

**ENGINEERING JOB APPROVAL AUTHORITY / CERTIFIED PLANNER CERTIFICATION**  
**ENG-UT-14 / UT-MGT-10d**  
**A Blank Engineer**

**Exhibit 1**

**SKILLS MATRIX WORKSHEET**

Name: A Blank Engineer

Title: Engineer

Grade: GS-9

Location: Salt Lake City

Concurred by:

Title:

Date:

**ETHICS STATEMENT**

In exercising Job Approval Authority as shown below, I agree to utilize my assigned technical approval authority only for work that I am competent and qualified to perform. Economic, social, cultural and environmental impacts will be considered before a conservation practice is recommended. I will seek assistance from others when complicating factors warrant.

I also understand that conservation practices can have negative effects on some resources. I agree to consider the impacts of practices on all resources before recommending their use.

**Employee signature:**

**Date:**

Conservation Practice	Lead Discipline	Controlling Factor	Units	Job Class / ASK LEVEL						ASK Level Collection	Approval Level		Approved by	Approved date
				I	II	III	IV	V	VI		Design Decision	Const Application		
Registered *Engineer in Training	Engineering	Engr 01) License	License	no	n/a	n/a	n/a	yes						
*Professional Engineer	Engineering	Engr 01) License	License	no	n/a	n/a	n/a	yes						
PE . Any Practice	Engineering	Engr 01) Design and Certify all Engineering Practice (Class IV)	each	n/a	n/a	n/a	yes	n/a						
Hazard *6 .Any Practice	Engineering	Engr 01) Hazard Potential	class	low	low	low	low	low	sig					
560 Access Road	Engineering	DE 01) Surface Treatment	Type	Soil	Gravel	Asphalt	Concrete	all	all					
	Engineering	DE 02) Length	ft	5,000	5,000	10,000	20,000	all	all					
	Engineering	DE 03) Maximum Grade	Percent	10	10	12	15	all	all					
	Engineering	DE 04) Culvert Pipe, ID	in	18	24	48	50	72	all					
309 Agrichemical Handling Facility *3	Engineering	EE 01) Tank Storage Volume	gal.	250	500	1,000	2,500	5,000	all					
	Engineering	EE 02) Trust Span	ft	24	32	42	52	52	all					

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309	Agrichemical Handling Facility *3	Engineering	EE	03) Supporting Post Height	ft	12	12	14	16	20	all			
371	Air Filtration and Scrubbing	Engineering	EE	01) Mechanical (Flow Volume)	CFM	none	5	10	20	50	all			
591	Amendment for Treatment of Agricultural Waste	Engineering	EE	01) Animal Units	A.U.'s	none	none	none	none	all	all			
366	Anaerobic Digester	Engineering	EE	01) Animal Units	A.U.'s	none	none	none	none	all	all			
316	Animal Mortality Facility	Engineering	EE	01) Animal Units	A.U.'s	none	none	none	none	all	all			
397	Aquaculture Ponds *1	Engineering & EcoSci	HE & AqEco	01) Effective Height	ft	5	10	15	20	25	35			
		Engineering & EcoSci	HE & AqEco	02) Conduit	in	6	8	12	18	24	48			
		Engineering & EcoSci	HE & AqEco	03) Storage * Height	ac-ft * ft	100	500	1,000	2,000	3,000	all			
		Engineering & EcoSci	HE & AqEco	04) Drainage Area	Acre	none	99	320	640	12,800	25,600			
584	Channel Stabilization	Engineering	EG	01) Design Capacity	cfs	none	none	200	500	1000	all			
		Engineering	EG	02) Design Velocity	fps	none	none	5	6	10	all			
326	Clearing and Snagging	Engineering	DE	01) Drainage Area	sq miles	none	none	none	none	all	all			
		Engineering	DE	02) Length of Reach	ft	none	none	none	none	all	all			
360	Closure of Waste Impoundments	Engineering	EE	01) Animal Unit	A.U.'s	none	none	none	none	all	all			
372	Combustion System Improvement	Engineering	EE	01) Horseposser	hp	5	10	50	100	200	all			

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317 Composting Facility *3	Engineering & EcoSci	EE & Agron	01) Litter/Manure Volume	cu ft	5,000	10,000	20,000	50,000	All	All				
	Engineering & EcoSci	EE & Agron	02) Surface	Type	natural	gravel	gravel	asphalt	concrete	All				
	Engineering & EcoSci	EE & Agron	03) Truss Span	ft	24	32	42	52	52	All				
	Engineering & EcoSci	EE & Agron	04) Retaining Wall Height	ft	3	4	5	6	8	All				
	Engineering & EcoSci	EE & Agron	05) Supporting Post Height	ft	12	12	14	16	20	All				
656 Constructed Wetland	Engineering & EcoSci	EE & Bio	01) Area	ac	0.1	0.25	0.50	1.0	All	All				
402 Dam *1	Engineering	DE	01) Effective Height	ft	5	10	15	20	35	50				
	Engineering	DE	02) Conduit	in	6	8	12	18	24	48				
	Engineering	DE	03) Storage * Height	ac ft * ft	100	500	1,000	2,000	3,000	all				
	Engineering	DE	04) Drainage Area	Acre	none	99	320	640	12,800	25,600				
348 Dam, Diversion	Engineering	DE	01) Stream flow (25 yr. freq.)	cfs	100	500	1,000	1,500	2,000	3,000				
	Engineering	DE	02) Flow Diverted	cfs	25	50	100	150	200	500				
	Engineering	DE	03) Height of Drop	ft	3	3	5	7	8	15				
356 Dike	Engineering	HE	01) Water Height	ft	none	2	6	8	<12	15				
362 Diversion	Engineering	DE	01) Flow Diverted	cfs	1	5	10	50	100	all				
	Engineering	DE	02) Drainage Area	ac	20	75	150	250	500	all				
554 Drainage Water Management	Engineering	HE	01) Area	ac	5	10	50	200	all	all				

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432	Dry Hydrant	Engineering	HE	01) Suction Head	ft	5	8	12	15	18	all			
373	Dust Control on Unpaved Roads and Surfaces	Engineering	EE	01) Surface Area	Ft2	1,000	2,000	5,000	10,000	40,000	all			
655	Forest Trails and Landings	Engineering & EcoSci	EE	01) Surface Treatment	Type	none	Gravel	Gravel	Gravel	other	All			
		Engineering & EcoSci	EE	02) Maximum Grade	Percent	10	10	15	20	All	All			
		Engineering & EcoSci	EE	03) Culvert Pipe, ID	in	18	18	24	36	All	All			
410	Grade Stabilization Structure *1	Engineering	DE	01) Effective Height	ft	5	10	15	20	35	50			
		Engineering	DE	02) Conduit	in	6	8	12	18	24	48			
		Engineering	DE	03) Storage * Height	ac ft * ft	100	500	1,000	2,000	3,000	all			
		Engineering	DE	04) Drainage Area	Acre	none	99	320	640	12,800	25,600			
412	Grassed Waterway	Engineering & EcoSci	HE & Agron	01) Drainage Area	ac	20	75	150	250	500	All			
355	Groundwater Testing	Engineering	EG	01) Unit	no	none	none	none	all	all	all			
561	Heavy Use Area Protection	Engineering	DE	01) Area Treated	sq ft	2,000	5,000	10,000	25,000	all	all			
		Engineering	DE	02) Treatment	Type	gravel	gravel	gravel	other	all	all			
423	Hillside Ditch	Engineering	DE	01) Drainage Area	sq miles	none	600ac	2,000ac	10	20	40			
320	Irrigation Canal or Lateral	Engineering	IE	01) Flow Capacity	cfs	10	50	100	250	500	1000			
428	Irrigation Ditch Lining	Engineering	IE	01) Design Capacity	cfs	10	20	50	100	all	all			
		Engineering	IE	02) Design Velocity	fps	2	4	6	10	15	all			

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388	Irrigation Field Ditch	Engineering	IE	01 Flow Capacity	cfs	2	5	10	20	25	all			
464	Irrigation Land Leveling	Engineering	IE	01) Cut Volume	yd3/ac	100	200	300	400	all	all			
430	Irrigation Pipeline *5	Engineering	IE	01) Open Flow Transmission pipes	cfs	10	20	50	100	200	all			
		Engineering	IE	02) Open System vented to atmosphere	gpm	1,500	2,000	2,500	3,000	5,000	all			
		Engineering	IE	03) Closed system -- static < 50 psi	gpm	900	1,800	2,500	3,000	5,000	all			
		Engineering	IE	04) Closed system -- static < 150 psi	gpm	450	900	1800	2500	3500	all			
		Engineering	IE	05) Closed system -- static > 150 psi	gpm	none	none	none	none	none	all			
436	Irrigation Reservoir *1	Engineering	IE	01) Effective Height	ft	5	10	15	20	35	50			
		Engineering	IE	02) Conduit	in	6	8	12	18	24	48			
		Engineering	IE	03) Storage * Height	ac ft * ft	100	500	1,000	2,000	3,000	all			
		Engineering	IE	04) Drainage Area	Acre	none	99	320	640	12,800	25,600			
441	Irrigation System -- Micro-irrigation	Engineering	IE	01) Area Benefited	ac	5	10	20	40	all	all			
442	Irrigation System -- Sprinkler *5	Engineering	IE	01) System Capacity	gpm	300	1,000	2,000	3,500	all	all			
443	Irrigation System -- Surface and Subsurface	Engineering	IE	01) Area Benefited	ac	10	20	40	80	all	all			
447	Irrigation System -- Tail Water Recovery	Engineering	IE	01) Contributing Area	ac	10	20	40	80	all	all			
449	Irrigation Water Management	Engineering & EcoSci	IE & Agron	01) Area Benefited	ac	40	80	160	640	All	All			

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460	Land Clearing	Engineering	EE	01) Area	ac	5	10	50	160	all	all			
466	Land Smoothing	Engineering	IE	01) Area	ac	20	40	80	160	all	all			
		Engineering	IE	02) average slope	percent	1	2	5	7.5	all	all			
468	Lined Waterway or Outlet	Engineering	HE	01) Flow Capacity	cfs	25	50	150	300	all	all			
353	Monitoring Well	Engineering	EG	01) Number	Each	none	none	none	none	all	all			
500	Obstruction Removal	Engineering	HE	01) Area	ac	none	none	none	none	all	all			
582	Open Channel	Engineering	DE	01) Design Capacity	cfs	50	150	300	400	1,000	2,000			
		Engineering	DE	02) Velocity	fps	3	4	5	7	10	12			
516	Pipeline	Engineering	IE	01) Length	mi.	0.5	2	7	15	30	all			
		Engineering	IE	02) Pressure	psi	20	40	75	100	300	all			
378	Pond *1	Engineering	DE	01) Effective Height	ft	5	10	15	20	25	35			
		Engineering	DE	02) Conduit	in	6	8	12	18	24	48			
		Engineering	DE	03) Storage * Height	ac ft * ft	100	500	1,000	2,000	3,000	all			
		Engineering	DE	04) Drainage Area	Acre	none	99	320	640	12,800	25,600			
521	Pond Sealing or Lining	Engineering	DE	01) Area	ac	none	none	5	10	all	all			
462	Precision Land Forming	Engineering	DE	01) Area	ac	20	40	80	160	all	all			
		Engineering	DE	02) Cut Volume	cy/ac	100	200	300	400	all	all			
533	Pumping Plant	Engineering	HE	01) Axial Flow	gpm	none	none	10,000	15,000	20,000	100,000			

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533	Pumping Plant	Engineering	HE	02) Centrifugal -- Capacity	gpm	200	500	1,500	2,500	3,500	5,000			
		Engineering	HE	02) Centrifugal -- Capacity	gpm	200	500	1,500	2,500	3,500	5,000			
		Engineering	HE	03) Centrifugal -- TDH or shut off head	ft	10	50	150	250	350	500			
		Engineering	HE	04) Turbine -- Capacity	gpm	200	500	1,500	2,500	3,500	5,000			
		Engineering	HE	05) Turbine -- TDH or shut off head	ft	50	100	250	300	500	1,000			
		Engineering	HE	06) Solar Powered -- Capacity	gpm	5	10	15	20	25	all			
		Engineering	HE	07) Solar Powered -- Total lift	ft	20	50	100	250	500	1,000			
566	Recreation Land Grading and Shaping	Engineering	DE	01) Area	ac	4	8	10	25	all	all			
		Engineering	DE	02) Soil Moved	cy/ac	300	800	1,000	2,500	all	all			
555	Rock Barrier	Engineering	DE	01) Effective Height	ft	2	4	8	10	12	all			
558	Roof Runoff Management	Engineering	DE	01) Area of Roof	sq ft	1,000	2,000	10,000	20,000	all	all			
557	Row Arrangement	Engineering	EE	01) Area of Field	ac	5	10	50	200	all	all			
570	Runoff Management System	Engineering	EE	01) Area	ac	none	none	1	5	25	all			
610	Salinity and Sodic Soil Management	Engineering & EcoSci	IE & Agron	01) Area Benefited	ac	40	80	160	640	All	All			
350	Sediment Basin *1	Engineering	HE	01) Effective Height	ft	5	10	15	20	25	35			
		Engineering	HE	02) Conduit	in	6	8	12	18	24	48			

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350 Sediment Basin *1	Engineering	HE	03) Storage * Height	ac-ft * ft	100	500	1,000	2,000	3,000	all				
	Engineering	HE	04) Drainage Area	Acre	none	99	320	640	12,800	25,600				
632 Solid/Liquid Waste Separation Facility	Engineering	EE	01) Animal Units	A.U.'s	75	250	500	1,000	all	all				
	Engineering	EE	02) Wall Height	ft	3	4	5	6	8	all				
572 Spoil Spreading	Engineering	HE	01) Depth	ft	1	2	3	5	all	all				
574 Spring Development *4	Engineering	HE	01) Spring Flow	gpm	none	none	10	20	all	all				
578 Stream Crossing *4	Engineering	HE	01) Bankfull Capacity	cfs	10	20	50	100	all	all				
580 Streambank and Shoreline Protection *4	Engineering	DE	01) Bankfull Capacity	cfs	none	none	1,000	1,500	5,000	20,000				
	Engineering	DE	02) Bankfull Velocity	fps	none	none	5	6	10	12				
	Engineering	DE	03) Channel Depth	ft	none	none	6	8	all	all				
	Engineering	DE	04) Water Height Above Shore	ft	none	none	none	none	none	none				
587 Structure for Water Control *1	Engineering	DE	01) Effective Height	ft	5	10	15	20	25	35				
	Engineering	DE	02) Storage * Height	ac-ft * ft	100	500	1,000	2,000	3,000	all				
	Engineering	DE	03) Drainage Area	Acre	none	99	320	640	12,800	25,600				
	Engineering	DE	04) Discharge	cfs	5	10	20	40	100	all				

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587	Structure for Water Control *1	Engineering	DE	05) Wall Height (refers to formed or placed walls, if vertical pipe is used in place of concrete or prefabricated structure, pipe shall be rated for maximum burial depth.)	ft	3	4	5	6	8	all			
606	Subsurface Drain *4	Engineering	HE	01) Area Drained	ac	40	80	160	320	all	all			
607	Surface Drain, Field Ditch *4	Engineering	HE	01) Area Drained	ac	40	80	160	320	all	all			
608	Surface Drain, Main or Lateral *4	Engineering	HE	01) Capacity	cfs	none	25	50	100	1,000	2,000			
		Engineering	HE	02) Velocity	fps	none	4	6	8	10	12			
600	Terrace	Engineering	DE	01) Area	ac	20	75	150	250	500	all			
575	Trails and Walkways	Engineering	DE	01) Surface Treatment	Type	none	Gravel	Gravel	Gravel	other	all			
		Engineering	DE	02) Maximum Grade	Percent	10	10	15	20	all	all			
		Engineering	DE	03) Culvert ID	in	18	18	24	36	all	all			
568	Trails and Walkways (use code 575)	Engineering	DE	01) Length	ft	5,000	10,000	20,000	2,500	all	all			
		Engineering	DE	02) Surface Treatment	Type	none	ood Chi	Gravel	Paved	all	all			
620	Underground Outlet	Engineering	HE	01) Pipe Diameter	in	8	12	24	30	all	all			
635	Vegetated Treatment Area	Engineering	EE	01) Animal Units	A.U.'s	none	none	none	none	all	all			
367	Waste Facility Cover	Engineering	EE	01) Cover Area	ac	none	none	5	10	all	all			

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367	Waste Facility Cover	Engineering	EE	02) Truss Span	ft	24	32	42	52	52	all			
		Engineering	EE	03) Supporting Post Height	ft	12	12	14	16	20	all			
313	Waste Storage Facility *1 *3	Engineering	EE	01) Animal Units	A.U.'s	75	125	250	500	all	all			
		Engineering	EE	02) Effective Height	ft	5	10	15	20	25	35			
		Engineering	EE	03) Conduit	in	6	8	12	18	20	24			
		Engineering	EE	04) Storage	cu ft (1000's)	100	250	500	1,000	2,000	5,000			
		Engineering	EE	05) Drainage Area	Acre	none	99	320	640	12,800	25,600			
		Engineering	EE	06) Retaining Wall Height	ft	3	4	5	6	8	all			
634	Waste Transfer	Engineering	EE	01) Animal Units	A.U.'s	75	250	500	1,000	all	all			
629	Waste Treatment	Engineering	EE	01) Animal Unit	A.U.'s	75	250	500	1,000	all	all			
359	Waste Treatment Lagoon (Anaerobic) *1	Engineering	EE	01) Area	ac	none	none	none	12	25	50			
		Engineering	EE	02) Storage	cu ft (1000's)	none	none	none	1,000	2,000	5,000			
633	Waste Utilization	EcoSci & Engineering	Agron & EE	01) Animal Units	A.U.'s	75	250	500	1,000	All	All			
638	Water & Sediment Control Basin	Engineering	DE	01) Drainage Area	ac	5	10	50	200	all	all			
636	Water Harvesting Catchment	Engineering	IE	01) Contributing Area	ac	1	2	5	20	all	all			
642	Water Well	Engineering	EG	01) Casing Diameter	in	none	none	8	10	all	all			
614	Watering Facility	Engineering	DE	01) Capacity	gal	300	500	1,000	2,000	all	all			

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614	Watering Facility	Engineering	DE	02) Hoop Tank & Trough Dia	ft	10	15	20	25	30	all			
640	Waterspreading	Engineering	HE	01) Ditch Capacity	cfs	5	10	15	20	all	all			
351	Well Decommissioning	Engineering	EG	01) Casing Diameter	in	none	none	8	10	all	all			
658	Wetland Creation	EcoSci & Engineering	Bio & EE	01) Area	ac	5	10	50	200	All	All			
659	Wetland Enhancement	EcoSci & Engineering	Bio & EE	01) Area	ac	5	10	50	200	All	All			
657	Wetland Restoration	EcoSci & Engineering	Bio & EE	01) Area	ac	5	10	50	200	All	All			

<b>Notes -- ENGINEERING PRACTICES</b>														
*1 Any embankment that is 20 feet in height as measured from the highest point on the top of the dam to the lowest point along the down stream toe and/or impounds 20 acre feet or more of water or effluent as measured from the top of the empankment must have a Dam Safety Permit. Smaller structures require a "Small Dam Application"														
*2 It is intended for any employee who is capable to gather basic data and prepare engineering plans and designs outside his approval authority. However, review and approval of all such plans by a person with appropriate approval authority is required.														
*3 As shown under controlling factor, supporting post height is measured from the floor level to the bottom of the truss.														
*4 This practice will likely require a regulatory permit.														
*5 Parallel pipes or networked pipes, velocities above 5 fps, or Pressure reducing stations require approval by the Area Engineer or the State Conservation Engineer.														
*6 <ul style="list-style-type: none"> <li>• Low Hazard Class—dams located in rural or agricultural areas where failure may damage farm buildings, agricultural land, or township and country roads.</li> <li>• Significant Hazard Class—dams located in predominantly rural or agricultural areas where failure may damage isolated homes, main highways or minor railroads, or cause interruption of use or service of relatively important public utilities.</li> <li>• High Hazard Class—dams located where failure may cause loss of life, serious damage to homes, industrial and commercial buildings, important public utilities, main highways, or railroads.</li> </ul>														

<b>Notes -- ECOLOGICAL SCIENCE PRACTICES</b>														
ASK LEVEL: 1=Aware, 2=Understand, 3=Preform with Supervision, 4=Apply Independently, 5=Proficient and can train others														