

Part 520 – Soil and Water Resource Development

Subpart C – Dams

KS520.21 Definitions and Classes

E. Dams are classified . . .

- (1) Low Hazard.
 - (i) A building
 - (ii) Agricultural land
 - (iii) A township or country road that is defined as having an average annual daily traffic (AADT) of 500 vehicles or less and would be overtopped by more than 0.5 foot
 - (iv) A road or highway that would be overtopped by 0.5 foot or less
- (2) Significant Hazard.
 - (i) A habitable house
 - (ii) A main highway or moderate-volume road (where AADT is 501 through 1,500 vehicles) and would be overtopped more than 0.5 foot
 - (iii) Minor railroad tracks that are used by a passenger train less than once per day or by a cargo train that carries less than 10 gross tons per mile annually
 - (iv) A public utility, which would cause an interruption of service to 5,000 people or less
 - (v) A recreation facility (including a campground area that is intermittently used for sleeping by a relatively small number of people) that would be inundated
- (3) High Hazard.
 - (i) Loss of life:
 - A house or other building that normally has people in it where the flooding at the adjacent low ground has a depth greater than 3 feet or where the product of depth times velocity is greater than 5
 - A main highway that would be overtopped by more than 0.5 foot and has AADT of more than 1,500 vehicles
 - (ii) Property damage:
 - A building and/or its contents where the value of loss would exceed \$200,000 - As a guide, use flood depths greater than 6 feet or where the product of depth times velocity is greater than 20
 - A public utility, which would cause an interruption of service to at least one city with a population greater than 5,000 or a military installation
 - Railroad tracks that are used by a passenger train more than once per day or by a cargo train that carries more than 10 gross tons per mile annually where the depth of flooding would be greater than one of the following:
 - 1 foot over the railroad bed for those railroads that intersect (cross) the breach flow path
 - 3 feet over the railroad bed for those railroads that run parallel to the breach flow path
- (4) Engineering judgment is a large component of dam hazard classification. The state conservation engineer (SCE) shall be consulted and will provide guidance for determining the classification if additional questions arise.

KS520.21 Definitions and Classes (continued)

I. Source of Data—As new dams are constructed, the required data are to be added to the Natural Resources Conservation Service (NRCS) inventory on the basis of design and construction records.

- (1) Non-project dams: The individual preparing the design shall, to the extent possible, complete [Form KS-ENG-65](#), Dam Inventory Input. The individual making the final construction check will check [Form KS-ENG-65](#), make any needed as-built corrections, and verify that all items are complete. One copy of [Form KS-ENG-65](#) is to be sent through the assistant state conservationist for field operations (ASTC-FO) to the SCE, and one copy is to be retained in the case file.
- (2) Project dams: The design engineer will, to the extent possible, complete [Form KS-ENG-65](#). The government representative will make any needed as-built corrections and verify that all items are complete. One copy of the form is to be sent through the ASTC-FO to the SCE, one copy is to be sent to the sponsor, and one copy is to be sent to the responsible DC for the operation and maintenance (O&M) file.

J. Entry, Storage, and Retrieval of Data

- (1) The NRCS inventory of dams will be maintained and entered at the state office (SO).
- (2) Inventory data will be retrieved as needed by the SO, and copies of the inventory will be furnished to respective area and field offices. Requests for printouts of specific dams should include the Dam ID Number and the county in which it is located. If the Dam ID Number is not known, provide as much of the following data as is known: county, dam name, latitude, longitude, year constructed, drainage area, height, and total storage.

K. Keeping the Inventory Current—Data on new dams or updated or corrected data on previously submitted dams can be sent to the SO at any time. Data on all new dams must be forwarded through the ASTC-FO to the SCE by January 15 and entered no later than March 1 following the calendar year in which construction was completed. [Form KS-ENG-65](#) for Public Law 83-566 (P.L. 566) dams should be completed before the construction and contract data are sent to the SO after completion of a site.

L. Responsibility

- (1) The SCE is to provide overall coordination of the dam safety inventory.
- (2) Each ASTC-FO is to ensure that the inventory policy is carried out by field offices.

KS520.23 Classification

A. Classification of dams . . .

- (1) Hazard classification of a dam shall be done early in the planning stage so that unnecessary delays and duplication of work can be avoided.
- (2) The individual or staff having responsibility for the feasibility study, preliminary investigation, or preparation of a watershed or measure plan will determine hazard classification. This staff will be responsible for gathering data; making the study in accordance with approved procedures; checking all data for accuracy and completeness; assigning the classification; obtaining approval of the person having engineering job approval authority as delegated in [Form KS-CPA-1](#), Kansas Practice Approval Certification; and filing the data in the design folder or structure data book for future use by those engaged in design, construction, and safety inspection. The approval authority for classifying project dams (Public Law 566 [P.L. 566] and Resource Conservation and Development [RC&D], etc.) shall be the state conservation engineer (SCE).
- (3) The individual or staff doing the design will make verification of the classification at the time of design.
- (4) Verification of the classification at the time of construction will be made by the individual responsible for the construction. Proposed classification changes will be reviewed by the originator and will require the same review and approval as the original classification.

B. Documentation of the . . .

- (1) Breach routing procedures will be used to determine the hazard classification of a dam due to present or future development downstream from the dam within the predicted breach impact area for all inventory size dams. On-ground reconnaissance, U.S. Geological Survey (USGS) quadrangle maps, electronic elevation maps, and aerial photographs can be used to determine existing conditions. Engineering judgment may be used for non-inventory size dams. A dam of any size that creates a probability of loss of human life or of significant property damage—significant or high hazard—is required to be an inventory dam. For dams that are smaller than inventory size requirements, the flood plain for 1 mile downstream shall be reviewed for potential hazards. A cross section shall be considered at a potential hazard, and the height of the potential hazard above the low point in the cross section shall be compared to $\frac{1}{2}$ the dam height. If the height of the potential hazard is less than $\frac{1}{2}$ the dam height, a hazard classification analysis will be required.
- (2) Determining the possibility of future downstream development may be difficult; but the conservation district board and any existing board, planners, or commission that zones land use for a city or county may provide information that will be useful in determining the hazard classification. The local unit of government shall be informed of the flood plain inundation and encouraged to zone the area to preclude the construction of anything that would recreate a potential for a hazard.
- (3) The hazard to present or future downstream developments will be determined by routing a breach wave of the magnitude defined in Technical Release 60. The routing may be accomplished by using the U.S. Army Corps of Engineers Hydraulic Engineering Center-River Analysis System (HEC-RAS) or other models currently accepted by the engineering profession.

KS520.23 Classification (continued)

- (4) The minimum depth of water at the time of failure shall be measured from the streambed elevation at the centerline of the dam to the auxiliary spillway elevation. The minimum water surface elevation in the reservoir to begin the breach analysis shall be the greater of the following:
- (i) The water surface elevation determined by routing the required 6-hour duration, 1 percent chance storm through the reservoir or
 - (ii) The elevation of the crest of the auxiliary spillway.

The storm routing shall begin by assuming the water surface is at the elevation of the lowest uncontrolled spillway inlet (not including low-flow augmentation works). The routing of the storm may account for discharge through the principal spillway.

- (5) The breach analysis and inundation map may be prepared using “non-storm” conditions downstream from the dam. Storm conditions may be used if the preparer wishes to complete an incremental risk analysis.
- (6) Documentation of the hazard classification and rationale will be made on [Form KS-ENG-12, Hazard Classification Documentation for Ponds](#), or similar document.

D. After the SCE approves a reclassification, the state conservationist (STC) will provide guidance (through supervisory channels) to the district conservationist (DC) on notifying the sponsor or owner of the current classification. The DC will inform the sponsor or owner in writing of the current classification and ask that they notify the Kansas Department of Agriculture, Division of Water Resources (DWR), of the potentially hazardous situation. If the sponsor or owner refuses to make the notification, the STC will notify DWR.

KS520.25 Clearing Reservoirs

B. The following minimum . . .

(2) Dams That Retain Water in a Reservoir.

(iii) Less clearing may be approved by the person having the engineering job approval authority as delegated on [Form KS-CPA-1](#), Kansas Practice Approval Certification (see Sections [501.4](#) and [KS501.04](#)).

KS520.27 Emergency Action Plans—High Hazard Dams

A. Applicability.

The owner or sponsor is responsible for having the emergency action plan prepared and for its implementation and maintenance.

B. Inundation Maps.

(2) Discharge due to . . .

(iii) The minimum impact area to be determined shall extend to the stream cross section where the routed breach flow rate is less than 10 percent of the peak breach flow rate at the dam or is contained within the streambanks.

(3) The Natural Resources Conservation Service (NRCS) staff responsible for the design will provide (or determine that others will provide) inundation maps to assist in preparing the emergency action plan. Other appropriate technical data and assistance may be provided when requested.

KS520.28 Potential Impact Area—Low Hazard Dams of Inventory Size and All Significant Hazard Dams

B. Requirements

- (1) The potential impact . . .
Use breach routing procedures and create an inundation map for all inventory size dams.
- (2) The potential impact . . .
 - (i) A map such as a U.S. Geological Survey (USGS) topographic map will be used to show the impact area determined by breach routing. A scale of not less than 1:24000 shall be used.
 - (ii) Documentation of the method and thought process used to develop the potential impact area shall be included in the design file.
 - (iii) The engineer with design approval will prepare a narrative and a map indicating precautions for further development.

C. Distribution

- (1) As early as . . .
 - (iv) For dams that are designed and approved by field engineers, the district conservationist is responsible for transmitting information on potential impact areas. See [Exhibit KS4](#) for an example of [Form KS-ENG-34](#), Letter to Landowner on Responsibilities of a Proposed Dam. For all other dams, the state conservationist will transmit the information.
- (2) If requested by . . .
The potential impact area description, assumptions made and procedures used to determine it, and precautions as to future development shall be made an attachment to the operation and maintenance plan.

KS520.29 Exhibits

A. Exhibit KS1—Data Dictionary for the Natural Resources Conservation Service Inventory of Dams (NRCSID)

Use the following as instructions to complete [Form KS-ENG-65](#), Dam Inventory Input. Data for each dam are to be updated as needed to reflect changes and corrections. Do not leave any item blank except as allowed by these instructions. (Numbers shown below correspond to the numbers on [Form KS-ENG-65](#).)

NRCSID DATA DICTIONARY

12-12-12

DATA DICTIONARY NATURAL RESOURCES CONSERVATION SERVICE INVENTORY OF DAMS (NRCSID)

The data base field information is given as follows:

() official field name (field name used in database) (units, where applicable) (field type, field size) -- field description and/or entry options.

The first series of fields (#1 - #44) comprise the National Inventory of Dams (NID) data fields that are standardized by the U.S. Army Corps of Engineers (USACE) and are reported by all National Inventory of Dams participating agencies.

(1) DAM NAME (DAM_NAME) (alphanumeric, 65 var) -- Enter the official name of the dam. Do not abbreviate unless part of the official name. For dams that do not have an official name, use the popular name of dam. Do not insert meaningless information such as "Noname" or "Unknown" which only serve to increase the size of the file.

(2) OTHER DAM NAMES (OTHER_NAMES) (alphanumeric, 65 var) -- If there are names other than the official name (i.e., reservoir name) of the dam in common use, enter the names in this space. Separate names using a semi-colon. Leave blank if none.

(3) DAM FORMER NAMES (FORMER_NAMES) (alphanumeric, 65 var) -- Enter any previous reservoir or dam name(s), if changed. Separate the names using a semi- colon. Leave blank if none.

(4) STATE OR FEDERAL AGENCY ID (FED_ID) (alphanumeric, 15 var) -- Enter the Official State or Agency identification number for the dam. The first 2 characters contain the State code. Characters 3 through 10 are assigned by the NRCS State office and must uniquely identify that dam within the State. This field was initially used in the 1983-1984 version of the SCS main frame inventory as the unique identifier. This need for a unique identifier has been replaced by the NID ID (Field #5) which has been assigned to every dam in the National Inventory of Dams (NID). This field may also be the same as Field #5 or left blank.

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY

12-12-12

(5) NID ID (NID_ID) (alphanumeric, 7) -- Enter the official NID identification number for the dam. This is a required field and must have an entry to be included in the National Inventory of Dams. This field is used as the unique identifier for each dam in the Nation. This identifier is used to link the NID and NRCS databases with other databases for queries about NRCS dams. It is the same as the Corps of Engineers Identification Number assigned in the original 1981 USACE National Inventory of Dams. Once assigned, this NID ID will never be reused. If a dam is removed or decommissioned, the NID ID number for that dam is retired.

The first two characters are the appropriate two letter State abbreviation, based on the location of the dam. The last five characters will be a unique number for that State. Ranges of numbers have been assigned to each Agency participating in the National Inventory of Dams effort so that assigning Agency can be determined.

For the NRCS compiled inventory, this number likely has already been assigned by the State Dam Safety Agency or another Federal Agency, and NRCS should obtain the NID ID from their State Dam Safety Agency. Only in very rare cases, such as non-participating States, will NRCS need to assign a NID ID. In this situation, please contact NRCS NHQ for the range of assigned numbers.

(6) LONGITUDE (LONG_DEG) (number, 12 var) -- Longitude at the dam centerline as a single value in decimal degrees to four significant digits (Degrees + Minutes/60 + Seconds/3600). NOTE: Longitude in the US is always a minus number. This is the X-coordinate for geocoding; NAD83. (example: -87.1252)

(7) LATITUDE (LAT_DEG) (number, 12 var) -- Latitude at the dam centerline as a single value in decimal degrees to four significant digits (Degrees + Minutes/60 + Seconds/3600). This is the Y-coordinate for geocoding; NAD83. (example: 34.2148)

(8) SECTION, TOWNSHIP, RANGE LOCATION (GEODETIC_LOC) (alphanumeric, 30 var) -- This is an optional field. States that track Section, Township and Range are requested to enter any information that is understandable and that clearly designates the individual values. (example: S21 T3N R69W) If the meridian location is needed to locate the dam, include it in the field. (example: S21 T3N R68W of 6PM (Sixth Principal Meridian).

(9) COUNTY (COUNTY) (alphanumeric, 30 var) -- Name of county (or parish) where dam is located.

(10) RIVER OR STREAM (STREAM) (alphanumeric, 30 var) -- Name of river or stream on which dam is built. If the stream is unnamed, identify it as a tributary to a named river (example: TR-Snake). If the dam is located offstream, enter the name of the river or stream and identify as offstream (example: Snake-OS).

(11) NEAREST CITY/TOWN (NEAREST_TOWN) (alphanumeric, 30 var) -- Name of nearest downstream city, town, or village that is most likely to be affected by floods resulting from failure of the dam.

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12	
<p>(12) DISTANCE TO NEAREST CITY/TOWN (DIST_TOWN) (miles) (number, 3 var) -- Distance to nearest downstream city, town, or village, to the nearest mile (and tenth if appropriate).</p>		
<p>(13) OWNER NAME (OWNER_NAME) (alphanumeric, 50 var) -- Name of legal owner of dam.</p>		
<p>(14) OWNER TYPE (OWNER_TYPE) (alphanumeric, 1) -- Use the following codes to indicate the type of owner:</p>		
F for Federal	U for Public Utility	
P for Private owner	S for State	
L for Local Government		
<p>Typically for NRCS, this Field would be L if Field #53 = WS, PT, RC, or FP.</p>		
<p>(15) DAM DESIGNER (DAM_DSGNR) (alphanumeric, 65 var) -- Enter the name of the principal firm(s) or agency accomplishing design of the dam and major appurtenances operating features, and major modifications. List original designer, then modification designers (if applicable). Separate the names using a semi-colon. Typically for NRCS, if the design was prepared by an A&E and NRCS approved the plans, this Field would show the name of the A&E firm, and Field #46 would show NRCS involvement. If the design was prepared by NRCS in-house, this field would show USDA-NRCS.</p>		
<p>(16) NON_FEDERAL DAM ON FEDERAL PROPERTY (NFDFP) (alphanumeric, 1) -- Indication whether the dam is a non-Federal dam on Federal property, such as in National Forests.</p>		
Y for Yes	N for No	
<p>(17) DAM TYPE (DAM_TYPE) (alphanumeric, 6 var) -- Codes to indicate the type of dam. List in order of importance. Codes are concatenated if the dam is a combination of several types. For example, an entry of CNCB would indicate a concrete buttress dam type.</p>		
RE for Earth	VA for Arch	ER for Rockfill
MV for Multi-Arch	ST for Stone	PG for Gravity
CN for Concrete/RCC	RC for Timber Crib	CB for Buttress
MS for Masonry		
<p>(18) CORE (CORE) (alphanumeric, 3) -- Enter code to indicate position, type of watertight member, and certainty. Typically for NRCS, most dams would be HEK.</p>		
<p>Position:</p>		
F for upstream facing	I for core	
H for homogenous dam	X for unlisted/unknown	

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12																		
<p>Type:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">A for bituminous concrete</td> <td style="width: 50%;">M for metal</td> </tr> <tr> <td>C for concrete</td> <td>P for plastic</td> </tr> <tr> <td>E for earth</td> <td>X for unlisted/unknown</td> </tr> </table>		A for bituminous concrete	M for metal	C for concrete	P for plastic	E for earth	X for unlisted/unknown												
A for bituminous concrete	M for metal																		
C for concrete	P for plastic																		
E for earth	X for unlisted/unknown																		
<p>Certainty:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">K for known</td> <td style="width: 50%;">Z for estimated</td> </tr> </table>		K for known	Z for estimated																
K for known	Z for estimated																		
<p>(19) FOUNDATION (FNDN) (alphanumeric, 3) -- Code for the material upon which dam is founded followed by the certainty; do not separate with a comma.</p>																			
<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Material:</td> <td style="width: 35%;">R for rock;</td> <td style="width: 30%;">S for soil;</td> <td style="width: 20%;"></td> </tr> <tr> <td></td> <td>RS for rock and soil;</td> <td>U for unlisted/unknown.</td> <td></td> </tr> <tr> <td>Certainty:</td> <td colspan="3">K for known;</td> </tr> <tr> <td></td> <td colspan="3">Z for estimated.</td> </tr> </table>		Material:	R for rock;	S for soil;			RS for rock and soil;	U for unlisted/unknown.		Certainty:	K for known;				Z for estimated.				
Material:	R for rock;	S for soil;																	
	RS for rock and soil;	U for unlisted/unknown.																	
Certainty:	K for known;																		
	Z for estimated.																		
<p>(20) PURPOSES (PURPOSES) (alphanumeric, 8 var) -- Codes to indicate the purposes for which the reservoir is used: Can use up to four purposes, list in order of importance. Codes are concatenated when multiple codes are used (example: ICF for irrigation, flood control, and fish and wildlife).</p>																			
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">I for Irrigation</td> <td style="width: 33%;">N for Navigation</td> <td style="width: 33%;">S for Water Supply</td> </tr> <tr> <td>R for Recreation</td> <td>H for Hydroelectric</td> <td>F for Fish and Wildlife Pond</td> </tr> <tr> <td>T for Tailings</td> <td>D for Debris Control</td> <td>O for Other</td> </tr> <tr> <td colspan="3">C for Flood Control and Storm Water Management</td> </tr> <tr> <td colspan="3">P for Fire Protection, Stock, or Small Farm Pond</td> </tr> <tr> <td colspan="3">G for Grade Stabilization</td> </tr> </table>		I for Irrigation	N for Navigation	S for Water Supply	R for Recreation	H for Hydroelectric	F for Fish and Wildlife Pond	T for Tailings	D for Debris Control	O for Other	C for Flood Control and Storm Water Management			P for Fire Protection, Stock, or Small Farm Pond			G for Grade Stabilization		
I for Irrigation	N for Navigation	S for Water Supply																	
R for Recreation	H for Hydroelectric	F for Fish and Wildlife Pond																	
T for Tailings	D for Debris Control	O for Other																	
C for Flood Control and Storm Water Management																			
P for Fire Protection, Stock, or Small Farm Pond																			
G for Grade Stabilization																			
<p>(21) YEAR COMPLETED (YR_COMP) (alphanumeric, 5 var) -- Year in which original main dam structure was completed. The NID allows addition of an "E" to indicate an estimated date. Use four digits (example: 2002). Entry date is not to be changed when modifications or rehabilitations are done; use Field #22 below.</p>																			
<p>(22) YEAR MODIFIED (YR_MOD) (alphanumeric, 60 var) -- Year of major modification or rehabilitation of dam or major control structure is completed. Use four digits (example: 2002). Major changes are defined as structural, foundation, or mechanical construction activity which significantly restores the project to original condition; changes the project's operation, capacity or structural characteristics (example: spillway or seismic modification); or increases the longevity, stability, or safety of the dam.</p>																			

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY

12-12-12

(23) DAM LENGTH (DAM_LEN) (feet) (number, 7 var) -- Length of dam defined as length along top of dam. Also includes spillway, power plant, navigation lock, fish pass, etc., where these form part of the length of the dam. If detached from the dam, these structures should not be included.

(24) DAM HEIGHT (DAM_HT) (feet) (number, 6 var) -- Height of the dam to nearest foot, defined as the vertical distance between the lowest point along the crest of the top of the dam and the lowest point at the downstream toe which usually occurs in the natural bed of the stream or water course.

(25) STRUCTURAL HEIGHT (STR_HT) (feet) (number, 6 var) -- Height of the dam to the nearest foot, defined as the vertical distance from the lowest point of the excavated foundation to the top of the dam. Top of dam refers to the parapet wall and not the crest.

(26) HYDRAULIC HEIGHT (HYDR_HT) (feet) (number, 6 var) -- Height of the dam to the nearest foot, defined as the vertical distance between the maximum design water level (freeboard design flood) and the lowest point at the downstream toe. Typically for NRCS, this is the same as Field #24.

(27) MAXIMUM DISCHARGE (MAX_DISC) (cfs) (number, 7 var) -- The discharge in cubic feet per second (cfs) that the spillway will discharge when the pool is at the maximum designed water surface elevation.

(28) MAXIMUM STORAGE (MAX_STOR) (acre-feet) (number, 10 var) – The total storage space in a reservoir below the maximum attainable water surface elevation. Typically for NRCS, this is the sum of #66, #67, #68, and #69.

(29) NORMAL STORAGE (NORM_STOR) (acre-feet) (number, 10 var) – The total storage space in a reservoir below the normal retention level, excluding any flood or surcharge storage. Typically for NRCS, this is the sum of #66 and #69.

(30) SURFACE AREA (SURF_A) (acres) (number, 8 var) -- Surface area of the impoundment at normal pool level to the crest of the lowest ungated outlet.

(31) DRAINAGE AREA (DA) (square miles) (number, 10 var) -- Drainage area to the nearest hundredth, which is defined as the area that drains to the dam.

(32) DOWNSTREAM HAZARD POTENTIAL (CUR_HAZ) (alphanumeric, 1) -- Code to indicate the most current potential hazard classification as defined in the NEM. Use best and latest available information. Qualify how current the data is in Field #64. Do not use any other codes since this Field is a critical filter for inclusion in the NID.

L for low S for significant H for high

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12
<p>(33) EMERGENCY ACTION PLAN (EAP) (alphanumeric, 2) -- Code indicating whether or not the dam has an Emergency Action Plan developed by the dam owner.</p> <p style="text-align: center;">Y for Yes N for No NR for Not Required by submitting agency</p> <p>Typically for NRCS, if Field #32 is L or S, this Field is NR.</p>	
<p>(34) INSPECTION DATE (LAST_INSP_D) (date, 10 var) -- Date of the most recent inspection of the dam prior to submission of data. Typically for NRCS, this means formal inspection led by a qualified engineer (can be NRCS or non-NRCS) as defined in NRCS National Operation & Maintenance Manual (NO&MM). Enter date as mm/dd/yyyy (example: 06/30/1982).</p>	
<p>(35) INSPECTION FREQUENCY (INSP_FREQ) (number, 1) -- Scheduled frequency interval for periodic inspections, in years. Typically for NRCS, this is the frequency of formal inspections required by the State dam regulatory authority.</p>	
<p>(36) STATE REGULATED DAM (STATE_REG) (alphanumeric, 1) -- Code to indicate whether the dam is considered “State Regulated” by the National Dam Safety Program Act. A “State Regulated Dam” is defined in the Act as a dam for which the State executes one or more of the following general responsibilities: (a) Inspection; (b) Enforcement; (c) Permitting.</p> <p style="text-align: center;">Y for Yes N for No</p>	
<p>(37) STATE REGULATORY AGENCY (STATE_REG_AGENCY) (alphanumeric, 30 var) -- Name of the primary state agency with regulatory or approval authority over the dam. Use the same abbreviation or acronym as used in the NID.</p>	
<p>(38) SPILLWAY TYPE (SPWY_TYPE) (alphanumeric, 1) -- Letter code that describes the type of spillway. This is oriented towards very large dams containing gated overflow spillways.</p> <p style="text-align: center;">C for Controlled U for Uncontrolled N for None</p> <p>Typically for NRCS; if Field #20 includes I, leave this field blank; if Field #71 is NO, use N for this field; if Field #71 is not NO, use U for this field.</p>	
<p>(39) SPILLWAY WIDTH (SPWY_W) (feet) (number, 4) -- The width to the nearest foot, of the spillway that is available for discharge when the reservoir is at its maximum designed water surface elevation. Typically for NRCS, this is the bottom width on an open channel spillway.</p>	

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12												
<p>(40) OUTLET GATES (OUT_GATES) (alphanumeric, 15 var) -- Use one or more of the following codes to describe the type of spillway and controlled outlet gates, if any.</p> <p>Use up to five types in decreasing size order, separated by semi-colons, followed by number of gates. Typically for NRCS, if Field #38 is U, this field is U; if Field #38 is N, this field is X.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">X for none;</td> <td style="width: 33%;">U for uncontrolled;</td> <td style="width: 33%;">T for tainter (radial);</td> </tr> <tr> <td>L for vertical lift;</td> <td>R for roller;</td> <td>B for bascule;</td> </tr> <tr> <td>D for drum;</td> <td>N for needle;</td> <td>F for flap;</td> </tr> <tr> <td>S for slide;</td> <td>V for valve; and</td> <td>O for other controlled.</td> </tr> </table>		X for none;	U for uncontrolled;	T for tainter (radial);	L for vertical lift;	R for roller;	B for bascule;	D for drum;	N for needle;	F for flap;	S for slide;	V for valve; and	O for other controlled.
X for none;	U for uncontrolled;	T for tainter (radial);											
L for vertical lift;	R for roller;	B for bascule;											
D for drum;	N for needle;	F for flap;											
S for slide;	V for valve; and	O for other controlled.											
<p>(41) VOLUME OF DAM (VOL_DAM) (cubic yards) (number, 10 var) -Total number of cubic yards of materials used in the dam structure. Include portions of the powerhouse, locks, and spillways only if they are an integral part of the dam and are required for structural stability.</p>													
<p>(42) CONDITION ASSESSMENT (CON_ASSES) (alphanumeric, 2) -- Complete only for High Hazard dams. Enter code that best describes the condition of the dam based on available information. Definitions, as accepted by the National Dam Safety Review Board, are as follows:</p> <p>S Satisfactory: No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.</p> <p>F Fair: No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.</p> <p>P Poor: A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary. Typically for NRCS, this condition is used for dams originally designed as low hazard or significant hazard, but later changed to high hazard).</p> <p>U Unsatisfactory: A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.</p> <p>NR Not Rated: The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated. Typically, this code is used for dams that have not had an assessment report prepared.</p>													

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY

12-12-12

(43) Condition Assessment Detail (Alphanumeric, 60) -- Leave this field blank for NRCS–assisted dams

(44) CONDITION ASSESSMENT DATE (ASSESS_DATE) (date, 10 var) -- Date of the most recent assessment referred to in field #42. Enter as mm/dd/yyyy (example: 06/30/2012).

The following eight fields (#45 - #52) comprise additional data fields that are only provided by participating Federal Agencies submitting data to the NID. Typically NRCS should enter data for only NRCS or other USDA Agencies involved with NRCS-assisted dams. Use the following codes as applicable for each field:

USDA NRCS (Natural Resources Conservation Service, formerly SCS) USDA FS (Forest Service)

USDA RHS (Rural Housing Service, formerly part of FmHA)

USDA RUS (Rural Utilities Service, formerly part of FmHA or REA) USDA FSA (Farm Services Agency, formerly ASCS)

USDA ARS (Agricultural Research Service)

(45) FEDERAL AGENCY INVOLVEMENT IN FUNDING (FED_FUND) (alphanumeric, 20 var) – Federal Agency involved in funding of the dam. Codes are concatenated if several agencies were involved. Typically for NRCS, this should be USDA NRCS if Field #53 = WS, PT, RC, FP, FB.

(46) FEDERAL AGENCY INVOLVEMENT IN DESIGN (FED_DESIGN) (alphanumeric, 20 var) -- Federal Agency involved in the design of the dam. Codes are concatenated if several agencies were involved.

(47) FEDERAL AGENCY INVOLVEMENT IN CONSTRUCTION (FED_CONST) (alphanumeric, 20 var) -- Federal Agency involved in construction of the dam. Codes are concatenated if several agencies were involved.

(48) FEDERAL AGENCY INVOLVEMENT IN REGULATORY (FED_REG) (Alphanumeric, 20 var) -- Federal Agency involved in regulating the dam. Codes are concatenated if several agencies are involved. Typically for NRCS, this field should be blank.

(49) FEDERAL AGENCY INVOLVEMENT IN INSPECTION (alphanumeric, 20 var) (FED_INSP) -- Federal Agency involved in inspecting the dam. Codes are concatenated if several agencies are involved. Typically for NRCS, this field should be blank. USDA NRCS involvement means formal inspection by an NRCS engineer as defined in NRCS National Operation & Maintenance Manual (NO&MM).

(50) FEDERAL AGENCY INVOLVEMENT IN OPERATION (FED_OP) (alphanumeric, 20 var) -- Federal Agency involved in operating the dam. Codes are concatenated if several agencies were involved. Typically for NRCS, this field should be blank.

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12
<p>(51) FEDERAL AGENCY OWNER (FED_OWN) (alphanumeric, 20 var) -- Federal Agency which partly or wholly owns the dam. Codes are concatenated if several agencies were involved. Typically for NRCS, this field should be blank.</p>	
<p>(52) FEDERAL AGENCY INVOLVEMENT - OTHER (FED_OTHER) (alphanumeric, 20 var) -- Federal Agency involved in other aspects of the dam. Codes are concatenated if several agencies were involved. Typically for NRCS, this field should be blank.</p>	
<p>The following twenty-seven fields (#53 - #79) comprise additional data fields that should be provided for NRCS assisted dams.</p>	
<p>(53) PROGRAM AUTHORIZATION (AUTH) (alphanumeric, var 2) -- Code for authorization.</p>	
CO for CO-01& Farm Bill	GP for GPCP
WS for PL-566	RC for RC&D
PT for PILOT	FP for WF-03
<p style="padding-left: 40px;">OT for Other</p>	
<p>Dams authorized under WS, PT, RC, or FP are considered “project” dams.</p>	
<p>(54) WATERSHED NUMBER (WSHED_NO) (number, 4) -- Contains the 4-digit watershed number for PL-566 dams. Typically the range is 2001 to 2800 for dams included in watershed plans developed within the state or 2801 to 2999 for dams included in plans developed by an adjoining state.</p>	
<p>(55) WATERSHED NAME (WSHED_NAME) (alphanumeric, var 40) -- Name of watershed project for PL-566 dams.</p>	
<p>(56) PLANNED SERVICE LIFE (SERV_LIFE) (alphanumeric, 3 var) – Number of years used to amortize the benefits of a project dam and/or determine the volume of sediment storage provided in the sediment pool.</p>	
<p>(57) O&M INSPECTION RESPONSIBILITY (O&M_INSP_RES) (alphanumeric, 5 var) -- Code to indicate the party assigned operation and maintenance inspection responsibility by an O&M Agreement or supplemental legal document for a project dam. Leave blank for non-project dams.</p>	
OWNER for owner in Field #13	NRCS for NRCS
JOINT for owner & NRCS	OTHER for other party
NONE for no existing or non-enforceable O&M Agreement	
<p>(58) O&M INSPECTION CURRENT (O&M_IN_CURR) (alphanumeric, 1) – Code to indicate if an O&M Inspection and written report were completed on a project dam during the current or past calendar year by the responsible party in Field #57. Leave blank for non-project dams.</p>	
Y for Yes	N for No

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY

12-12-12

(59) O&M COMPLETED (O&M_COMP) (alphanumeric, 1) – Code to indicate if O&M needs reported in prior O&M Inspection Report(s) for project dams have been completed. Leave blank for non-project dams.

Y for Yes N for No

(60) POPULATION AT RISK (POP_RISK) (number, 5 var) -- All persons that would be exposed to flood waters if they took no action to evacuate. It is the maximum combination of people reasonably expected in the dam breach inundation zone simultaneously at any time of the day or night, including permanent residents, seasonal transients (campers, recreationists, etc), and daily transients (workers, students, shoppers, commuters, etc). Accuracy of the data should be qualified by Field #61.

(61) POPULATION AT RISK ACCURACY (POP_ACC) (alphanumeric, 1) -- Code indicating if the Population at Risk number in Field #60 is based on a visual estimate or breach inundation map analysis.

E for Estimated visually
A for Analyzed with breach inundation map

(62) YEAR - POPULATION AT RISK (YEAR_POP) (number, 4) -- Year of most recent determination of population at risk shown in Field # 60). Use four digits (example: 2012)

(63) HAZARD CLASSIFICATION AS DESIGNED OR MODIFIED (DSGN_HAZ) (alphanumeric, 1) -- Code to indicate the potential hazard to the downstream area at the time the dam was built or modified. If an existing dam was modified to reflect a change in classification, enter the most recent classification for which the dam was designed and modified. Leave blank for unknown.

L for low S for significant H for high

(64) HAZARD POTENTIAL CLASSIFICATION YEAR (HAZ_CLASS_YEAR) (number, 4) -- Year of most recent verification of Hazard Potential Classification in Field #32 by qualified NRCS personnel. Use four digits for the year (example: 2012).

(65) EAP YEAR (EAP_YEAR) (number, 4) – Year of most recent review and verification of existing or implementation of new Emergency Action Plan in Field #33. Use four digits for the year (example: 2012). If there is no EAP, leave blank.

(66) SEDIMENT STORAGE (SED_STOR) (acre-feet) (number, 10 var) -- The planned sediment storage capacity of the reservoir as designed.

(67) FLOOD STORAGE (FLD_STOR) (acre-feet) (number, 10 var) -- The flood storage capacity of the reservoir. Typically, this is the capacity of the reservoir between the elevation of the permanent pool and the crest of the auxiliary spillway.

(68) SURCHARGE STORAGE (SUR_STOR) (acre-feet) (number, 10 var) -- The surcharge capacity of the reservoir. Typically, this is the capacity of the reservoir between the elevations of the auxiliary spillway crest and the top of dam.

KS520.29 Exhibits (continued)

NRCSID DATA DICTIONARY	12-12-12	
(69) OTHER STORAGE (OTH_STOR) (acre-feet) (number, 10 var) -- The other beneficial capacity of the reservoir.		
(70) PRINCIPAL SPILLWAY TYPE (PS_TYPE) (alphanumeric, 2) -- Code identifying the type of principal spillway as follows:		
CP for Concrete Pipe	CM for Corrugated Metal	PL for Plastic
WS for Welded Steel	CB for Concrete Box	OT for Other
OC for Open Pipe	NO for None	
(71) PRIMARY AUXILIARY SPILLWAY TYPE (AS1_TYPE) (alphanumeric, 2) -- Code identifying the spillway type of the first auxiliary spillway.		
VE for Vegetated	RK for Rock	ST for Structural
EA for Earth	OT for Other	NO for None
HR for Hard Rock	SR for Soft Rock	AR for Armored
(72) SECONDARY AUXILIARY SPILLWAY TYPE (AS2_TYPE) (alphanumeric, 2) -- Code identifying the spillway type of the second auxiliary spillway. Use the codes under Field #71 above.		
(73) TERTIARY AUXILIARY SPILLWAY TYPE (AS3_TYPE) (alphanumeric, 2) -- Code identifying the spillway type of the third auxiliary spillway. Use the codes under Field #71 above.		
(74) CONDUIT HEIGHT (COND_HT) (feet) (number, 4 var) -- Height for rectangular or diameter for round conduit for the largest conduit through the dam to nearest tenth of a foot.		
(75) CONDUIT WIDTH (COND_W) (feet) (number, 4 var) -- Width of the largest conduit through the dam to the nearest tenth of a foot. Leave blank if conduit is round.		
(76) NUMBER OF CONDUITS (NO_COND) (number, 2 var) -- Number of conduits through dam.		
(77) COOL WATER RELEASE (COOL_WATER) (alphanumeric, 1) -- Code indicating if a cold water release exists.		
Y for Yes	N for No	
(78) REHABILITATED (REHAB) (alphanumeric, 1) -- Code indicating if dam was rehabilitated to meet all current NRCS criteria. Leave blank for non-project dams.		
Y for Yes	N for No	
(79) YEAR REHABILITATED (REHAB_YEAR) (number, 4) -- Year rehabilitation in Field #78 was completed. Use four digits for the year (Example: 2012). Typically this will be the same year as field #22.		

KS520.29 Exhibits (continued)

B. Additional Fields for NRCS Dams in Kansas on [Form KS-ENG-65](#)

The following additional fields are required for NRCS dams in Kansas:

80. Uncontrolled Drainage Area (square miles)—For dams in series, enter the drainage area (to the nearest hundredth of a square mile) of the downstream dam that is not controlled by the upstream dam or dams. Leave blank if dams are not in series.
81. Controlled Drainage Area (square miles)—For dams in series, enter the drainage area (to the nearest hundredth of a square mile) that is controlled by the upstream dam or dams. Leave blank if dams are not in series.
82. Number of Stages—Enter the number of ungated stages designed in inlet. Normally this will be "1" for most non-project dams.
83. Cap.—Lowest Ungated Opening (cfs)—Enter the capacity to the nearest cfs of the lowest ungated opening with pool level at the next highest ungated opening. Leave blank if Field Number 82 is 1.
84. Capacity of Conduit (cfs)—Enter the capacity to the nearest cfs of the conduit with pool level at the auxiliary spillway level.
85. Energy Dissipator—Enter one of the following codes that identifies the type of energy dissipater:
N for none PP for plunge pool IB for impact basin O for other
Explain "other" in Field Number 103 or 104, Remarks.
86. Inlet Type—Enter one of the following codes that identifies the type of inlet:
DI for drop inlet C for canopy H for hooded O for other
Explain "other" in Field Number 103 or 104, Remarks.
87. Height of Riser (feet)—Enter the height of the riser to the nearest tenth of a foot. For canopy inlet, leave blank.
88. Percent Chance Use—The percent chance of use of the auxiliary spillway is the value to the nearest percent when you divide 100 by the storm frequency of the detention storage design.
89. Diff. Crest AS to Top of Dam (feet)—Enter the elevation difference (to the nearest tenth of a foot) between the design crest of the auxiliary spillway and the design top of the dam.
90. Max. AS Discharge (cfs)—Enter the maximum capacity to the nearest cfs of all auxiliary spillways with the water surface at the top of dam. (Do not include pipe discharge.)
91. Bulk Length AS as Designed (feet)—Enter the total profile length of the auxiliary spillway (to the nearest foot) from a natural ground or approach channel point upstream to a natural ground or exit channel point downstream measured by a line 2 feet below and horizontal with the control section or station. This is typically blank for non-project dams.
92. Plasticity Index—Enter the plasticity Index of the surface material of the excavated auxiliary spillway or of the material used to backfill or topsoil the subgrade surface. Leave blank if unknown.
93. Unified Soil Class—Enter the unified soil classification of the soil at the finished surface of the auxiliary spillway (subsurface material when spillway is to be topsoiled). Leave blank if unknown.

KS520.29 Exhibits (continued)

94. Hydrologic Number—Enter the 11- or 14-digit number where the dam is located. These numbers will become 10- or 12-digit numbers as soon as the SO certifies the change.
95. Construction of Dam by—Enter the person or company who built the dam.
96. Design Approval Date—Enter the date the construction plans were approved. Enter as mm/dd/yyyy (06/30/1999).
97. Local Landrights Cost—Enter the total dollars paid to secure the landrights for the dam. Leave blank if this is 0.
98. Federal Landrights Cost—Enter the total federal dollars spent to secure landrights for the dam. Leave blank if this is 0.
99. Construction Cost—Enter the total construction dollars paid to the person or company to build the dam.
100. Federal Construction Cost—Enter the total federal dollars paid to the person or company to build the dam. Leave blank for non-project dams.
101. Mitigation Cost—Construction
102. Mitigation Cost—Off-Site
103. Remarks—Enter remarks as needed from any field.
104. Remarks—Enter additional remarks as needed from any field.
105. Rehab. Required Year—Enter the year the rehabilitation analysis is requested by the watershed district.
106. O&M Inspection Date—Enter the date of the most recent O&M inspection that has been completed on the dam.

Title 210 – National Engineering Manual

KS520.29 Exhibits (continued)

C. Exhibit KS2—Sample of [Form KS-ENG-65](#) for a non-project dam

USDA
NRCS

KS-ENG-65
Rev. 8/14

Dam Inventory Input

(1) Dam Name	Walleye Haven	(38) Spillway Type	U	(73) Tertiary AS Type	NO
(2) Other Dam Names		(39) Spillway Width	30	(74) Conduit Height	1.1
(3) Dam Former Names		(40) Outlet Gates	U	(75) Conduit Width	
(4) State or Federal Agency ID		(41) Volume of Dam	20178	(76) Number of Conduits	1
(5) Nat. Inventory of Dams (NID) ID		(42) Condition Assessment	0	(77) Cool Water Release	N
(6) Longitude	38.323	(43) Condition Assessment Detail		(78) Rehabilitated	
(7) Latitude	95.691	(44) Condition Assessment Date		(79) Year Rehabilitated	
(8) Sec. Twp. Rng Location	SW4 21 3 9E	Fields for Federal Agencies Submitting Data to the NID		Additional Fields for NRCS Dams in Kansas	
(9) County	Osage	(45) Involvement in Funding		(80) Uncontrolled Drainage Area	
(10) River or Stream	TR-Branch Creek	(46) Involvement in Design	USDA NRCS	(81) Controlled Drainage Area	
(11) Nearest City/Town	Sometown	(47) Involvement in Construction		(82) Number of Stages	1
(12) Distance Near City/Town	12	(48) Involvement in Regulatory		(83) Cap.–Lowest Ungated Opening	
(13) Owner Name	Harry Thornton	(49) Involvement in Inspection		(84) Capacity of Conduit	16
(14) Owner Type	P	(50) Involvement in Operation		(85) Energy Dissipator	N
(15) Dam Designer	USDA NRCS	(51) Owner		(86) Inlet Type	C
(16) Non-Fed. Dam on Fed. Prop	N	(52) Involvement–Other		(87) Height of Riser	
(17) Dam Type	RE	Fields for NRCS-Assisted Dams		(88) Percent Chance Use	20
(18) Core	HEK	(53) Program Authorization	CO	(89) Diff. Crest AS to Top of Dam	3.1
(19) Foundation	SK	(54) Watershed Number		(90) Max. AS Discharge	400
(20) Purposes	P	(55) Watershed Name		(91) Bulk Length AS as Designed	
(21) Year Completed	1999	(56) Planned Service Life	50	(92) Plasticity Index	
(22) Year Modified		(57) O&M Inspection Responsibility	Owner	(93) Unified Soil Class	CL
(23) Dam Length	572	(58) O&M Inspection Current		(94) Hydrologic Number	10290101030070
(24) Dam Height	27	(59) O&M Completed		(95) Construction of Dam by	Robert Fellers
(25) Structural Height	28	(60) Population at Risk	0	(96) Design Approval Date	9/21/1999
(26) Hydraulic Height	27	(61) Population at Risk Accuracy	E	(97) Local Landrights Cost	
(27) Maximum Discharge	400	(62) Year Population at Risk	1999	(98) Federal Landrights Cost	
(28) Maximum Storage	62	(63) Hazard Poten. Class Des./Mod.	L	(99) Construction Cost	\$15,000
(29) Normal Storage	18	(64) Hazard Poten. Class Year	1999	(100) Federal Construction Cost	
(30) Surface Area	2.7	(65) EAP Year		(101) Mitigation Cost–Construction	
(31) Drainage Area	0.11	(66) Sediment Storage	5	(102) Mitigation Cost–Off-Site	
(32) Downstream Hazard Potential	L	(67) Flood Storage	13	(103) Remarks	
(33) Emergency Action Plan (EAP)	NR	(68) Surcharge Storage	12	(104) Remarks	
(34) Inspection Date	6/21/1999	(69) Other Storage		(105) Rehab. Required Year	
(35) Inspection Frequency		(70) Principal Spillway Type	PL	(106) O&M Inspection Date	
(36) State Regulated Dam	Y	(71) Primary Auxiliary Spill. (AS) Type	VE		
(37) State Regulatory Agency	DWR	(72) Secondary AS Type	NO		

Instructions for Completion: National Engineering Manual, Section KS520.29

Title 210 – National Engineering Manual

KS520.29 Exhibits (continued)

D. Exhibit KS3—Sample of [Form KS-ENG-65](#) for a project dam

USDA
NRCS

KS-ENG-65
Rev. 8/14

Dam Inventory Input

(1) Dam Name	South Fork, Wolf Site 12-7	(38) Spillway Type	U	(73) Tertiary AS Type	NO
(2) Other Dam Names		(39) Spillway Width	40	(74) Conduit Height	1.3
(3) Dam Former Names		(40) Outlet Gates	U	(75) Conduit Width	
(4) State or Federal Agency ID		(41) Volume of Dam	25000	(76) Number of Conduits	1
(5) Nat. Inventory of Dams (NID) ID		(42) Condition Assessment		(77) Cool Water Release	N
(6) Longitude	39.681	(43) Condition Assessment Detail		(78) Rehabilitated	
(7) Latitude	95.365	(44) Condition Assessment Date		(79) Year Rehabilitated	
(8) Sec, Twp, Rng Location	SW4 26 4 18E	Fields for Federal Agencies Submitting Data to the NID		Additional Fields for NRCS Dams in Kansas	
(9) County	Brown	(45) Involvement in Funding	USDA NRCS	(80) Uncontrolled Drainage Area	
(10) River or Stream	TR-Wolf Rv.	(46) Involvement in Design	USDA NRCS	(81) Controlled Drainage Area	
(11) Nearest City/Town	Everest	(47) Involvement in Construction	USDA NRCS	(82) Number of Stages	1
(12) Distance Near City/Town	10.3	(48) Involvement in Regulatory		(83) Cap.–Lowest Ungated Opening	
(13) Owner Name	Wolf River WJD 66	(49) Involvement in Inspection		(84) Capacity of Conduit	25
(14) Owner Type	L	(50) Involvement in Operation		(85) Energy Dissipator	PP
(15) Dam Designer	USDA NRCS	(51) Owner		(86) Inlet Type	DI
(16) Non-Fed. Dam on Fed. Prop	N	(52) Involvement–Other		(87) Height of Riser	20
(17) Dam Type	RE	Fields for NRCS-Assisted Dams		(88) Percent Chance Use	4
(18) Core	HEK	(53) Program Authorization	WS	(89) Diff. Crest AS to Top of Dam	3.1
(19) Foundation	SK	(54) Watershed Number	2065	(90) Max. AS Discharge	745
(20) Purposes	C	(55) Watershed Name	South Fork Wolf River	(91) Bulk Length AS as Designed	320
(21) Year Completed	1999	(56) Planned Service Life	50	(92) Plasticity Index	35
(22) Year Modified		(57) O&M Inspection Responsibility	Owner	(93) Unified Soil Class	CL
(23) Dam Length	600	(58) O&M Inspection Current		(94) Hydrologic Number	10240005060
(24) Dam Height	33	(59) O&M Completed		(95) Construction of Dam by	King Construction Co.
(25) Structural Height	32	(60) Population at Risk	0	(96) Design Approval Date	4/2/1997
(26) Hydraulic Height	33	(61) Population at Risk Accuracy	A	(97) Local Landrights Cost	
(27) Maximum Discharge	100	(62) Year Population at Risk	1999	(98) Federal Landrights Cost	
(28) Maximum Storage	109	(63) Hazard Poten. Class Des./Mod.	L	(99) Construction Cost	\$344,000
(29) Normal Storage	27	(64) Hazard Poten. Class Year	1999	(100) Federal Construction Cost	\$344,000
(30) Surface Area	4.4	(65) EAP Year		(101) Mitigation Cost–Construction	
(31) Drainage Area	0.34	(66) Sediment Storage	27	(102) Mitigation Cost–Off-Site	
(32) Downstream Hazard Potential	L	(67) Flood Storage	45	(103) Remarks	
(33) Emergency Action Plan (EAP)	N	(68) Surcharge Storage	37	(104) Remarks	
(34) Inspection Date	6/30/1982	(69) Other Storage		(105) Rehab. Required Year	
(35) Inspection Frequency	5	(70) Principal Spillway Type	CP	(106) O&M Inspection Date	
(36) State Regulated Dam	Y	(71) Primary Auxiliary Spill. (AS) Type	VE		
(37) State Regulatory Agency	DWR	(72) Secondary AS Type	NO		

Instructions for Completion: National Engineering Manual, Section KS520.29

KS520.29 Exhibits (continued)

- E. Exhibit KS4—Sample of [Form KS-ENG-34](#), Letter to Landowner on Responsibilities of a Proposed Dam



KS-ENG-34
Rev. 3/14

May 14, 2014

Mr. Bill Farmer
830 Oak Street
Anywhere, Kansas 67543

Dear Mr. Farmer:

The Natural Resources Conservation Service (NRCS) is designing a dam for you in the Northwest Quarter, Section 35, Township 11 South, Range 13 East on Somewhere Creek, a tributary of the Mighty River.

Enclosed are three copies of an evaluation report that was made of the impact area that is below this dam. This is the area that could be flooded (inundated) if a sudden failure of the dam occurred. The procedure used to determine the impact area is described in this report, and an inundation area boundary map of this impact area is attached to the report.

The evaluation report indicates that only fences, trails, a minor road(s), and valley crops would be affected in the impact area. For this reason, the dam has been assigned a low hazard classification. The design of this dam will be based on this classification. If future development should occur downstream of the dam in this impact area that would (in the event of a dam failure) create a probable risk to human life, the hazard classification would change. You will be responsible for any costs associated with required improvements to the dam if the hazard classification changes. These costs could be as much as several times more than the original cost of the dam. This information is being provided to you so that you are aware of your responsibilities and liabilities in connection with the proposed dam and any future development that may take place in the impact area.

Please let me know as soon as possible if you want NRCS to complete the final design of your dam. We are waiting for your reply before we continue.

If you proceed with the design of this dam, you will need to provide one copy of the enclosed report to the Division of Water Resources (DWR) when you apply for a permit for the dam. You also need to provide one copy to the county zoning officer for zoning restrictions consideration.

If you have questions, please contact me.

Sincerely,

Jane J. Doe

JANE J. DOE
Supervisory District Conservationist

Enclosures

cc:

John Q. Public, Chairman, Any County Conservation District, 123 E Street, Lost, Kansas 67333

Natural Resources Conservation Service
12 Walnut Street
Anywhere, Kansas 67543

Phone: 785-555-1234
FAX: 785-555-6789
www.ks.nrcs.usda.gov

Helping People Help the Land
An Equal Opportunity Provider and Employer