

ENGINEERING JOB APPROVAL AUTHORITY

Name: _____ Title: _____ Grade: _____

Delegated by: _____ Title: _____ Date: _____
(Responsible Engineer)

Concurred By: _____ Title: _____ Date: _____
(Supervisor)

This form will be reviewed with the employee periodically and revised as needed. If no significant changes are made, the following table will be used to indicate that the review has been made by the appropriate engineering personnel.

<u>Reviewed by:</u>	<u>Title:</u>	<u>Comments:</u>	<u>Date:</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

DEFINITIONS OF MAXIMUM APPROVAL LIMITS COLUMN

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

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

Construction-Surveys, layout, staking, inspections of materials and work, and making tests to determine that the job meets the plans and specifications. Jobs where letters of inspection instructions are issued are not included on this chart.

Standard designs noted under practice name are those engineering drawings and design criteria that have been approved and distributed by or otherwise approved by the State Conservation Engineer. Standard designs are developed to function satisfactorily based on a set of design parameters. The person responsible for design and approval shall verify that the standard design is adaptable to the site and the design limitations are not exceeded.

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr
--	Any Practice	Hazard Potential as defined in 503 NEM	--	Low	Low	Low	Low	Low			
--	Any Practice	Alters the visual resources of beaches and shorelines on oceans	--	None	None	None	None	None			
560	Access Road	Surface Treatment Length Grade Culvert Pipe, I.D. (includes stormwater conduits not associated with access road) Monolithic concrete opening Bridge -span (Std. Design)	Kind Feet % Feet Feet Sq Ft Feet	Unsurfa d 2,000 5 <2 None None	Gravel 5,000 5 2 None 12	Gravel 10,000 8 3 8 16	Asphalt 15,000 10 5 20 20	All All All 6 25 24			
310	Bedding	Area	Acres	40	160	320	All	All			
326	Clearing & Snagging	Length of Reach	Feet	1,000	2,500	5,000	All	All			
397	Commercial Fishponds	See Controlling Factors for Dams and Related Structures on Page 7									
317	Composting Facility (Std. Design)	Design Capacity (1000 lb Animal Units)	Cu Ft A. U.	None None	750 200	1,500 500	1,800 600	All All			
348	Dam, Diversion	Steam Flow (25 yr. freq.) Flow Diverted Height of Drop	cfs cfs Feet	None None None	500 50 3	1,000 100 5	1,500 150 7	2,000 200 8			
402	Dam, Floodwater Retarding	See Controlling Factors for Dams and Related Structures on Page 7									
349	Dam, Multipurpose	See Controlling Factors for Dams and Related Structures on Page 7									
356	Dike	Water Height Hazard	Feet Class	None None	3 III	6 III	10 III	12 III			
362	Diversion	Drainage Area	Acres	100	250	500	1000	All			
432	Dry Hydrant	Capacity	gpm	300	1,000	1,500	All	All			
393	Filter Strip	Surface Area	Acres	None	1	5	10	All			

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
398	Fish Raceway or Tank	Length Capacity	Feet cfs	500 1	1,000 3	2,000 5	3,000 10	All All			
400	Floodwater Diversion	Design Capacity Water Height	cfs Feet	None None	150 3	300 4	400 5	500 6			
404	Floodway	Design Capacity Hazard	cfs class	None None	100 III	300 III	500 III	1,000 III			
410	Grade Stabilization Structure	See Controlling Factors for Dams and Related Structures on Page 7									
412	Grassed Waterway (Gully Shaping)	Design Capacity Drainage Area	cfs Acres	100 10	200 25	500 50	All All	All All			
561	Heavy Use Area Protection	Area Treated Surface Treatment	Acres Kind	1 Unsurfaced	5 Gravel	10 Asphalt	All Concrete	All All			
192	Incinerator	Design Capacity	Lb/day	none	none	250	500	All			
320	Irrigation Canal or Lateral	Design Capacity	cfs	10	100	200	300	500			
388	Irrigation Field Ditch	Design Capacity	cfs	1	5	10	25	All			
552A	Irrigation Pit	See Controlling Factors for Dams and Related Structures on Page 7									
552B	Irrigation Regulating Reservoir (Std. Design)	See Controlling Factors for Dams and Related Structures on Page 7									
436	Irrigation Storage Reservoir	See Controlling Factors for Dams and Related Structures on Page 7									
442	Irrigation System, Sprinkler	System Area	Acres	None	40	160	320	All			
443	Irrigation System, Surface & Subsurface	System Area	Acres	None	40	160	320	All			
447	Irrigation System, Tailwater Recovery	Area Served	Acres	None	160	320	640	All			
441	Irrigation System, Trickle	System Area	Acres	None	40	160	320	All			

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
428	Irrigation Water Conveyance, Ditch & Canal Lining	Design Capacity	cfs	None	25	50	100	200			
430	Irrigation Water Conveyance, Pipeline	Pipeline Capacity ≥ 50 psi < 50 psi	gpm gpm	None None	600 600	1,200 1,200	2,500 2,500	3,500 5,000			
449	Irrigation Water Management	Area Served	Acres	80	160	320	640	All			
460	Land Clearing	Area Cleared	Acres	40	160	320	640	All			
466	Land Smoothing	Area Cleared	Acres	40	160	320	640	All			
468	Lined Waterway or Outlet	Design Capacity	cfs	None	50	100	200	All			
634	Manure Transfer	See Controlling Factors for Components Used									
482	Mole Drain	Length	Feet	None	100	500	1,000	All			
500	Obstruction Removal	Hazard to Public During Removal: None Moderate to High	Feet Feet	5,000 None	10,000 None	15,000 None	All None	All None			
582	Open Channel	Design Capacity (Subcritical Flow Only) Design Velocity	cfs fps	50 2	100 3	300 4	500 5	1,000 10			
516	Pipeline	Length Inside Diameter	Miles Inches	0.5 2	1 3	2 4	5 6	30 8			
378	Pond	See Controlling Factors for Dams and Related Structures on Page 7									
521	Pond Sealing or Lining	Area Lined	Acres	None	1	5	10	All			
462	Precision Land Forming	Design Area	Acres	40	160	320	640	All			
532	Pumped Well Drain	Inside Diameter	Inches	None	4	6	8	All			

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits			
				I	II	III	IV	V	I&E	Design	Constr.	
533	Pumping Plant for Water Control	Axial Flow Pumps										
		Design Capacity	Gpm	None	None	5,000	10,000	50,000				
		Static Head	Feet	None	None	10	15	25				
		Mixed Flow Pump										
		Designed Capacity	Gpm	None	None	5,000	10,000	20,000				
		Head	Feet	None	None	30	40	50				
		Centrifugal Pumps										
		Design Capacity	Gpm	None	None	1,200	2,500	3,500				
566	Recreation Land Grading & Shaping	Area Graded	Acres	4	8	10	160	All				
		Static Head	Feet	None	None	100	200	350				
-	Recreation Facilities	Water Supply or Sewage Treatment	Daily Design Capacity	None	None	100	150	200				
		Onsite	(people)	None	None	200	300	400				
568	Recreation Trail and Walkway	Length	Feet	5,000	10,000	20,000	All	All				
		Surface Treatment	kind	None	Gravel	Asphalt	All	All				
554	Regulating Water in Drainage Systems	Use Controlling Factors for System Components										
558	Roof Runoff Management	Roof Area	Sq Ft	None	2,000	5,000	10,000	All				
557	Row Arrangement	Area of Field	Acres	40	160	320	All	All				
570	Runoff Management System	Use Controlling Factors for System Components										
350	Sediment Basin	See Controlling Factors for Dams and Related Structures on Page 7										
572	Spoil Spreading	Length	Feet	2,500	5,000	10,000	All	All				
574	Spring Development	Spring Flow	gpm	5	10	50	100	All				
580	Streambank and Shoreline Protection	Beaches and Shorelines										
		Revetments, Bulkheads, and Groins										
		Water Height Above Mean High Water (Shoreline)	Feet	None	None	None	None	3				
		Streambanks, Vegetative										
		Drainage Area	Sq Mi	None	1	5	10	All				
		Streambanks, Mechanical										
		Drainage Area	Sq Mi	None	1	5	10	100				
Bankfull Capacity	cfs	None	500	1,000	1,500	5,000						
Bankfull Velocity	fps	None	4	6	8	10						
Channel Depth at Low Bank	Feet	None	4	6	8	10						

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
584	Stream Channel Stabilization	Design Capacity	cfs	50	100	300	400	1,000			
		Design Velocity	fps	2	3	4	5	10			
587	Structure for Water Control	See Controlling Factors for Dams and Related Structures on Page 7									
606	Subsurface Drain	System Length	Feet	2,500	5,000	20,000	30,000	All			
			Inches	6	6	12	24	All			
607	Surface Drainage, Field Ditch	Drainage Area	Acres	40	160	320	640	All			
608	Surface Drainage, Main or Lateral	Design Capacity	cfs	30	75	300	500	1,000			
		Design Velocity	fps	2	3	4	5	10			
600	Terrace	Area of System	Acres	40	160	320	All	All			
614	Trough or Tank (Std. Design)	Capacity	Gal	1,000	2,000	5,000	All	All			
620	Underground Outlet	Pipe Diameter	Inches	6	8	12	All	All			
630	Vertical Drain	Diameter	Inches	None	12	24	48	All			
312	Waste Management System	Design Capacity 1,000 lb. animal, live weight	A. U..	None	250	500	1,000	All			
313	Waste Storage Facility (Std. Design)	Structure									
		Wall Height									
		Above Ground	Feet	None	4	6	8	10			
		Below Ground	Feet	None	3	5	8	8			
		Tank Span									
		Above Ground	Feet	None	None	All	All	All			
		Below Ground	Feet	None	10	12	14	16			
		Storage Capacity	1000 Cu Ft	100	200	500	1,000	2,000			
Impoundment	Design Capacity (1000 Lb Animal Units	Effective Height of Dam	A. U.	None	250	500	1,000	All			
			Feet	None	20	25	30	35			
359	Waste Treatment Lagoon	Aerobic-Surface Area	Acres	None	2	4	10	25			
		Anaerobic Volume	1000 Cu Ft	None	100	1,000	1,500	2,000			
		Effective Height of Dam	Feet	None	20	25	30	35			
633	Waste Utilization	Design Capacity, 1000 Lb animal, live weight	A. U.	None	250	500	1,000	All			
636	Water Harvesting Catchment	Area of System	Acres	None	40	80	160	All			

Name: _____ Title: _____ Grade: GS- _____ Date: _____

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
638	Water and Sediment Control Basin	Drainage Area	Acres	10	40	160	All	All			
640	Waterspreading	Design Flow Rate	cfs	75	150	200	300	All			
642	Well	Diameter Capacity	Inches gpm	6 400	8 600	12 1,000	16 1,500	All All			
351	Well Decommissioning	Diameter	Inches	None	None	6	10	All			

CONTROLLING FACTORS FOR DAMS AND RELATED STRUCTURES

* Dams & Structures - All with relatively impervious cutoff, simple foundation needs, and standard or proven designs not exceeding the limits set forth below.

** Effective height of dam is the difference in elevation in feet between the lowest open channel emergency spillway crest and the lowest point in the original profile along the centerline of the dam. If there is no open channel emergency spillway, the top of the dam becomes the upper limit.

Practice	Controlling Factors	Units	Job Class					Max. Approval Limits		
			I	II	III	IV	V	I&E	Design	Constr.
Dams & Related Structures *	Hazard Class	---	a	a	a	a	a			
397 Commercial Fishponds										
402 Dam, Floodwater Retarding	Drainage Area	Sq Mi	0.25	1.0	2.0	5.0	20			
349 Dam, Multipurpose										
410 Grade Stabilization Structure	** Effective Height	Feet	15	20	25	30	35			
552A Irrigation Pit										
552B Irrigation Regulating Reservoir	Storage X Effective Height	Ac*Ft ²	500	1,000	2,000	3,000	3,000			
436 Irrigation Storage Reservoir										
378 Pond										
350 Sediment Basin	Embankment over active fault	--	None	None	None	None	None			
587 Structure for Water Control										
	Principal Spillway Prefabricated Conduit (Single) - Inside Diameter	Inches	12	24	36	42	48			
	Box Culvert, Area of Opening (Std. Design)	Sq Ft	None	4	8	12	16			
	Reinforced Concrete Structural Spillways - Type B, C, or F - Standard Design - Net Drop	Feet	None	None	4	6	8			
	Straight Drop Spillways (Std. Design)									
	Net Drop	Feet	None	4	6	8	8			
	Weir Depth	Feet	None	2	3.0	3.5	4.0			
	Weir Capacity	cfs	None	150	300	400	500			

Name: _____ Title: _____ Grade: GS-_____ Date: _____

CONTROLLING FACTORS FOR DAMS AND RELATED STRUCTURES

Practice	Controlling Factors	Units	Job Class					Max. Approval Limits			
			I	II	III	IV	V	I&E	Design	Constr.	
<u>Dams & Related Structures</u> *	Box Inlet Drop Spillways,										
397 Commercial Fishponds	Open or to Conduit										
402 Dam, Floodwater Retarding	Net Drop	Feet	None	3	4	5	6				
349 Dam, Multipurpose	Weir Capacity	cfs	None	200	300	400	500				
410 Grade Stabilization Structure	Chutes (Std. Design)										
552A Irrigation Pit	Net Drop	Feet	None	6	8	10	12				
552B Irrigation Regulating Reservoir	Weir Depth	Feet	None	1.5	2.0	2.5	3.0				
436 Irrigation Storage Reservoir	Weir Capacity	cfs	None	150	200	250	300				
378 Pond	Siphon										
350 Sediment Basin	Inside Diameter	Inches	6	8	10	12	All				
587 Structure for Water Control											