ILLINOIS ENGINEERING JOB APPROVAL AUTHORITY

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Rev. November 2007

U.S. Department of Agriculture
Natural Resources Conservation Service

Name		**Title**		**Grade**	
Recommended By		**Title**		**Date**	
Concurrence By		**Title**		**Date**	

Job Type and Codes	Controlling Factors		Job Class						Maximum Approval Limits		
			Units	I	II	III	IV	V	I&E	Design	Const.
All Practices **	Hazard Classification as defined in NEM 520.21 Subpart C, Dams		Class	Low	Low	Low	Low	Low	Low	Low	Low
Dams and Structures - All with relatively impervious cutoff, simple foundation needs, and standard or proven designs for conservation practice standards Grade Stabilization Structure (410), Pond (378), Sediment Basin (350), Dike (356), Structure for Water Control (587), Shallow Water Development and Management (646), Wildlife Watering Facility (648), Constructed Wetland (656), Wetland Creation (658), Wetland Restoration (657), and Wetland Enhancement (659) . Dam classification is a "low" hazard class and treated the same as other features for approval purposes.	Requires Illinois DNR Division of Water Resources Permit			No	No	No	No	No	No	No	No
	Detention Type for Ponds and Grade Stabilization										
	Total Fill Height [1/]		ft	10	15	24	30	35			
	Storage x Effective Fill Height [2/]		ac-ft-ft	200	500	1,000	3,000	All			
	Drainage Area (Detention structure)		ac	20	100	320	640	12,800			
	Conduit Spillway - Diameter		in	8*	12*	24*	36	48			
	Grade Stabilization Practices										
	Pipe Structure - Full Flow (Less than 10' Net Drop)	Conduit Diameter	ft	1*	2*	3*	4	5			
	Chute (Riprap or Block)	Net Drop	ft	4*	4*	6*	8	10			
		Weir Capacity	cfs	50	75	150	200	300			
	Weir Structure - (fabricated metal, modular concrete or concrete)	Net Drop	ft	2*	3*	4*	6	8			
		Weir Capacity	cfs	100	200	300	400	500			
	Box Inlet to Existing Culvert	Net Drop	ft			4*	6	6			
		Weir Capacity	cfs			300	400	500			
	Lined Waterway	Design Capacity	cfs		20*	50*	All	All			
	Structure for Water Control	Conduit Diameter	in	8*	12*	24*	36	48			
	Sediment Basin - Class I (Class II see Detention Type.)				All	All	All	All			
	Dike - Hazard Class III	Max Design Water He	ft	2	3	4	6	12			
	Wetland Practices										
	Wetland - Codes (646), (656), (657), (658), and (659)	pool area	ac	1*	5*	25*	all	all			
	Dam or berm height	Total fill height [1/]	ft	5.9	5.9	5.9	6	all			

Notes: [1/] Total fill height is the difference in elevation from the top of the embankment to the natural bed of the watercourse at the downstream dam slope or toe.

[2/] Effective fill height of the dam is the difference in elevation from the auxiliary spillway crest to the lowest point in the cross section taken at the centerline of the dam.

*** Standard Designs and Standard Detailed Drawings** approved by the State Conservation Engineer.

**** For Practices With Multiple Controlling Factors,** the most restrictive approval limit applies.

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Erosion Control and Other Practices

Job Type and Codes		Controlling Factors		Job Class						Maximum Approval Limits		
				Units	I	II	III	IV	V	I&E	Design	Const.
600	Terrace	Area Terraced in System		ac	10	20	40	80	All			
638	Water & Sediment Control Basin	Drainage Area - Single Basin		ac	3	5	10	15	All			
620	Underground Outlet	Orifice Flow	Conduit Diameter	in	8*	12*	18*	30*	All			
		Pressure Flow	Conduit Diameter	in		8*	12*	15*	All			
		Relief Well	Conduit Diameter	in		12*	24*	48*	All			
412	Grassed Waterway	Design Capacity		cfs	50*	100*	200*	300	500			
362	Diversion	Capacity		cfs		50*	100*	200	All			
606	Subsurface Drain	Tile Diameter		in	8	12	18	24	All			
432	Dry Hydrant	Total Lift		ft			15*	All	All			
630	Vertical Drain	Inlet Diameter		in			18*	All	All			

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Livestock Grazing System

Livestock Grazing System in 1000# Animal Units	Job Class and Controlling Factors						Maximum Approval Limits		
	Units	I	II	III	IV	V	I&E	Design	Const.
	No	20	40	100	200	All			
Grazing System Practice Scenario- Inclusive of the following typical engineering practices in the Illinois FOTG used for a grazing system. Conservation practice standards include Pipeline (516), Heavy Use Area (561), Pumping Plant (533), Spring Development (574), Animal Trails and Walkways (575), Stream Crossing (578), Watering Facility (614) and Water Well (642).	Heavy Use Area Protection - Includes Feeding Areas, Access Ramps, and Areas to Protect Watering Facilities. *								
	Heavy Use Area Protection - Winter Feeding Station *								
	Animal Trails and Walkways								
*** Standard Designs and Standard Detailed Drawings** approved by the State Conservation Engineer.	Watering Facility*								
	Pipeline with Pump and Appurtenances - less than 2000 ft *								
	Pipeline with Pump and Appurtenances - greater than 2000 ft*								
	Gravity flow pipeline*								
	Sump *								
	Stream Channel Crossing less than 8 ft bank height*								
	Stream Channel Crossing greater than 8 ft bank height								
	Water Well								
	Spring Development*								

Streambank and Shoreline Practices

Code	Job Type	Controlling Factors	Job Class						Maximum Approval Limits		
			Units	I	II	III	IV	V	I&E	Design	Const.
580	Streambank Protection										
	Vegetative Protection	None					All	All			
	Mechanical Protection	Capacity (Low Bank)	cfs				1,000	5,000			
		Velocity (Low Bank)	fps				8	10			
		Drainage Area	sq mi				50	600			
	Barbs and Bendway Weirs	Mean Geomorphic Bankfull Height	ft				5*	8*			
	Longitudinal Peaked Stone	Mean Geomorphic Bankfull Height	ft				3*	5*			
	Beaches and Shorelines	Height Above Mean High Water	ft					3			

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Confined Livestock Practices											
Code	Job Type	Controlling Factors	Job Class						Maximum Approval Limits		
			Units	I	II	III	IV	V	I&E	Design	Const.
313	Waste Storage Structure	Dry Stack - Wall Height	ft			6*	8*	8			
		Liquid or Slurry - Capacity	cu ft			200000*	500000*	2,000,000			
359	Waste Treatment Lagoon	Aerobic-Surface Area	ac			6	10	25			
		Anaerobic	cu ft			500,000	1,000,000	2,000,000			
		Total Fill Height [1/]	ft			20	25	35			
634	Manure Transfer	System, Number of 1000-lb Animal Units	AU			300	1000	All			
		Pipeline, Offsite - Length	ft			3000	8000	All			
		Concrete, Scrape Alleys and Curbing	cu yd				200	All			
317	Composting Facility	Capacity Dead Animals	lbs/day			120*	250*	All			
635	Waste Treatment Strip	Feedlot Area	ac			0.5	2	All			
558	Roof Runoff Management	Roofed Area	sq ft			1000	5000	All			
632	Solid/Liquid Waste Separation Facility	Number of 1000-lb Animal Units	AU			300*	1000	5000			
367	Waste Facility Cover	Cover Area	sq ft			5000	12000	All			
360	Closure of Waste Impoundment	Surface Area	sq ft			5000	12000	All			
560	Access Road	Distance	ft			500	1000	All			
		Culvert Diameter	ft			1	2	All			

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The form will be reviewed with the employee annually and revised as needed. Even if no significant changes are made, the following table will be used to indicate that the review has been made by the individual with proper approval authority.

Reviewed By	Title	Comment	Date

Definitions of Maximum Approval Limit Columns

Inventory and Evaluation (I&E) - Onsite observation of an exploratory nature and preparation of sound alternative solutions of sufficient intensity for the cooperator to make treatment decisions. May require assistance from higher levels including the TSC for large or complex jobs.

Design - Designing and checking all aspects of the supporting data, drawings, and specifications to insure that the planned practice will meet the purpose for which it is installed. Also includes setting any specific inspection requirements.

Construction - Surveys, layout, staking, inspection of materials and work, and making tests to determine that the job meets the plans and specifications.

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