APPENDIX 3

CHECKLIST TO DETERMINE IF A GEOLOGIC MAP SUBMITTED

TO THE UGMS MEETS MINIMUM UGMS STANDARDS AND FORMATS

DELIVERABLES

Geologic map inked an Colored paper copy of Any overlays with inf geologic map (structu etc.) Overlays must (alignment) marks. U would make the geolog -Map Explanation One or more cross sec Colored paper copy of Map Symbols explanati map and cross section Two copies of a Corre used on the map and c surficial) in as much white copy and one co Lithologic column. Written Dependent Plate I--Geologic Map 11. 42. NA3. Any overlays with inf Plate II--Map Explanation ¥ 1. Y 2. ý3. Map Symbols explanati map and cross section 14. y 5. Lithologic column. Written Description of Map Units with significant unconformities indicated by a word inserted between unit descriptions. Other charts, diagrams, or explanatory material needed to NA 7. understand the geologic map. Booklet Booklet manuscript. 1. Abstract Introduction (includes previous works) Stratigraphy or Map Units Structure Geologic History (optional) Economic Resources Water Resources Geologic Hazards Acknowledgements References Cited Appendices (optional) Other sections as needed (optional) At least three photographs highly recommended Xerox Diagrams, graphs, and tables as needed Measured sections as needed

APPENDIX 3

CHECKLIST TO DETERMINE IF A GEOLOGIC MAP SUBMITTED

TO THE UGMS MEETS MINIMUM UGMS STANDARDS AND FORMATS

DELIVERABLES

Plate I--Geologic Map

- Geologic map inked and hand-lettered on mylar base. 11.
- Colored paper copy of geologic map. 12.
- Any overlays with information that will be on the published NA 3 . geologic map (structural contours, bedding attitudes, mines, etc.) Overlays must be on mylar with registration (alignment) marks. Use overlays only if the information would make the geologic map too cluttered.

Plate II--Map Explanation

- / 1. / 2. One or more cross sections drafted on mylar.
- Colored paper copy of cross sections.
- Map Symbols explanation chart showing all symbols used on 3. map and cross sections.
- Two copies of a Correlation Diagram showing age of all units ¥4. used on the map and cross sections (both bedrock and surficial) in as much detail as possible (one black and white copy and one copy colored to match map).
- 1 5. Lithologic column.
- 46. Written Description of Map Units with significant unconformities indicated by a word inserted between unit descriptions.
- Other charts, diagrams, or explanatory material needed to NA 7. understand the geologic map.

Booklet

1.	Booklet manuscript.
	Abstract
	Introduction (includes previous works)
	Stratigraphy or Wan Units
	Stratigraphy of Map Units
	Structure
	Geologic History (optional)
	Economic Resources
	Water Resources
	Geologic Hazards
	Acknowledgements
	References Cited
	Appendices (optional)
	Athor costions as nooded (entional)
	other sections as needed (optional)
Xerox	At least three photographs highly recommended
	Diagrams, graphs, and tables as needed
	Measured sections as needed

Other deliverables

other deriverables		
1.	Computer copy of all text on floppy disk (should	
	include all written parts of plate II).	
12.	Originals of all photographs, diagrams, tables, etc.	
	Copy of all sections measured in the guadrangle.	
73.	Conjes of laboratory reports of radiometric dating	
	copies of indicating reports of the laboration means	
Later	palynology, geocnemistry, and other laboratory research.	
- < 5.	Completed UGMS database forms:	
)	Stratigraphic Sections = as Grave	
)	Geochronology	
	Petrology	
/	Landslide Inventory	
VE	Aerial photographs provided by the UGMS.	
	Orthorhotoguad mans provided by the UGMS.	
	Convert and there are discortation (where applicable)	
/8.	Copy of completed thesis of disselection (where applicable).	
9.	is the author's name, a date, and a project name on all	
	deliverables?	
•	PLATE IGEOLOGIC MAP	
11.	Is every part of the guadrangle (except areas under	
7	perennial bodies of water) represented as a map unit?	
1 2	Ts every area no matter how small labeled or indicated by	
P 2 •	a leader from a label? (coloring shading or using	
	a leader from a laber: (coloring, shading, of using	
- 2	patterns is not an acceptable substitute.)	
3.	Do symbols (faults, contacts, cleavage, etc.) used on the	
_	map conform to UGMS guidelines (page_)?	
4.?	Do map unit labels follow UGMS guidelines?	
у 5.	Do faults represented by solid or dashed lines actually cut	
1	adjoining units? (if not they should be shown as dotted,	
	indicating that latest fault movement predates all units	
	that adjoin touch or cover it.) See page . This point is	
	very important to geologic bazards planning	
NE ?	The addited fault every used as a contact?	
	Is a dotted fault evel used as a contact:	
N 0.	is relative offset indicated by a bar and bar on all	
_	raults: (or, if not, is the reason explained in the text?)	
7.	Are economic-related features shown properly? (see	
	appendix)	
	a. mines, alteration, deposits, etc.	
	b. adits, shafts, winzes, tunnels	
	c. mineralization. alteration	
	d. gravel and road fill pits, guarries	
	a deep drill holes (shallow drill holes are at the	
	diagonation of the author)	
	And manad minor anomning drill belog and other fortunes	
NA 8 .	Are named mines, quarries, drill notes and other features	
	identified either by writing name on the map or keying to a	
	table?	
y9.	Are named faults, folds, and other features identified and	
/	labeled?	
110.	Are sufficient strike and dip, foliation, joint, cleavage.	
1	and similar symbols shown?	
NA 11	Are structural contours shown where appropriate?	

- If structural contours are shown, are they indicated by
- continuous solid lines (good control) or long dashes (inadequate control) where the datum surfaces exists and by short dashes where the contours are projected into the air? Are elevations of contours properly labeled?
- NA 13. Are contours properly offset along faults? NA14.
- Do contours agree with bedding attitudes and fold axial NA 15. traces?
 - 16.7 Do bedding attitudes as indicated by contact positions (determined using three-point problems in washes, over ridges, position on slopes, etc.) conform to given strikes and dips, map patterns indicated by contours, and other indicators that mapping is logical and consistent?
- y 17. Do contacts and faults "V" properly in washes and canyons and over ridges?
- y 18. Do contacts and faults match adjoining and previous maps (or is it explained why they don't in the text)?
- Do ancestral lake levels (as of Lake Bonneville) shown on NA 19. the map follow topographic contours properly? (if not there should be an explanation in the text)
- NA 20. Are fold axes and other structural features properly indicated?
- γ 21. Are landslides shown, subdivided by age and type where possible?
- γ 22. Have surficial deposits been subdivided and mapped in as much detail as is practical?
- 23. Is it indicated when field work was done (season and year)? 24. Are names of thesis advisors, field assistants, and others
 - shown on the map as needed?
- _____25. Are author names given as they should appear in the title by-line (no nicknames)?

PLATE II--MAP EXPLANATION

Cross section(s)

NA 12.

- 11. Are the cross sections drafted on a stable base?
- 12. Are the cross sections drawn in the most advantageous direction (generally perpendicular to principle structural fabric)?
- Y3. Does at least one cross section extend from border to border? (if not-is there a valid reason?)
- Y4. Do the locations of contacts, faults, end points, and bends shown on the cross section(s) match the cross section line on the map EXACTLY!, (to within a line width)?
- Y5. Are the number of cross sections sufficient?
- уб. N 7. Do they extend to a proper depth for available control?
- Are all units on the cross section labeled?
- 78. 79. Is the cross section drafted without vertical exaggeration?
- Do inclinations of contacts and faults match what is shown on the map?

- 10. Have angles of drafted lines depicting contacts and faults crossed obliquely by the cross section been adjusted for apparent dip (be especially careful of curved features) (see Compton, 1962, p.362)? (Example: a fault with a true dip of 50° that is crossed by the cross section at a 45° angle to strike should be drafted with a 40° apparent dip)
- Are elevations shown on a scale along vertical margins? 111.
- Are the ends of the cross sections labeled with a compass 12. direction (East or E, W, NE, etc.)?
- 113. Are important geographic and structural features labeled on the cross section?
- Are the cross sections restorable? 114.
- v15. Are structural relationships reasonable?
- Is apparent offset on faults accurately shown? Ý16.

Description of Map Units

- Is a written description of EVERY map and cross section unit 11. provided?
- 12. Is style and organization consistent for all descriptions?
- Y3. Are descriptions sufficiently clear to make each map unit recognizable in the field?
- Are the lithology, mineralogy, colors, texture, cementation, 14. bedding characteristics, thickness, age and other needed features adequately described?

Time Correlation Chart

- Y 1. Y 2. Is every unit represented on the time correlation chart?
- Is the correlation as precise as possible?
- Y3. Are labels and time divisions accurate and consistent?
- Are major unconformities indicated? 14.
- γ5. Are names of unconformities indicated (if available)? (Example: J-2 unconformity)
- Y6. Are epoch, stage, and age names consistent and do they follow most common and recent usage?

Lithologic Column

- ¥1. Is the column as detailed as is practical (example: shows details such as thin-bedded, thick-bedded, cherty, fossiliferous, lenticular, oolitic, etc.)?
- Y 2. Does the column give an accurate visual representation of each formation?
- Y3. Are thicknesses or thickness ranges listed for all units?
- 7.4. Do columns conform to standard UGMS style?
- Y5. Is erosion profile accurate and detailed?
- Are thicknesses of individual units consistent with the y6. scale of the column as a whole?

Map Symbols Explanation

- Is every symbol used on the map and cross sections 1.
- represented?
- 7.2. Do symbols conform to UGMS guidelines? (see appendix 4)

Does wording used with symbols conform to UGMS guidelines? 3. (see appendix 4)

Other Plate II features

- Would other supplemental charts, diagrams or explanations 1. improve the overall product?
- Are all elements as clear and understandable as possible? 2.
- Are Plate II features referred to in the text booklet in a 3. way that makes them easy to find?
- Is the space available on Plate II well utilized? (For 4. example: you can move diagrams or photographs from the booklet to Plate II so they can be printed in color to increase readability)
- Will everything planned for Plate II fit within an area of 5. approximately 19 by 28 inches?

TEXT BOOKLET CHECKLIST

Is the text clear, concise, accurate, and understandable? $\frac{1}{2}$

- Does the manuscript follow UGMS style guidelines?
- 43. Are meaningful tables, photographs and illustrations provided?
 - 14. Is all information obtained from other sources properly referenced or acknowledged?
- 7.5. Does the bibliography follow UGMS style guidelines?
- A6. Are all authors, and their current addresses and affiliations listed?
- -7. Have all reviewers and contributors to the document, field assistants, donors of facilities or economic assistance, etc. been acknowledged?
 - Are the names of all counties covered by the map included in 18. the title?
 - Is every map unit discussed under a separate heading?
 - γ9. ×10. Does each map unit heading include the unit map symbol in parentheses?
 - y12. Are all mines that occur in the map area discussed in the economic section of the text (commodities mined, amounts, mine history, etc.)
 - Are landslides and other hazardous features discussed in the y13. text?
 - 214. Are map units that are prone to cause geologic hazards discussed in the hazards section (example: units prone to landslide, units with expanding clays, etc.)?
 - Are faults that cut Quaternary deposits discussed in the y15. hazards section?
 - Is the length of the manuscript planned so that all Y16. materials, including text, tables, photos, and cover page will make 8 to 24 published pages (3 to 4 typed, doublespaced, manuscript pages equals one published page (with no illustrations)).
 - y17. Are references complete? (see examples, page --, or a recent issue of Geological Society of America Bulletin)

- a. Are <u>all</u> authors names written out properly?
- b. Are volume, number, part, pages given?
- c. Is scale given for all maps?
- d. No abbreviations are used except allowable exceptions.
- 18. Are the text and other typed materials double-spaced? (19. Are multiple author references cited properly? (Example:
- (19. Are multiple author references cited properly? (Example: reference is "Jones and others, 1990" but the text is incorrectly written as, "Jones said...".)

CHECKLIST--CONSISTENCY AMONG PARTS

(Inconsistencies between parts is a common problem with submitted materials)

- ?1. Are unit names used consistently in all parts of the deliverables? (Examples: "Flagstaff Formation" in one place and "Flagstaff Limestone" in another, or "lower member..." in one place and "lower part..." in another, or "alluvial deposits" in one place and "alluvium" in another) (surprisingly, this type of problem is common-especially with surficial units)
- 2. Do thicknesses and thickness ranges stated in the text, on the lithologic column, and in the Description of Map Units match exactly? (be especially cautious with approximations, rounding, metric equivalents, or when giving ranges)
- 3. Do thicknesses determined from map solutions (using strike and dips, contours and contacts, three-point solutions, etc.), measured from the cross sections, or measured in the field, match thicknesses stated in the written materials?
- 4. Do unit labels shown on the map, in the Description of Map Units, on the correlation chart, in the lithologic column, and on the cross section match exactly? (Example: Km in one place, Kml in another; Qap in one place, Qap, in another)
- 45. Are lithologies depicted symbolically on the lithologic column consistent with the text discussion and in the Plate II--Description of Map Units?
- γ 6. Are descriptions in text discussion and on Description of Map Units consistent?
- γ 7. Are ages or age-ranges of map units stated in the text, Correlation Diagram, Description of Map Units, and on lithologic column all the same?
- γ 8. Are references standard and complete?
 - a. Are all references cited in the text or on plate II included in the "References"?
 - b. Are all publications listed in the "References" actually cited in the text?
 - c. Did you do a final check at the very end of the project for discrepancies? (Reference problems are one of the most common errors in submitted materials--they usually arise because a reference was added or deleted late in the writing process without changing the References list)

d. Are multiple citations from the same author(s) in the same year cited consistently with an "a", "b", etc.

9. Is the official USGS quadrangle name used properly in the title and throughout the text? (Examples of incorrect usage: 1) in an effort to shorten the writing, the Big Pack Mountain NE quadrangle might be <u>incorrectly</u> referred to as the "Pack Mountain NE" or even the "Pack Mountain" quadrangle; 2) "The" is part of the official name of some quadrangles and should be included and capitalized every time the quadrangle is mentioned by name.)