Act, we are required to analyze the potential impact area in the event of a dam failure. Due to the overall height from the top of the dam to the downstream toe (34 feet) and storage capacity below the auxiliary spillway (96 acre-feet), your dam falls within the size category in which potential downstream damage should be considered. This does not reflect on the adequacy of the design or construction of the dam.

An evaluation was made of the area below your dam that could be flooded should a sudden failure occur. This evaluation indicated that the flooded area affected would be fences, valley cropland, woodland, pasture, and secondary roads. The estimated width of the flooded area immediately downstream from the dam would be approximately 200 feet. The flood wave would be carried in the ditch bank about 1000 feet downstream. The attached breach inundation map indicates the area subject to damage.

As a result, the dam was assigned a low hazard rating. The design of the dam and auxiliary spillway was based on this classification. If future development should occur immediately downstream of the dam or should another dam be built upstream, the hazard classification could change. You need to be aware of this, so that you might alert future developers to the hazard that could occur. This is your responsibility.

NRCS stands ready to help you or your private engineer evaluate the potential impact area that sudden failure of your dam could have on a downstream development, should any occur.

A copy of this letter and attached map are being sent to the Iowa Department of Natural Resources, which is the state agency responsible for dam safety, and to the Any County Soil and Water Conservation District.

If you have any questions on this matter, please do not hesitate to contact the Any County Soil and Water Conservation District.

Sincerely,

/s/ DC, STC, or STC Designee Signature
NRCS Title