Memorandum

To: Angela Throneberry
   Interim VP for Administration and Finance
   Wendy Wilkins
   Executive VP and Provost

From: Dr. Elizabeth A. Titus
      Dean of the Library
      Glen Haubold
      Assistant VP
      OFS Administration and Services

Date: February 15, 2011

Subject: Mitigation Plan for Addressing Offloading of Collections in Branson Library and Zuhl Library

For your information and further action, attached is a proposed mitigation plan for addressing the offloading of collections in Branson Library and Zuhl Library.

This proposal was jointly developed by staff from OFS Administration and Services and NMSU Library. The engineering firm of Bohannan - Huston conducted a study entitled, New Mexico State University Branson Library Floor Loading Study. This study indicated structural floor load problems in Branson Library. Thus, the need for a mitigation plan.

A number of internal actions have been already initiated to offload collections. However, these are short term solutions. We institutionally need to begin the planning process for the creation of a storage facility to not only adequately house NMSU Library’s existing physical collections but also address future growth needs. We request that this process begin as soon as possible so we may continue to meet the critical space needs of our physical collections.
Summary of Issues:

**For both Branson Library and Zuhl Library:**
1. Collection stack areas have critically exceeded their floor load weight capability. Consequently, they need to be offloaded and there will need to be extensive shifting and offloading of collections in both libraries.
2. Solutions such as de-selection, continued collection conversions from print to electronic or non-book formats, relocation of collections to ground level floors in Branson Library, reductions in seating areas to provide space for additional shelving capacity in Zuhl Library, reductions in the number of multiple copies retained, are all in progress. However, these collection management strategies are short term solutions. While they contribute to offloading some of the weight, contribute only to short term solutions not long term solutions. There is also a need to begin the planning process for creating a storage facility (leasing space and/or building space).
3. The library needs to develop a space plan for not only housing its current collections but one which also meets collection growth needs.
4. The library operating budgets are extremely limited in their ability to handle the costs associated with labor and equipment needed for shifting collections, disassembling and reassembling shelving we currently have, purchasing new shelving, moving operational units to accommodate floor loads and moving collections to a storage facility. Currently, library budgets are absorbing all costs associated with offloading activities to date. Project funds will have to be identified in addition to funds from the library’s operating budgets.
5. Not only do we need to find space for collections being offloaded, we need space for the estimated 12,000 new volumes we add to the collections each year. Simply put, our collections are not static and we have exceeded the capacity of both buildings to handle the size of our collections. Twelve out of 14 peer institutions have either remote storage facilities or alternative storage spaces. **Addendum 1**

**For Branson Library Stack-Loaded Bays:**
1. We are over capacity or at capacity for all stack areas in Branson Library on the upper floors. The engineering study does not recommend additional stacks be added on any of the upper floors.
2. NMSU has evaluated each bay of each floor to confirm that each bay is loaded according to its intended use as corridors, reading rooms, staff areas, or stack areas based on load capacities. **Addendum 2**
3. Stack dimensions must not exceed 90 inches in height, 24 (inches) in total width, and have a clear space aisle of at least 3 feet (36 inches) wide as described in Section111.B.
4. Load capacities cannot be exceeded. Based on the testing done, each bay area in Branson Library has significant variances in the amount of floor load weight (psf) that are permissible. The bays can handle only between 120 and 140 psf. Library shelving for a typical double sided range is 155 psf.
5. Under the current IBC code measured deflections in Phases I and II are within allowable limits. The measured deflections in Phase III exceed the allowable deflections under the IBC code.
6. No additional materials may be shelved in any of the Branson Library stack areas until they meet acceptable load requirements. This includes all new acquisitions, new gifts, and volumes returning from bindery. This is an estimated at 1,000 items per month.
For Branson Library- Archives and Special Collections Areas
1. NMSU has evaluated each of its areas to assure they are loaded for intended uses only. Some collections will have to be shifted to other areas in Archives because the areas in which they currently are housed are not built to support floor load weights for collections. Phase I in Branson Library was not originally designed as Library space. It was designed as classroom/office space.

For Zuhl Library re: Stack Loaded Bays
1. The engineering study focused its analysis on Branson Library only. Based on the floor plans for Zuhl Library, the floor load limit for the stack areas on second and third floors is 125 psf.
2. Stack dimensions must not exceed 90 inches in height, 24 inches in total width of the base, and have a clear aisle space of at least 3 feet (36 inches) as described in Section 111.B.
3. The Library now has seven shelves per section. In order to meet the requirements of floor load, only five shelves per section are permitted. The floor load limit also applies to existing study space. The Library may need to expand shelving into existing study spaces.

Offloading goals can be achieved using several collection management approaches including the following:

1. **De-selection of Print Materials** - This approach establishes a set of criteria for de-selecting materials and withdrawing these materials permanently from the library’s collections. Materials identified for de-selection include the following:

   a. Collections that are duplicated in both print and another format (electronic or microformats). To offload weight, the decision would be to de-select print copy and retain the information electronically, are in another non-book format or are stored through contractual arrangements.

   b. Collections that are duplicated in other libraries in the State of New Mexico. To offload weight, the decision may be that NMSU Library would not duplicate print collections held elsewhere in the state. For example, for federal documents collections we would rely on the state’s regional depository library to hold a title or volumes. The priority would be assuring access verses ownership, especially for low use, low demand collections.

   c. Review all our multiple copy holdings for compliance with our Multiple Copies policy and reduce the number of multiple copies held, especially for low use, low demand titles. This review is in progress and will be completed by May 2011.

   d. Withdrawal of print materials from collections which meet the criteria for withdrawal under our current withdrawal policies e.g. severely damaged superceded materials, new editions, etc.
2. **Collection Space Management** - Either by expansion, relocation, and/or reconfiguration of shelving units offload weight from upper floors of both libraries.

   a. Branson Library
      i. Some offloading of weight from upper floors in Branson Library is being achieved by relocation of collections from upper floors to the ground level floor in Branson Library.
      ii. Relocation of collections currently housed in Branson Library to Zuhl Library will also result in some offloading of weight on upper floors in Branson.
      iii. Reconfiguration of stack areas on upper floors in Branson Library e.g. having consistent aisle widths with fewer shelves per section/range will result in optimal use of space available without exceeding floor load limits.
      iv. Staff are being relocated from the ground level of Branson Library to the 2nd floor of Branson Library.

   b. Zuhl Library
      i. Some offloading of weight from upper floors in Zuhl Library can be achieved by relocation of collections from upper floors in Zuhl Library to the ground floor level in Branson Library e.g. State of New Mexico documents collections.
      ii. In Zuhl Library potentially we could expand shelving areas by removing some seating areas on upper floors. However, we need to assure that there is adequate seating space to meet library users’ needs. A seating use study is currently being conducted to determine how current seating areas are being used.
      iii. The business collections are being relocated from Branson Library to Zuhl Library. This would put the collections into an A-Z arrangement and will offload weight on 2nd floor Branson Library.

3. **Conversion from print to electronic formats** - Replace print formats with electronic formats. For some of our print collections, if they are available in electronic formats we can purchase the electronic versions and deselect the print versions. This option would require additional recurring and non-recurring funding sources.

4. **Remote Storage** - Offload those materials that need to be retained, but are low use-low demand into a remote storage facility.

5. **Temporary Storage** – The Library needs temporary storage space now. The Library has insufficient spaces in either building to temporarily store shelving parts, partitions, modular office panels, boxes, or furniture. Until a storage unit is established, the Library needs space to store these materials until they can be reused in the two buildings.
MITIGATION PLAN
NMSU Library is working with Office of Facilities and Services and other offices on campus to develop and implement a mitigation plan that will address both immediate and long term storage space needs for NMSU Library’s collections. This is a multi-year project.

ALL PHASES
a. During all phases we will constantly be shifting collections in both libraries and pulling our staff off other job functions to accomplish tasks associated with this project.
b. During all phases we will be working to find funds in our operating budgets and from other funding sources to fund the various aspects of this mitigation plan.
c. NMSU Library will be communicating to our constituents and staff as phases progress.

PHASE ONE:
a. Completed: Estimate the number of linear feet that needs to be offloaded in Branson Library (Floors 2, 3, 4, and Archives) and Zuhl Library (Floors 2 and 3). Included in this calculation would be the number of linear feet permitted per standard shelving unit to reach capacity for shelving ranges that are primarily bound journals, primarily books, and a mixture of books and bound journals. Addendum 3

b. Completed: Redesign stack area layouts for floors 2, 3, and 4 in Branson Library that meet the requirements as specified in the Bohannon-Huston engineering study and optimize stacks space. This plan will then be used as the master plan to reconfigure stack areas. See attached proposed layout plans.

c. Completed: Provide data on the linear feet that need to be offloaded for collections housed in Branson Library and Zuhl Library. Determine how many linear feet can be offloaded through deselection, format conversions, and collection relocations. Estimate the number of linear feet for collection growth for the next five years. Make recommendations on collection storage space needs that will need to be met by storing collections at a remote storage facility.

d. Completed: Establish a library task force and charge with the task of making recommendations on collections that can be deselected or converted from print to electronic. Recommendations will be based on an established set of criteria including whether perpetual access licensing exists.

e. Targeted completion date by March 1, 2011: Relocate the federal documents collections, state documents collections, and map collections from 2nd floor Branson Library and 2nd floor Zuhl Library.
Proposed sequence of moves to offload monographs and serials from overloaded floors in Branson and Zuhl Libraries.

Completed as of February 1, 2011.

- Move unbound periodicals from the periodicals room in Branson (1st floor west) to Room 135
- Move CEBIEL offices out of Branson Library – 1st floor north.
- Move government documents reference and oversized from 2nd floor south in Branson to the government documents room on 1st floor west.
- Move government publications from 2nd floor south to the former periodicals room on 1st floor west, now the government documents area.
- Remove partition walls from former CEBIEL office space – 1st floor north.
- Install service desk in government documents area.
- Install new partition wall and office doors in government documents area.
- Move government documents offices and staff to government documents area.
- Install shelving from 2nd floor in former CEBIEL area in Branson, now state documents area.

To be completed Spring 2011.

- Move maps and atlases from second floor to state documents area.
- Move state documents from 2nd floor Zuhl to state documents area.
- Withdraw multiple copies from the collection in Branson by May, 2011.
- Withdraw multiple copies from the collection in Zuhl by May, 2011.
- Move business monographs and serials from 2nd floor north to 2nd floor Zuhl.
- Plan for the move of the Technical Services department to the 2nd floor in Branson.

To be completed Summer 2011.

- Move Technical Services staff and student work spaces to Technical Services staff area on 2nd floor north.
- Establish a closed stack area in former Technical Services office area on 1st floor east.

To be completed Fall 2011 – Spring 2012.

- Rearrange shelving on the 2nd, 3rd, and 4th floors of Branson Library to hold 27,531 linear feet on both 3rd and 4th floors and 13,092 linear feet on 2nd floor.
- Shift all collections on 2nd, 3rd, and 4th floors.
- Integrate new books held on Branson 4th floor into collections.
- Move 12,564 linear feet of bound periodicals from Zuhl Library to former Technical Services office area on 1st floor east.
- Shift collections on 2nd and 3rd floors of Zuhl.
- Integrate new books held on Branson 4th floor into collections.

These actions will help alleviate overloading of the upper floors of both libraries for period of up to five years. None of these actions provide any help for the archival collections on the 2nd, 3rd, and 4th floors in the east wing of Branson. During the five year period, a remote storage facility must be found to handle the growing collections.
Appendix A.

Chronological Summary of Events (July 2007 to present)

November - February
Discussion of drafts between Library and OFS re: Mitigation Plan.

October 11, 2010
Meeting with Glen Haubold, Dave Bollschweiler, Norice Lee, David Baldwin, and Dean Titus to discuss and review 1st draft of mitigation plan.

August 2010 – February 2011
Relocation of Federal Documents, State Documents, and Map collections from Branson Library 2nd floor and Zuhl Library 2nd floor to 1st floor Branson Library. Includes relocation of all Government Documents staff and service areas.

August 26, 2010
Memorandum to Jennifer Taylor from Glen Haubold re: Library space and floor loading. Confirmation of the need to move materials for safety reasons and the need to stop shelving any additional materials for safety reasons. “In-house staff is not qualified to evaluate all the alternatives that might exist through a comprehensive effort to maximize the use of space and storage.” Note: Dean Titus sent copy of memorandum to Provost as an FYI.

August 25, 2010-
Email from Glen Haubold. Need for a library long term space plan. OFS staff does not have the in-house expertise of their own to accomplish this.

July 31, 2010
Meeting held with new Executive VP and Provost Wendy Wilkins, Jennifer Taylor and Dean Titus. Provost queried about deselection as an approach to offloading- identify collections for deselection and do it. How much more seating can we take out? Wants data on these options. Is digitization an approach? ET response...digitization is not seen as a preservation option and is costly. More of a way to access unique collections. Provost will be meeting with Glen Haubold and then getting back to ET. Jennifer Taylor will look at on campus options vs. leasing or purchasing a bldg.

July 8, 2010
Email to Anne Comeau requesting a meeting with Jennifer Taylor to discuss needs for collections. Note: Major restructuring of OFS in progress at this point. All OFS now reporting to J. Taylor, VP for Business, Finance, and Human Resources.

May 26, 2010
Email from David Bollschweiler. Confirmation that floor loading limits for Zuhl Library is 125 pounds per square foot. “...the existing shelving cannot be loaded to more than 5 shelves.”
May 25, 2010
Memorandum to Fred Ayers from Norice Lee. Subject: Library’s Addendum re: Remote Storage Facility Requirements.

May 18, 2010
Memorandum to Fred Ayers re: Concerns Regarding Remote Storage Facility Requirements from Norice Lee. Memo from OFS estimation of space needs does not take into account growth of collections, journals returned from the bindery needing to be shelved, recent acquisitions waiting to be shelved, or that collections housed in Zuhl Library are overloaded.

May 18, 2010
Finalized memorandum to Fred Ayers from OFS Engineering. Note: Recommendations only address floor load problems in Branson Library. The engineering study only looked at Branson Library as well. It did not assess Zuhl Library even though the library had raised the question for both facilities.

May 13, 2010
Draft of memorandum to Fred Ayers, NMSU Director of Real Estate re: Remote storage facility requirements from OFS Engineering (Kirby and Bollschweiler)

April 29, 2010
Memorandum to Jack Kirby and David Bollschweiler re: Remote Storage Space Needs. This memorandum discusses remote storage space requirements including linear feet for collections, security, HVAC, work spaces, heat and water sensors, lighting, loading dock, etc.

March 18, 2010
Meeting with Jack Kirby and David Bollschweiler to discuss report findings.

February 2010.
Final Submittal. New Mexico State University Branson Library Floor Loading Study completed and distributed. Prepared for: New Mexico State University, Las Cruces, NM by Bohannan-Huston, Albuquerque, NM.

VII. Conclusions and Recommendations

It is recommended that NMSU evaluate each bay of each floor and confirm that each bay is loaded according to its intended use as corridors, reading rooms or stack rooms based on the load capacities show in Figures 1.1, 2.1, and 3.1. The areas of most concern are bays which are loaded with stacks. Each bay loaded with stacks, that has a capacity of at least 150 psf, shall be evaluated to ensure that the stack dimensions do not exceed 90 inches in height, 24 in total width, and have a clear space aisle of at least 3 feet wide as described in Section 111.B.

Stack-loaded bays that have a service live load capacity less than 150 psf shall be evaluated to determine how to arrange the stacks so that their load capacities are not exceeded. This may be achieved by increasing the minimum aisle width to a dimension greater than 3 feet, decreasing the maximum stack height to a dimension less than 90 inches, decreasing the shelf
depth to a dimension less than 12 inches, using only one face per shelf or a combination of these options. This exercise is particularly important for bays located between column grid lines C-D in Phase 1, and all the bays in Phase 111.

The measured deflections throughout Phases 1 and 11 are well within what is allowed by the current IBC code and what would be expected for a similar building of similar age and use. The measured deflections in Phase 111 exceed the allowable deflections from the current IBC code. The reason for this is likely due to a combination of overloading, creep, and construction errors.

In summary, the majority of Branson Library is likely currently loaded at or near its capacity. It is not recommended that additional stacks be added, except on the ground floor in locations that are not directly above the underground utility tunnels. Source: Page 14 of the report.

February 19, 2010
Email from David Bollschweiler to Norice Lee re: Final report will be available on Friday, February 26, 2010.

February 4, 2010
Email from David Bollschweiler to Norice Lee re: Concrete strength test results received. Final report should be available next week or so.

January 6, 2010
Email from Glen Haubold to Norice Lee re: Status of report. No change in status from reported in December 14, 2009.

December 14, 2009
Email from Jack Kirby to Norice Lee re: Status of report. Evaluation of preliminary conclusions in the draft report in progress. Staff working with firm to perform coring.

November 23, 2009
Email from Nick Davis to Jack Kirby re: Erin Clemens and Nick Davis will be doing deflection readings in Archives areas today.

November 18, 2009
November 19, 2009- Email to/from Norice Lee and Jack Kirby re: status of analysis and report. Site visit nearing completion. Engineers want to make another site visit to do additional floor deflection measurements. Target date for completion and report is December 15, 2009.

October 27, 2009
Email from Norice Lee. On October 15, structural engineers in Branson Library to do evaluation.
August 31, 2009-September 2, 2009
  Memorandum to and from David Bollschweiler and Norice Lee. Outside evaluation will be
  for Branson Library. Assessment of Zuhl Library will be done in-house.

July 16, 2009
  Memorandum from Jack Kirby to Norice Lee re: Update on the status of the Branson
  Structural Evaluation.

July 2007
  Memorandum to Stephan Hussman from David Bollschweiler re: 3rd floor (East) Branson Hall
  Evaluation (floor load capacity).
Addendum #1

Survey of Remote Storage Facilities at Peer Group Institutions 2010

Addendum #2

4th floor Branson Library - Present configuration of shelving - all sections have 7 shelves

3rd floor Branson Library - Present configuration of shelving - all sections have 7 shelves

Phase II and Phase III of Branson Library - 2nd, 3rd, and 4th floors - Pounds per square foot (psf) floorload limits shown by bay

Proposed configuration of shelving on 4th floor Branson Library
  Green and Yellow = 5 shelves limit  Blue = 6 shelves

Proposed configuration of shelving on 3rd floor Branson Library
  Green and Yellow = 5 shelves limit  Blue = 6 shelves

Proposed configuration of shelving on 2nd floor Branson Library
  Green and Yellow = 5 shelves limit  Blue = 6 shelves
  North side of 2nd floor shows Technical Services department relocated from the 1st floor

New closed shelving area on 1st floor Branson Library
  Blue = 6 shelves  Dark green = 7 shelves
  Houses bound periodicals from Zuhl Library - Would be shelved in a remote storage facility if available

Addendum #3

Linear feet of existing collections on the 2nd, 3rd, and 4th floors of Branson Library and Proposed relocation of collections
Addendum 1
## Survey of Remote Storage Facilities at Peer Group Institutions 2010

<table>
<thead>
<tr>
<th>Peer Group Institution</th>
<th>Remote Storage Facility/Alternative Storage Spaces</th>
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<tbody>
<tr>
<td>Colorado State University</td>
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</tr>
<tr>
<td>Iowa State University</td>
<td>Yes</td>
</tr>
<tr>
<td>Kansas State University</td>
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</tr>
<tr>
<td>Montana State University</td>
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</tr>
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<td>Oklahoma State University</td>
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</tr>
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<td>Oregon State University</td>
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<tr>
<td>Texas Tech University</td>
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<tr>
<td>University of Idaho</td>
<td>Yes - Alternative/Basement</td>
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<td>University of Nevada-</td>
<td>Yes</td>
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<tr>
<td>UTEP</td>
<td>Yes – Alternative/Warehouse</td>
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<tr>
<td>Washington State University</td>
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| Total – Yes                    | 12                                                |
| Total – No                     | 2                                                 |
Addendum 2
4th Floor - Present configuration of shelving
Floor weight limit – 124 pounds per square foot – 5 shelves per section

Floor weight limit – 120 pounds per square foot – 5 shelves per section

Floor weight limit – 140 pounds per square foot – 6 shelves per section

4th Floor - Branson Library
Addendum #2
Floor weight limit - 124 pounds per square foot - 5 shelves per section

Floor weight limit - 120 pounds per square foot - 5 shelves per section

Floor weight limit - 140 pounds per square foot - 6 shelves per section
Floor weight limit - 124 pounds per square foot - 5 shelves per section

Floor weight limit - 120 pounds per square foot - 5 shelves per section

Floor weight limit - 140 pounds per square foot - 6 shelves per section
Addendum #2

Floor weight limit: 140 pounds per square foot

6 shelves per section

1st Floor - Branson Library

Ground floor - 7 shelves
Goal: To remove 15,430 linear feet of materials from 2nd, 3rd, and 4th floors of Branson Library.
Goal: To remove 12,966 linear feet of materials from 2nd and 3rd floors of Zuhl Library.

<table>
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<tr>
<th>Branson Library</th>
<th>Existing shelving &amp; collections</th>
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<tr>
<td></td>
<td>4th floor</td>
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<tr>
<td>Sections</td>
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<tr>
<td>Shelves</td>
<td>9177</td>
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<tr>
<td>Linear feet</td>
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</table>

2nd floor* - Move Government Documents (5,115 linear feet) and Business Collection (8,304 linear feet)

<table>
<thead>
<tr>
<th>Proposed</th>
<th>4th floor</th>
<th>3rd floor</th>
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<th>TOTAL</th>
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<td>18936</td>
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<td>Linear feet</td>
<td>21858</td>
<td>21858</td>
<td>13092</td>
<td>56808</td>
<td>19116</td>
</tr>
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Some large sets and multiple copies will be removed from Branson collections
Shifting of collections on 2nd, 3rd, and 4th floors will remove at least **15,430** linear feet

Zuhl Library - Remove the top two shelves and fill remaining shelves at 75% - TOTAL = **12,966** linear feet
Some large sets and multiple copies will be removed from Zuhl collections
Move Pre-2000 bound periodicals from Zuhl collections to 1st floor Branson storage - **19,116** linear feet

**Addendum #3**