

# Space Assessments for Museum Collections Planning

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# What is a Space Assessment?

- ▶ Determines the physical space that is currently occupied by a collection.
- ▶ Determines the physical space needed by a collection for appropriate storage.



## How do we:

- Know how overcrowded is it?
- Effectively intervene?
- Advocate for our needs?
- Budget for new storage?



**One method is not inherently better or worse than any other**

# Room-Level Assessments



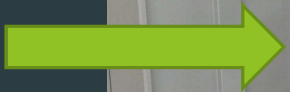
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# Unit-Level Assessment

Overcrowded, shelf too short



Unused vertical space



# Unit-Level Assessment: Documentation

Fixture	Current					Needed	
	Type	Height	Width	Depth	Volume	Expansion	Volume
#10	Shelving Unit	84	36	18	31.5	50%	47.25
#11	Shelving Unit	58	36	18	22	75%	38.5
#12	Cabinet	78	36	18	29.25	25%	36.56
#13	Shelving Unit	84	36	18	31.5	25%	39.375
#14	Cabinet	78	36	18	29.25	100%	58.5
#15	Shelving Unit	84	36	18	31.5	150%	78.75
#16	Shelving Unit	58	36	18	22	75%	38.5
#17	Shelving Unit	84	36	18	31.5	75%	55.125
#18	Cabinet	78	36	18	29.25	50%	43.875
#19	Cabinet	78	36	18	29.25	100%	58.5
Total					287		494.935

# Item-Level Assessment





# Case Study from the CU Museum of Natural History



# Planning a Space Assessment

- ▶ The most important stage of a space assessment.
- ▶ Proper planning ensures useful results.
- ▶ Streamlines and creates consistency in the process.
- ▶ A holistic balancing act.
- ▶ Starts with your goals.

# Planning a Space Assessment: Scope

- Defines what will and will not be covered in this project.
- Actions and physical spaces and collections.
- Defines what sort of situation you will slow down to correct



# Planning a Space Assessment: Assess your storage

Fixture Type	Number of Fixtures	Exterior Dimensions (in)	Cubic footprint, Single Fixture	Cubic Footprint, Total Fixtures	Available Shelf Space (inches)	Available interior Space (Height, inches)	Shelf Thickness (in)
All-Steel (1)	66	36 x 18 x 78	29.25	1930.5	35.5x17.2	70.5	1
All-Steel (2)	3	36 x 24 x 78	39	117			
Open Shelving	14	18 x 36 x 84	31.5	441	35.5X17.5	76.75	1.25
Open Shelving (#68)	1	36 x 36 x 76	57	57			
Open Shelving (#69)	1	36 x 36 x 86	64.5	64.5			
Open Shelving	11	18 x 36 x 59.5	22.313	245.443	35.5x17.5	52.25	1.25
Open Shelving	8	18 x 36 x 58.5	21.983	175.864			
Drawer Unit (Sherds)	1	18 x 36 x 85	31.875	31.875			
Lane Cabinet	1	32 x 29 x 37	19.875	19.875			
<b>Totals</b>	106			3083.057			

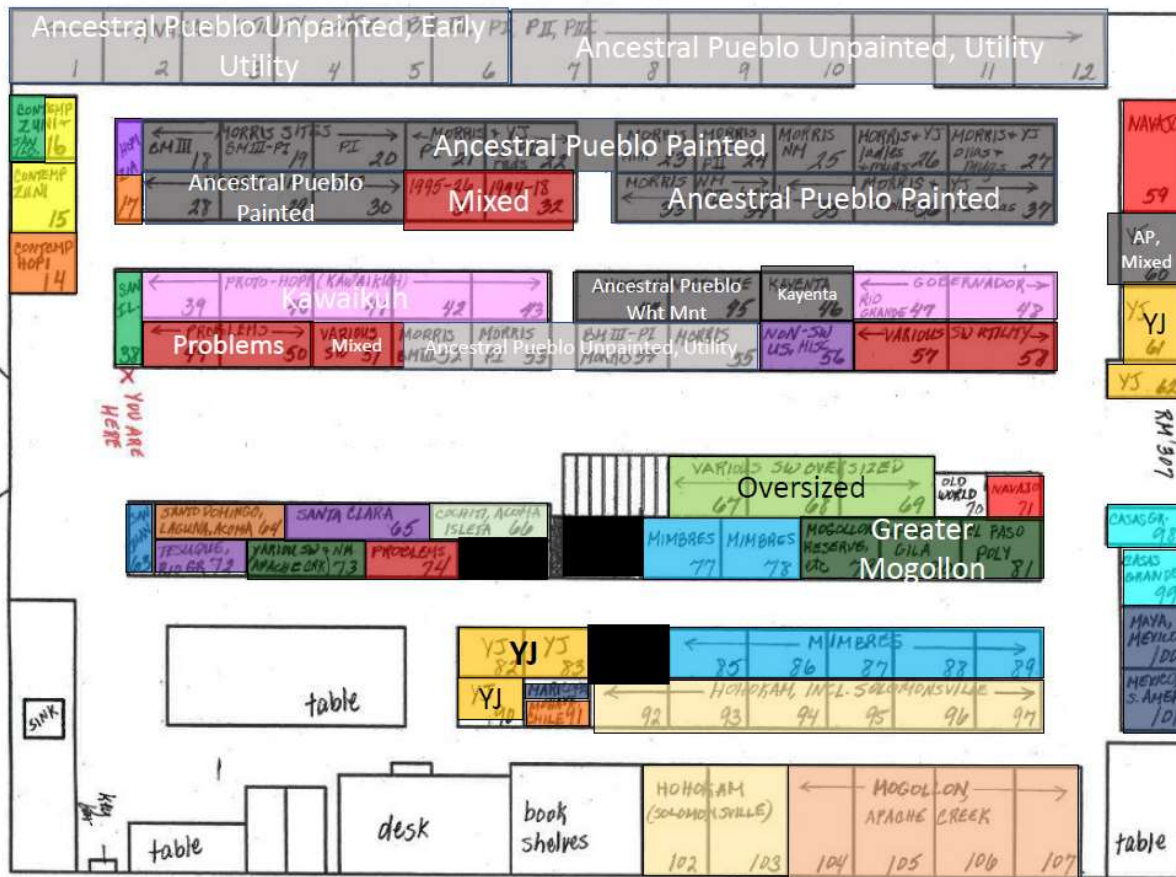
# Planning a Space Assessment: Survey



- Visually survey the collections that will be part of your assessment.
- Gain a better understanding of what you will encounter.
- Identify and document 'atypical' items.

# Planning a Space Assessment: Organization





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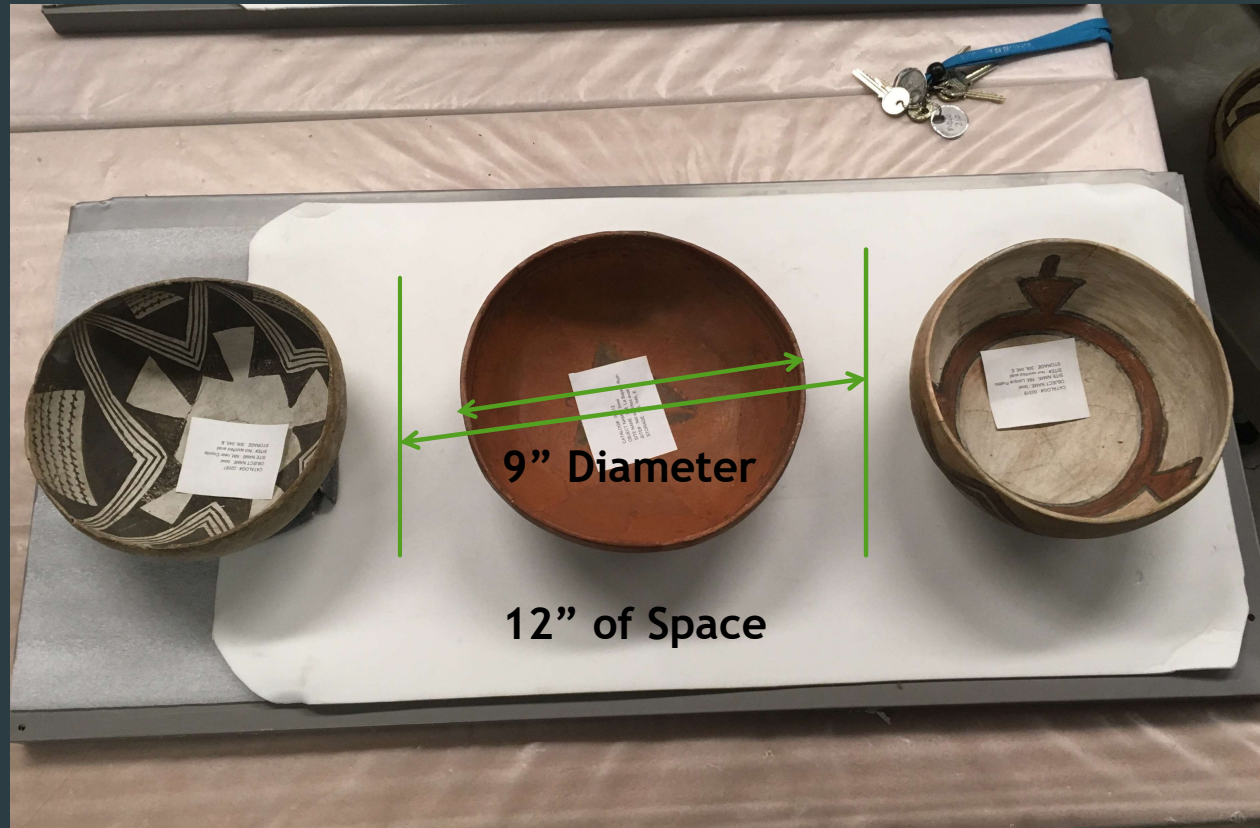
# Planning a Space Assessment: Future Growth



- ▶ Percentage
  - ▶ 3% collections growth every year for 10 years
- ▶ Space
  - ▶ 20% of the calculated footprint for 10 years of growth
- ▶ Items
  - ▶ Space for 20 textiles/year for 5 years



# Planning a Space Assessment





	Section Name			Section Name			Section Name			Section Name		
DxWxH												
Object Measurements	Absolute Number	Cubic Feet Total	Square Feet Total	Absolute Number	Cubic Feet Total	Square Feet Total	Absolute Number	Cubic Feet Total	Square Feet Total	Absolute Number	Cubic Feet Total	Square Feet Total
4x4x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
6x6x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
8x8x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
10x10x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
12x12x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
14x14x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
16x16x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
18x18x4		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
4x4x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
6x6x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
8x8x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
10x10x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
12x12x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
14x14x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
16x16x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
18x18x5		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
4x4x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
6x6x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
8x8x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
10x10x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
12x12x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
14x14x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
16x16x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000
18x18x6		0.00	0.00		0.000	0.000		0.000	0.000		0.000	0.000

# Planning a Space Assessment: Project Guide



# Planning Practice

- ▶ Think of a collection you would like to do a space assessment for  
OR
- ▶ Scenario:
  - ▶ 500-item basket collection
  - ▶ Move into a new storage room
  - ▶ Goals, atypical items, organization, growth, space standards, data collection.



# Measuring Space



W/D -> Height	4	6	8	10
4				
5				
6			 	 
7			 	 
8				

DxWxH <b>Object Measurements</b>	Apache Creek			Greater Mogollon			Mixed Mogollon		
	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total
4x4x4	2	0.07	0.22	8	0.296	0.889	4	0.148	0.444
6x6x4	1	0.08	0.25	3	0.250	0.750		0.000	0.000
8x8x4	1	0.15	0.44		0.000	0.000		0.000	0.000
10x10x4		0.00	0.00		0.000	0.000		0.000	0.000
12x12x4		0.00	0.00		0.000	0.000		0.000	0.000
14x14x4		0.00	0.00		0.000	0.000		0.000	0.000
16x16x4		0.00	0.00		0.000	0.000		0.000	0.000
18x18x4		0.00	0.00		0.000	0.000		0.000	0.000
4x4x5		0.00	0.00		0.000	0.000		0.000	0.000
6x6x5		0.00	0.00	8	0.833	2.000		0.000	0.000
8x8x5		0.00	0.00	4	0.741	1.778		0.000	0.000
10x10x5		0.00	0.00		0.000	0.000		0.000	0.000
12x12x5		0.00	0.00		0.000	0.000		0.000	0.000
14x14x5		0.00	0.00		0.000	0.000		0.000	0.000
16x16x5		0.00	0.00		0.000	0.000		0.000	0.000
18x18x5		0.00	0.00		0.000	0.000		0.000	0.000
4x4x6	2	0.11	0.22	2	0.111	0.222	1	0.056	0.111
6x6x6	6	0.75	1.50	12	1.500	3.000	9	1.125	2.250
8x8x6	23	5.11	10.22	17	3.778	7.556	3	0.667	1.333
10x10x6	13	4.51	9.03	3	1.042	2.083		0.000	0.000
12x12x6	2	1.00	2.00	1	0.500	1.000		0.000	0.000
14x14x6		0.00	0.00		0.000	0.000		0.000	0.000
16x16x6		0.00	0.00		0.000	0.000		0.000	0.000
18x18x6		0.00	0.00		0.000	0.000		0.000	0.000

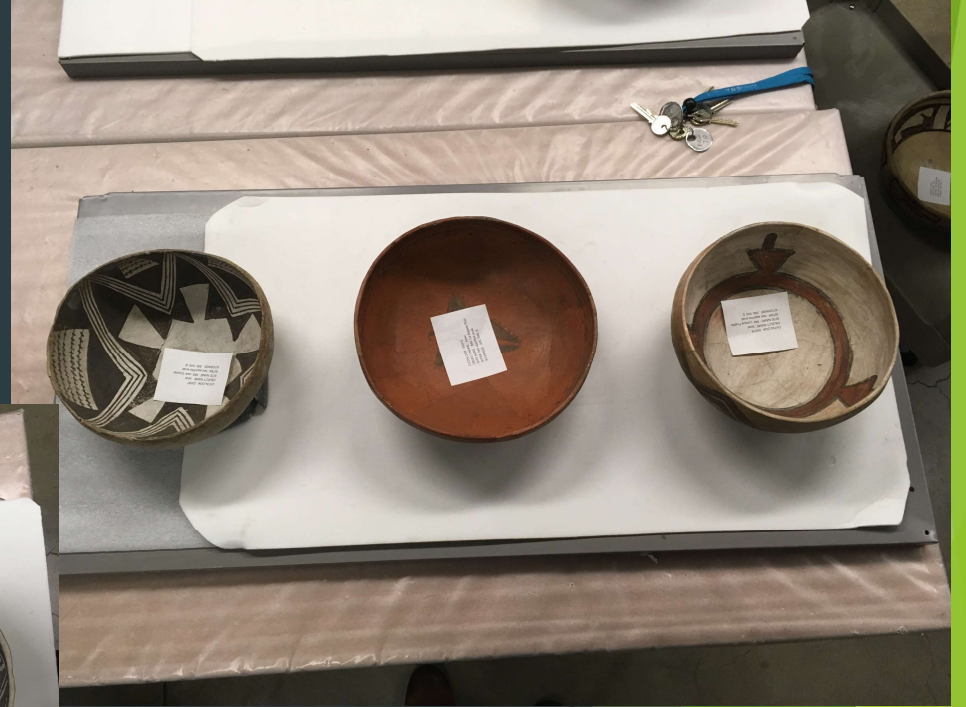
# Analyzing Space Assessment Data

DxWxH	Apache Creek			Greater Mogollon			Mixed Mogollon		
	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total
4x4x4	2	0.07	0.22	8	0.296	0.889	4	0.148	0.444
6x6x4	1	0.08	0.25	3	0.250	0.750		0.000	0.000
8x8x4	1	0.15	0.44		0.000	0.000		0.000	0.000
10x10x4		0.00	0.00		0.000	0.000		0.000	0.000
12x12x4		0.00	0.00		0.000	0.000		0.000	0.000
14x14x4		0.00	0.00		0.000	0.000		0.000	0.000
16x16x4		0.00	0.00		0.000	0.000		0.000	0.000
18x18x4		0.00	0.00		0.000	0.000		0.000	0.000
4x4x5		0.00	0.00		0.000	0.000		0.000	0.000
6x6x5		0.00	0.00	8	0.833	2.000		0.000	0.000
8x8x5		0.00	0.00	4	0.741	1.778		0.000	0.000
10x10x5		0.00	0.00		0.000	0.000		0.000	0.000
12x12x5		0.00	0.00		0.000	0.000		0.000	0.000
14x14x5		0.00	0.00		0.000	0.000		0.000	0.000
16x16x5		0.00	0.00		0.000	0.000		0.000	0.000
18x18x5		0.00	0.00		0.000	0.000		0.000	0.000
4x4x6	2	0.11	0.22	2	0.111	0.222	1	0.056	0.111
6x6x6	6	0.75	1.50	12	1.500	3.000	9	1.125	2.250
8x8x6	23	5.11	10.22	17	3.778	7.556	3	0.667	1.333
10x10x6	13	4.51	9.03	3	1.042	2.083		0.000	0.000
12x12x6	2	1.00	2.00	1	0.500	1.000		0.000	0.000
14x14x6		0.00	0.00		0.000	0.000		0.000	0.000
16x16x6		0.00	0.00		0.000	0.000		0.000	0.000
18x18x6		0.00	0.00		0.000	0.000		0.000	0.000



4.2 sqft average	Apache Creek			Greater Mogollon			Mimbres				
	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total	Number of Vessels	Cubic Feet Total	Square Feet Total		
4x4x4	2	0.074	0.222	4x4x4	8	0.296	0.889	6x6x4	1	0.083	0.250
6x6x4	1	0.083	0.250	6x6x4	3	0.250	0.750	8x8x4	2	0.296	0.889
8x8x4	1	0.148	0.444	6x6x5	8	0.833	2.000	6x6x5	2	0.208	0.500
4x4x6	2	0.111	0.222	8x8x5	4	0.741	1.778	8x8x5	4	0.741	1.778
6x6x6	6	0.750	1.500	4x4x6	2	0.111	0.222	10x10x5	2	0.579	1.389
8x8x6	23	5.111	10.222	6x6x6	12	1.500	3.000	6x6x6	6	0.750	1.500
10x10x6	13	4.514	9.028	8x8x6	17	3.778	7.556	8x8x6	27	6.000	12.000
12x12x6	2	1.000	2.000	10x10x6	3	1.042	2.083	10x10x6	25	8.681	17.361
4x4x7	2	0.130	0.222	12x12x6	1	0.500	1.000	12x12x6	11	5.500	11.000
6x6x7	6	0.875	1.500	6x6x7	1	0.146	0.250	14x14x6	1	0.681	1.361
8x8x7	23	5.963	10.222	8x8x7	9	2.333	4.000	12x6x6	1	0.250	0.500
10x10x7	14	5.671	9.722	10x10x7	7	2.836	4.861	8x8x7	5	1.296	2.222
12x12x7	2	1.167	2.000	12x12x7	7	4.083	7.000	10x10x7	28	11.343	19.444
6x6x8	1	0.167	0.250	6x6x8	4	0.667	1.000	12x12x7	30	17.500	30.000
8x8x8	6	1.778	2.667	8x8x8	16	4.741	7.111	14x14x7	7	5.558	9.528
10x10x8	5	2.315	3.472	10x10x8	2	0.926	1.389	14x8x7	1	0.454	0.778
12x12x8	9	6.000	9.000	12x12x8	2	1.333	2.000	8x8x8	8	2.370	3.556
6x6x9	1	0.188	0.250	14x14x8	4	3.630	5.444	10x10x8	13	6.019	9.028

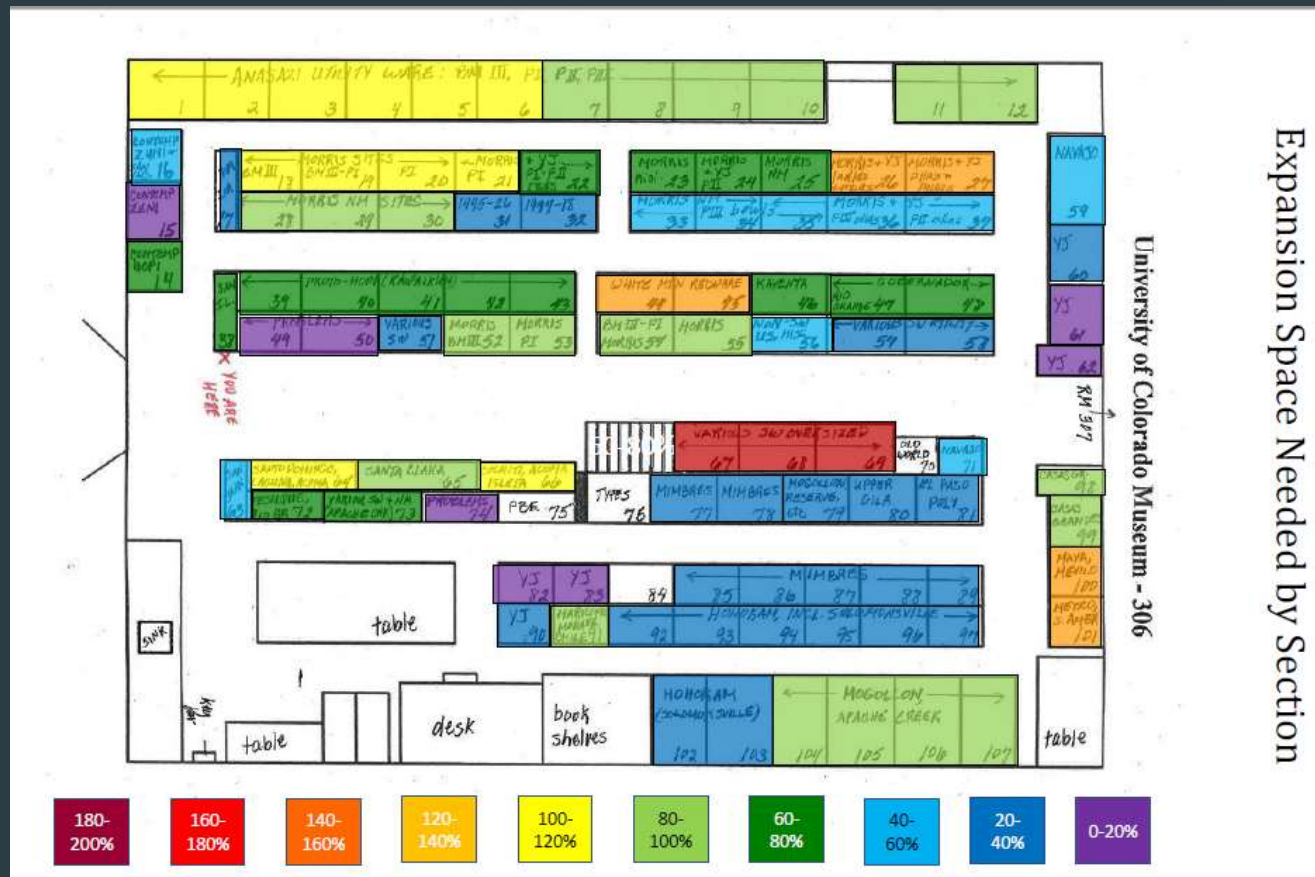




	Mogollon, Mixed					
	Number of Vessels	Cubic Feet Total	Square Feet Total	# of shelves	Shelf Height	Total Height Needed
4x4x4	4	0.148	0.444			
4x4x6	1	0.056	0.111			
6x6x6	9	1.125	2.250			
8x8x6	3	0.667	1.333	2	6	14.00
6x6x7	4	0.583	1.000			
8x8x7	13	3.370	5.778	3	7	24.00
6x6x8	2	0.333	0.500			
8x8x8	9	2.667	4.000			
10x10x8	4	1.852	2.778			
8x8x9	1	0.333	0.444			
10x10x9	2	1.042	1.389	1	9	10.00
14x14x9	1	1.021	1.361			
10x10x10	2	1.157	1.389			
10x10x11	1	0.637	0.694	1	11	12.00
12x12x11	1	0.917	1.000			
12x12x12	1	1.000	1			
12x12x14	1	1.167	1	1	14	15.00
16x16x15	1	2.222	1.778			
18x18x15	1	2.813	2	1	15	16.00
Totals	61	23.109	30.500	9		91.00

Collections Sections	Included Fixtures	Current Cubic Footprint	Current # of Fixtures	Current # of Shelves	Mixed Cab Type?	Notes	Assessed Cubic Footprint	Assessed # of Fixtures	Assessed # of Shelves	Growth Needed: Cubic Footprint	Growth Needed: Shelves	Space and Shelf Growth Difference
Apache Creek	104, 105, 106, 107	87.92	4	16	N		162.79	7.3	37	85%	131%	46%
Greater Mogollon	79, 80, 81, 73E	96.5	3.3	22	Y	1 Shelf in 73, 21"H	117	4	29	21%	32%	11%
Mimbres	77,78, 85,86, 87, 88, 89	204.75	7	52	N	4 empties	280.8	9.6	77	37%	48%	11%
Mixed Mogollon	73A-D, F	22.05	0.7	3	N	See above, two empty shelves not counted	37.8	1.2	9	71%	200%	129%
Casas Grandes	98, 99	58.5	2	14	N		111.15	3.8	25	90%	79%	-11%
Hohokam	92, 93, 94, 95, 96, 97, 102, 103	219.46	8	46	Y		283.725	9.7	66	29%	43%	14%
Non-Southwest United States	56	31.5	1	4	N	1 empty	50.4	1.6	7	60%	75%	15%
Mexico/South America	70B, 91A, 100, 101	70.8	2.4	15	N	70B not counted (1 item), 91A 8"H	160.875	5.5	36	127%	140%	13%
Gobernador	47, 48	59	2	12	N		99.45	3.4	22	69%	83%	15%
Navajo	59, 71	51.55	2	8	Y	1 empty	78.975	2.7	14	53%	75%	22%
Ancestral Puebloan Utility, Earlier	1, 2, 3, 4, 5, 6	133.8	6	23	N		294.36	13.2	60	120%	161%	41%
Ancestral Puebloan Utility, Later	7, 8, 9, 10, 11, 12, 52, 53, 54, 55	197.82	9	38	Y	1 empty	383.66	17	58	94%	53%	-41%
Ancestral Puebloan, Painted (Earliest)	18, 19, 20, 21	118	4	30	N		236.925	8.1	77	101%	157%	56%
Ancestral Puebloan, Painted (Early)	22, 23, 24, 25	118	4	31	N		195.975	6.7	52	66%	68%	2%
Ancestral Puebloan, Painted (Later)	33, 34, 35, 36, 37	147.5	5	34	N		213.525	7.3	50	45%	47%	2%

# Analyzing Space Assessment Results





# Tips to Remember

- ▶ Tailor your assessment to the scale of the project at hand
- ▶ Be consistent
- ▶ Don't be afraid to pad the measurements
- ▶ Space assessments are inherently subjective
- ▶ Have a plan before you start
- ▶ Ask for help



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# QUESTIONS



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