LYRASIS DISASTER RECOVERY REQUEST FOR QUALIFICATIONS

Completed qualifications may be sent to
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DESCRIPTION

This RFQ addresses the availability of disaster recovery firm(s) to provide freezing, drying, and recovery services to Lyrasis members. The firm(s) will have the knowledge, experience, equipment, training, and capabilities to handle, freeze, remove mold, and dry large quantities of wet or otherwise affected books, manuscripts, records, photographs, audiovisual materials and other library and archival materials. Such a firm(s) will respond 24-hours, 7 days a week, 365 days a year within 24 hours notice.

Preservation staff members at Lyrasis are available to consult with organizations affected by a disaster provided that an institution's own staff is unable to cope with the disaster due either to the nature or size of the disaster, or their lack of experience or knowledge of disaster recovery and the availability and range of services.

ELIGIBILITY

Any Lyrasis member is eligible for contracting for emergency recovery services under the terms of this RFQ.

VENDOR QUALIFICATIONS

Any vendor wishing to be approved by Lyrasis Preservation Services to provide disaster recovery services should submit, in writing, their ability to meet the following qualifications. Include methodology and equipment as appropriate.

1. The vendor(s) should have the facilities, experience, qualifications and expertise to provide professional advice, packing, freezing, and drying services for cultural institutions affected by a disaster.

2. The vendor should provide freezer and/or drying trucks, packing supplies, and personnel to assist Lyrasis members that have been affected by a disaster that is beyond their individual capabilities to handle.

3. The vendor should have systematic procedures and policies in place to handle the removal of library and archival materials from a damaged facility to ensure that all the materials have been documented and identified, inventoried, and kept in order as much as possible during the pack out. Lyrasis members should be able to request copies of these policies and procedures upon request.

4. The vendor should have the capacity to transfer large quantities of materials in a secure and safe method to the freezing or drying facility.

5. The vendor should have the equipment necessary to dry damp library and archives materials on site if needed using desiccant dehumidification.

6. The vendor should have the capabilities to conduct vacuum freeze-drying operations if the affected materials warrant this type of action based on quantity and type of damage. Temperatures for vacuum freeze-drying should not exceed 105°F. Companies should include in response to this qualification their philosophy regarding the introduction of heat with rare, fragile or archival materials.

7. The vendor should have the capacity to freeze large quantities of records and library materials if the quantity to be freeze-dried is too large for the current capacity of the firm due to the available space or the amount of material to be dried.

8. The vendor should have the facility to dry materials of varying levels of dampness and to remove mold when necessary using non-chemical methods. Please include available drying options and drying methodology

9. The vendor should have the facility to decontaminate/sterilize materials when necessary. Decontamination/sterilization procedures should focus on practices that minimize damage to materials and/or only be used in extreme situations. The vendor will not use such procedures without adequately explaining the need for such procedures and the potential effects on the materials. Companies should include in response to this qualification their philosophy regarding use of chemicals or radiation in decontamination/sterilization procedures.

10. The vendor should have drying policies and procedures in place to determine when the materials have reached normal equilibrium and to ensure that all materials are completely dry, while not over-drying.

11. The vendor should have the capability for cleaning the materials after they have been dried. Materials should be cleaned manually using HEPA vacuums, soft bristled brushes, or dry rubber sponges.

12. The vendor should have the capability of re-boxing and re-foldering records if needed, using materials that meet the ANSI/NISO Z39.48 Standard for Permanent Paper and/or as specified by the institution.

13. The vendor should have the capability of returning the materials to the affected cultural institution in order, in appropriate boxes, etc., and in as useable a format as possible considering the degree of the disaster.

14. The vendor should have the capability of cleaning and processing contaminated or wet photographs, microforms, sound and moving image materials.

RANGE OF SERVICES

Vendors should address, in writing, their ability to perform these range of services.

1. Respond to a disaster call within 12 hours of being called by a Lyrasis member.

2. Report to a disaster scene within 24 hours of being called, to box and, if necessary, freeze the affected materials and to prepare for drying. [In cases of wide-area disasters, more time may be required to gain access to the site.]

3. Work with the affected organization and their insurance company or entity to provide the best options for recovery as possible.

4. Provide for freezer trailer rental, including the driver to drop off and subsequently to pick up the trailer at the affected organization when it has been loaded.

5. Provide appropriately-sized boxes and containers for pack out purposes.

6. Be able to transport a wide variety of formats (from books to photographs to audiovisual materials to oversize materials).

7. Freeze and completely dry the materials affected by a disaster using the most appropriate method (probably vacuum freeze-drying) and return these materials to the organization in useable form when completed.

8. Constantly monitor the drying process and manipulate the materials to ensure they are completely dried and not stuck together.

9. When the affected materials would be damaged by vacuum freeze-drying, provide other services to ensure the drying of these materials with the least possible damage.

10. Once drying has been completed, work with the organization to determine what else is needed in the way of cleaning services.

11. Provide options for the organization to restore their building that may include drying, temporary HVAC, carpet cleaning, water extraction, etc.

12. Mold should not be removed using fogging or spraying of chemicals. Mold should be removed from materials by HEPA vacuuming or brushing after drying.

13. Sterilization methods should only be employed when records or books have been exposed to biological or microbial contamination. While these agents, such as gamma radiation and/or ethylene oxide, do render the materials sterile, they can cause permanent damage to cellulose. Research has found that gamma radiation can result in decreased paper strength, and ethylene oxide is a serious health hazard. Use these

services only when absolutely necessary.

ADDITIONAL INFORMATION REQUIRED

Vendors seeking qualification from Lyrasis Preservation Services will provide (in appendices) the following information. Lyrasis reserves the right to ask follow up questions.

1. Short narrative of vendor's history and experience dealing with response and salvage of cultural materials.

2. List of equipment capacities and amount of materials available to the vendor to respond to the wide range of disaster recovery services listed above. Please state whether or not the vendor owns or has access to these items. If vendor has access to, please provide partner information.

3. List of certifications that vendor or personnel have that are relevant to disaster recovery services.

4. Philosophy of pricing (i.e. what factors contribute to costs for recovery and any national pricing lists, if applicable.)

DEFINITIONS OF ACCEPTABLE DRYING TECHNIQUES FOR LIBRARY AND ARCHIVAL COLLECTIONS

AIR DRYING

Materials are dried in ambient environmental conditions – 70° -75° Fahrenheit and 50 - 55% (or lower) relative humidity (RH) with constant air circulation using fans. Spread damp or wet materials out on tables or surfaces covered with absorbent material such as blotter paper, kraft paper or unprinted newsprint. Paper documents can be dried flat in small stacks or upright in racks. Increase evaporation rates by interleaving book pages with absorbent paper to wick moisture from pages and gutters of bindings. Interleaving should be changed when wet and materials should be frequently monitored for possible mold growth. Circulating fans can be directed to blow gently over groupings of wet materials. Items should be placed under weight when nearly dry to minimize cockling.

DESICCANT DRYING / DEHUMIDIFICATION

Desiccant dehumidification is a contracted service used to rapidly dry out a building and its contents after a water disaster. Rapid and thorough drying of building materials (without high heat) is imperative to the prevention of mold growth. The process replaces humid air with controlled low humidity air (less than 20% RH). Atmospheric pressure, air movement and temperature control are manipulated to speed up the drying process. An entire building can be dried in this manner while leaving damp collections out on shelves; or a room or area of a building can be converted to a drying chamber. This process is for onsite drying of damp to slightly wet books and records, equipment, and furnishings. It is not suitable for

drying coated paper.

FREEZE-DRYING

Batches of damp to slightly wet materials can be dried in a specially engineered self-defrosting blast freezer (one that quickly lowers the temperature). Very cold freezer coils draw out and condense the water vapor from the air. The water is drawn away from the wet material toward the drier air, thus drying the materials. Materials dry more quickly with less distortion if the temperature is kept between -10° to -40° F. This method is good for a variety of materials, after a small disaster if the institution has access to a freeze-dryer. Otherwise, this is not a very practical option since it is not easily scalable and the drying process is very long, from 2 –18 months.

FREEZING

If items cannot be dried within a few days, freeze them until further action can be taken. Freezing helps to stop mold growth, prevents inks from running and offsetting, and limits swelling. Blast freezing is best because smaller ice crystals are formed, but any commercial freezer will do. Pack materials loosely in cardboard or plastic boxes to allow air flow.

VACUUM FREEZE-DRYING

A process employing a combination of low temperature, low vapor pressure, and uniformly controlled heat in a vacuum chamber to dry materials. Frozen materials are placed in a vacuum chamber. At 32° F in a vacuum freeze-dryer, the ice in the materials vaporizes; i.e., H_2O goes directly from a solid to a gaseous phase through a process called *sublimation*. Vaporization absorbs heat and the temperature of the materials must be maintained at 32° F; accordingly, a small amount of heat must be applied to maintain the temperature. Swelling and distortion are greatly reduced with this process, since the ice in the frozen materials does not pass through a liquid state. Coated paper may be dried using this process if frozen within 6-8 hours after the disaster. Suitable for a wide variety of materials, this is the preferred method for salvaging saturated books and paper that are not easily replaced. (In most cases, it is actually much cheaper to replace materials than have them transported off-site and freeze-dried.). Materials will have to be dried off-site, and will be inaccessible for a period of time.

ARCHIVAL AND LIBRARY FORMATS THAT SHOULD NOT BE FROZEN OR FREEZE DRIED

- Wet collodion photographic processes
- Glass based negatives and positives
- Cased photographs: daguerreotypes, ambrotypes, tintypes
- Vellum illuminated manuscripts.
- Beaded or painted fabrics
- Magnetic media
- Art with friable media (pastels, charcoal)
- Joined wooden artifacts

RECOVERY SERVICES NOT RECOMMENDED FOR LIBRARY AND ARCHIVAL COLLECTIONS

DEODORANTS

Deodorants, in general, should not be used to mask toxic substances, or used to fool one's sense of smell, especially when toxic substances may exist. The safest way to reduce odor in materials after a disaster without using chemicals is to let the items air out in a well-ventilated space with a high rate of air exchange.

DISINFECTANT

Disinfection is likely not necessary. If the materials have been exposed to hazardous or toxic substances, all affected paper (or porous) materials will need to be reproduced or replaced. In general, do not apply disinfection agents, solutions, vapors, or mists. Use of chemicals could cause paper to weaken, inks to run or fade, and harm to photographic materials, and damage to metal surfaces. Do not use proprietary mixtures that may not reveal all the ingredients of their disinfectants. If chemicals must be used, keep a record of the type, quantity and use location of each chemical and cleaning agent used, along with the MSDS for each and provide to the customer. Materials also should not be exposed to radiation, ozone, or microwaves.

OZONE

The use of ozone is not acceptable for materials of permanent value because it is a powerful oxidizing agent and accelerates the breakdown of organic materials, especially paper. However, it may be a strategy to deodorize materials for short-term use or that will be reformatted.

VACUUM THERMAL DRYING

Also called *vacuum drying* or *thermal drying*.
Non-frozen, wet materials are placed in a vacuum chamber. During the drying cycle, the material is warmed by heated gas introduced into the chamber. When the material is heated, it thaws, which can increase damage: water soluble inks, adhesives, and colors will run; coated paper will stick together; book boards will likely become more warped; book cloth will bleed and blister. This technology may be suitable for wet, unbound materials if they are to be photocopied or microfilmed after they are dry, but in general this process is not appropriate for original or unique materials. It can be effective in smoke odor removal and in non-chemical fumigation. This process is not suitable for coated paper or saturated materials.