

Disaster Recovery Guide

Developing a Disaster Recovery Plan



Developed by the Printing & Imaging Association of MidAmerica
Updated July, 2003

Introduction

What would happen if a wind storm hit your plant and shut you down temporarily? Or how about a lightning strike that destroys your computer network? Who would you call? How would you get back in operation? Would you have the right kind of insurance?

These are the kinds of questions that are best answered PRIOR to the actuality of a fire, tornado, or flood devastating a company. Yet, ask any small business person if they have planned for this type of plant closure, and 99% of the time the answer is no, and the primary reason is lack of time.

In late 1999, the Association's Board of Directors determined that a guide was needed to help the membership plan for disaster recovery. This publication is the result of the Board's direction and the leadership of the Disaster Recovery Committee. We hope that you make the best use of it, and if nothing else, keep it handy – just in case.

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The Disaster Recovery Guide (DRG) is divided into three main areas:

Planning – This section outlines the procedures necessary for a company to look at its risks and how to minimize its exposure;

The First 72 Hours – Here's the action plan that needs to be followed just in case disaster strikes. Although a lot of it is common sense, when a disaster strikes, sometimes the most level-headed folks fail to think clearly.

Appendix – This is the real meat of our Guide. Here are checklists and guidelines that will help in planning and reacting to a disaster. We also list a variety of resources from insurance providers to various publications that can assist in developing a disaster recovery plan.

The DRG is straightforward and uses a checklist approach to help a manager prepare a company specific plan. Remember, incorporate what works for you and discard the rest.

Planning

Establish a Planning Team

In reviewing your company's ability to cope with disaster, and/or to plan for that event, the scope is too much for one person. Consequently, develop a team and assign tasks based on functions so that nothing gets overlooked. If your company has 10 employees, the team could consist of two or three people. A company with several hundred employees may have a team of 10-15. Here are some possible functional areas:

Executive – President/CEO and other key Execs. Responsible for overall team and the business functions.

Administration – Controller/Bookkeeper; Outside Accountants. Responsible for all administrative, data processing functions.

Manufacturing – Plant Managers/supervisors. Responsible for all production/manufacturing functions as well as safety issues.

Personnel/Community – HR Director/plant manager/supervisors. Responsible for all issues regarding employees, their families, and the community.

Finance – CFO/Controller/CEO. Responsible for insurance and financial functions.

Now that you have your team in place, it's time to start reviewing your operation and analyzing the risks.

Determine the Risks

In planning, consideration has to be given to the type of disaster. Flood, tornado, and fire are the most prevalent in this part of the country. What about a major power outage or lightning strike? How about a virus which destroys files and is transferred to your customer's systems? In our digitally connected industry, these are surely disasters.

The form of disaster and how we plan to address it is crucial for insurance coverage. For example, if a company determines that flooding is their major risk, and overlooks the possibility that the results of a flood could close the business for several weeks, lack of business interruption insurance would be as bad as not having any insurance coverage at all.

Thus the first step in planning a Disaster Recovery Plan, is conducting a Vulnerability Analysis. Although this is a relatively subjective approach, it can help a company focus its efforts in the appropriate areas. For example, if a business is located in a flood plain in San Antonio, a flooding disaster might be given a stronger consideration than a tornado.

Type of Emergency	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	TOTAL
		High Impact		Low Impact	Weak Resources	Strong Resources	
	5 -----1		5 -----1		5 -----1		

In turn this would impact how insurance coverage is procured and what type of planning would be in place.

The following is a simple chart that can be developed and guide a company in its decision making:

Each disaster is given a numerical value in probability, impact and resources. The values are totaled and the higher the total value, the more resources should be utilized in planning for it.

Types of Disaster

- Fire
- Hurricane
- Tornado
- Windstorm/Hail
- Electrical Surge/Power Outage
- Flood
- Computer Virus

Probability

A subjective ranking between 5 – 1 (1 being lowest) is assigned to the type of disaster.

Human Impact

Determine the potential in harm or injury that the disaster could have on your personnel. A subjective ranking between 5 – 1 (1 being lowest) is assigned.

Property Impact

What's the potential loss to property? Cost to replace; repair; business interruption. A subjective ranking between 5 – 1 (1 being lowest) is assigned.

Business Impact

What is the potential loss to business for this disaster? A tornado destroying the plant has a far higher weight than a computer virus – or it could be vice versa depending on your market and technology. A subjective ranking between 5 – 1 (1 being lowest) is assigned.

Internal & External Resources

This response might be the most difficult to assess a ranking. Do you have the necessary resources and capabilities to handle a disaster? Do you have external resources that could assist? A subjective ranking between 5 – 1 (1 being lowest) is assigned.

After numerical values have been assigned and totaled, it becomes apparent which types of disasters potentially have a severe impact on the business. Consequently, when the company starts its self-audit process, it can focus on the issues that could have the most severe impact.

Company Self-Audit

Once the teams are made up and the initial risks are assessed, it is time to start in-depth analysis of the risks that are involved and then developing the necessary plans.

Inventory

The first step is to prepare an inventory. If a loss does occur, insurance carriers are going to demand an itemization of the loss – every single item. If you don't know what you have, you can't make a claim for it. You can utilize your existing inventory and depreciation records and video tapes. If you don't have physical inventory records, it's now time to prepare them.

Teams: Manufacturing, Administration

Inventory

- Paper, film, supplies
- Administrative Equipment
- Manufacturing Equipment
- Work-in-Process
- Archived Digital Records
- Job Tickets
- Video Tape Entire Facility

Business Evaluation

This requires the actions of the CEO and CFO and the company's insurance agent. What happens to the business if a disaster strikes and closes it down for half a day; 2 days; 2 weeks? What will the financial needs be for the business? Will insurance provide the necessary working capital?

Don't make the mistake of assuming the agent knows all the ins and outs of our industry or business interruption insurance. No matter how good the agent, very few experience a business interruption loss. Read Appendix IV in the last section of this publication to better prepare you for the insurance questions which will rise in this part of the analysis.

Team: Executive, Financial

Hazard Evaluation

Many of our companies deal with a variety of hazardous chemicals. What are they? What happens in case of a fire? Flood? Tornado? If inks and solvents are being spread all over a neighborhood how will cleanup be handled? What proof is available that those chemicals don't possess components harmful to human life?

Team: Manufacturing; Personnel

Key Process Evaluation

Every functional area has to review their processes and discover what happens if all of a sudden their equipment or records did not exist. How would they get back in business? How soon?

Team: Administrative; Manufacturing; Personnel; Finance

Review Internal Plans and Policies

Existing documents and procedures have to be reviewed to examine areas such as: evacuation plans, security procedures, plant closing policies, fire protection plans, etc.

Team: All Teams

Meet with Outside Groups

This may not be an issue with many of the Association's members, but if you are a major employer in a community, this aspect cannot be overlooked. It will be important to meet with the local community's fire and police department as well as the Local Emergency Planning Committee (LEPC) to discuss possible emergencies and hazards. Quite often they can be a major resource for assistance.

Team: Personnel; Executive

Preliminary Actions

Once the team has determined what it has to address in disaster recovery planning, the areas of specific action can be established. A checklist of items can be created based on the checklist found in this document's appendix.

There are a few other areas that can also be addressed:

- Posting Emergency Numbers

- Identifying Critical Records (and safeguarding)

- Developing A Site Map & Evacuation Routes

- Establish Maintenance Schedule for preventive devices (extinguishers, etc.)

- Train Employees on Evacuation Drills and preventive devices

- Writing up Procedures (Use Checklist in Appendix) in case of a disaster, and this takes us to our next section.

The First 72 Hours

It's the worst case scenario. A disaster has struck, and the next 72 hours are the most crucial in getting your business up and running.

Sound The Alarm

Whether it's a hailstorm, tornado, or fire, there are a variety of tasks which have to be accomplished immediately! They are:

Contact the authorities

Make sure employees (if they are in the building) are evacuated. Shut off gas, utilities, and machinery (if warranted)

Establish security for the building and records

This is when the checklist that has been developed is crucial. During stressful times important elements can be forgotten. A pre-determined phone tree is also very helpful to make sure that pre-assigned tasks are accomplished. (See Appendix).

Analyze the Loss

Once the 'must' items have been accomplished, it's time to start the review process. Is equipment operational? Are files accessible? Can the building be used? Will work be interrupted? For how long? Each department/business function should be responsible for what has been lost with team leaders reporting to the CEO.

Contact Customers

Once the type of loss is determined, the company begins the process of contacting customers and outlining your contingency plans for them. Is there work to be farmed out to another printer? Will they accept delays? How will you ensure that once your customer's work/work-in-process is completed that your customer does not want to move his business elsewhere?

Your Association can play a crucial role by being an intermediary in finding members who are willing to assist as well as using its network to find valuable resources that will aid a company in its recovery.

Contact the Insurance Provider

When a property loss occurs, timely contacting of the insurance provider is highly important. Make sure to contact the agent, and don't assume that he will automatically contact the carrier. Settling a major insurance loss can be a painful process of negotiation and documentation — at the best of instances. Document. Document. Document.

In the instance of a major loss, it may be necessary to hire an outside consultant to act as your agent. This person will be an individual who is very knowledgeable of the insurance business and how it operates – and will be working to protect your interests rather than the insurance provider.

Contact Suppliers

Suppliers need to be contacted and reassured as to your status to operate and your need of support. Supplies may need to be redirected to another printer, or terms of sale may have to be re-negotiated because of the disaster.

Contact Employees

Employees and their families need to be reassured that the business will continue to operate and they have a job. Someone who doesn't think they are going to receive pay for several days, or weeks, will quickly be looking for employment elsewhere. In our industry this could be an insurmountable loss.

Contact the Public

Many firms can recover from a seemingly catastrophic loss, but it's important that the public be aware that the firm will still operate. It may require the hiring of a public relations firm, or a task given to the sales/marketing team, but people have to be told that you are still in business – just momentarily hindered.

How were your business and community neighbors impacted? How you handle this aspect could help future relationships.

Is developing a complete disaster recovery plan daunting? Yes, but you don't have to 'eat the elephant' all in one bite. Start by preparing the 72 hour checklist you will find in our appendix. Once you have done that, you will become cognizant of other issues. It could be the type of insurance you don't have. It could be processes you need to put in place to backup your networks. It could be a more functional design of your building. There will be a variety of rewards that you'll discover as you accomplish the process. And if disaster ever occurs, you will be prepared.

Appendix I

Planning Checklist

Establish Disaster Recovery Team (Functional Areas)

Executive	
Administration	
Manufacturing	
Personnel/Community	
Finance	

Determine Risk to Business

DISASTER RISK CHART

Type of Disaster	
Probability	
Human Impact	
Property Impact	
Business Impact	
Internal & External Resources	

Company Self-Audit

CREATE INVENTORY (VIDEO & HARD COPY)

Equipment (Mfg. & Admin.)	
List Manufacturer, Serial #'s, Date of Purchase	
Determine Fair Market & Replacement Value	
Establish Work-in-Process Methodology	
Determine update timing (monthly, quarterly, annual)	
Archive Digital Manufacturing Files	
Determine update timing (monthly, quarterly, annual)	
Job Jackets/History	
Digital, Microfiche	
Supplies & Raw Material	
Finished Goods & Storage	

BUSINESS EVALUATION

Determine Value of Business	
Determine MIS Risks	
Backups	
"Hot" Sites	
Offsite Storage of Records	
Assess Ability to Recover (Cost & Time)	
Digital Data	
Manufacturing Equipment	
Administrative Functions	

REVIEW PROPERTY & CASUALTY COVERAGE

Business Interruption	
Replacement Cost Riders	
What type of disaster coverages are available?	

HAZARD EVALUATION

What type of chemicals are stored onsite?	
Is there any hazardous waste stored?	
What containment options are available?	
Is there potential exposure to the community? Employees?	

KEY PROCESS EVALUATION

Sales	
Customer Service	
Prepress	
Pressroom	
Finishing	
Warehouse	
Billing & Receivables	
General Accounting	

INTERNAL PLANS & POLICIES

Evacuation Plan Developed & Posted	
Fire Protection (Include maintenance plan)	
Security Procedures in case of disaster	
Plant Closing Policy	
Mutual Aid Agreements	
Post Emergency Numbers	
Emergency Telephone Tree (See Appendix III)	
Identify Critical Records	
Employee Training Program (Evac. and Preventive Devices)	

MEET WITH OUTSIDE GROUPS

Fire Department	
Police Department	
LEPC (Local Emergency Planning Committee)	
Telephone Company	
Utility Company	
Neighboring Businesses	
American Red Cross	

Appendix II

The 72 Hours

Sound the Alarm

- Call Authorities (911, Police, Fire)
- Evacuate Building
- Shut off gas, utilities, etc.
- Reroute Telecommunications
- Establish Security for building and records

Analyze the Loss

- By Department
- Equipment Loss
- Work-in-process
- Records/customer files
- Report to CEO/CFO

Contact Customers

- Utilize Phone Tree Data
- Prepare Script to answer major questions
 - What was lost
 - Time to recovery
 - Alternative plans

Contact Insurance Provider

- Review Loss
- Prepare Loss Documents
- Is Loss Consultant Necessary?

Contact Suppliers

- Are Work-in-process supplies necessary?
- Inventory
- Financial arrangements
- Will alternative production sources be necessary?

Contact Employees

- Are they working? What hours?
- How will payroll be handled? Benefits?
- Contact family members

Contact Public

- PR Firm?
- Contact PIA-MidAmerica
- Contact Community Newspaper
- Contact Neighbors
- Local Community/Municipality

Appendix III

Lone Star Litho, Inc. – Phone Tree

Company Personnel	Home Phone	Cellular
Company President	_____	_____
Plant Manager	_____	_____
Personnel Manager	_____	_____
Chief Financial Officer	_____	_____
Maintenance Supervisor	_____	_____
Medical Personnel	_____	_____
Company Information Line (Recorded Message)	_____	_____
 Local Emergency, Media, News		
Local Radio, TV	_____	_____
Local Municipality	_____	_____
911 – Be prepared with street direction, etc.	_____	_____
Police	_____	_____
Fire Department	_____	_____
HAZMAT Response Team	_____	_____
Local Hospitals, company physician	_____	_____
Utility Companies (Phone, Power, etc.)	_____	_____
 Outsourcing Numbers		
Power (generators, etc.)	_____	_____
Computer Support	_____	_____
Insurance Agent	_____	_____
HVAC Support	_____	_____
Major Suppliers, Customers	_____	_____
Other Important Numbers	_____	_____

Appendix IV

Insurance

Insurance is an important aspect of disaster recovery planning, and quite often one of the most misunderstood and frequently overlooked part of the planning process.

In this section, developed by Joseph Bellucci with the Printing and Imaging Association of New York State, we outline the planning process as well as what's involved in case of a loss.

Insurance Reviews - The key to pre-loss planning

Pre-loss planning is the most effective way to assure equitable loss settlement in the event of a large fire or other equally disabling event at your printing establishment. Accuracy of your Plant and Equipment values and carrying adequate amounts of insurance are the best way to avoid problems when losses occur.

Terms and Conditions Relating to Property Values

There are other issues and insurance requirements to keep in mind when determining the appropriate value of your building and contents, including:

Replacement cost versus actual cash value – Always confusing, these insurance terms will determine how your plant will look and operate following an event of loss. Let's examine each term individually:

Replacement cost – Coverage which intends to most closely reproduce your current functional plant environment in the event of a loss. When determining values for your press equipment, understand that you may not be able to find another 10 year old, 2 color, Heidelberg press to replace your current machine. You must decide with your agent, if you will carry extra insurance on this equipment to replace with say a new 2 color Speedmaster, or find a closely resembled press in the used marketplace. If you don't replace this press, your insurance carrier will most likely pay you a depreciated value on the existing equipment in your loss settlement.

Of similar concern with replacement cost issues, is new equipment recently purchased, which appreciates in the first two to three years, because of technological advancements and cost increases in the marketplace. The six color Komori press you purchased two years ago for 1.2 million dollars, may now cost 2 million dollars if you had to replace this machine in today's market. Your limit of insurance should reflect your intentions to replace this machine with new equipment in the event of a loss.

Actual Cash Value – If you decide not to replace lost equipment either because new equipment is too expensive to buy, or too costly to insure against at higher values, your insurance carrier will pay you for the depreciated or actual cash value of this equipment in your loss settlement.

The integrity of your record keeping will help to guide you and your agent, when explaining to a claims adjuster the intent of your coverage.

Co-Insurance -- What is it and how does it affect your loss settlement?

The issues of proper plant and equipment valuation are very important because your insurance carrier requires you to carry an amount of Insurance at least equal to some agreed percentage of full coverage to make certain they collect enough premium for

your total exposure to loss. The pre-agreed amount of adequate coverage is referred to as a Co-insurance requirement.

If your plant and equipment values fall below a million dollars, coverage is most likely provided by your carrier through some type of business owner's package policy (commonly referred to as a BOP). These reasonably priced products normally waive co-insurance requirements and will not penalize insureds for carrying values which would be considered too low by industry standards.

As the values of your plant and equipment increase, your carrier becomes concerned that adequate coverage is provided (and they collect sufficient premium for your exposures). If proper co-insurance values are not maintained (normally 80-90% of full replacement cost coverage) your carrier will penalize you in partial loss settlements on your plant and equipment.

Co-Insurance requirements relating to your building insurance are usually computed per commercial contracting building standards, relating to per square footage cost of current replacement building values. For example, if you owned a 10-year-old brick building in the city of Garland which is 5,000 square feet, your insurance carrier would require an insurance limit reflecting somewhere between an estimated \$35 and \$50 per square foot of fire and related perils protection, depending on building condition. This building would generate an insurance replacement cost estimate of \$175,000 (5,000 sq. ft. x \$35 per sq. foot = \$175,000). Your co-insurance minimum requirement amount would then be \$157,500 (\$175,000 x 90%).

Loss penalties are experienced when these coverage minimums are not met. To illustrate this issue: Let's say you insured the above building for \$125,000 in lieu of the required \$157,500 and you had a small fire loss which caused \$30,000 worth of damage to your building. Because you are not insuring at the minimum co-insurance value, you are penalized in the amount of settlement you receive from your carrier.

The formula followed is:

$$\frac{\text{Amount of Insurance you did carry}}{\text{Amount of Insurance you should have carried}} \times \text{the amount of loss}$$

In our example:

$$\frac{\$125,000}{\$157,500} = .79$$

$$.79 \times \$30,000 \text{ (loss amount)} = \text{loss settlement of } \$23,700$$

In the event insurance values equaled at least \$157,500, full loss settlements would be provided.

As you can see, Co-insurance is an important function of loss settlement.

Time Element coverages - Business Interruption Insurance

In the event of a major insured loss such as fire and related smoke damage, there is another important issue which impacts the actual economic loss you will suffer. This issue is the amount of time your business will be shut down as a result of this loss. Not only will

a direct economic loss be felt by you, the business owner and your employees, but an indirect impact will also be felt by your creditors and clients who depend on your products and services.

It's surprising how many insurance professionals gloss over the topic of business interruption. In some cases the topic isn't fully understood, or the amount of coverage carried isn't adequate to cover the exposure. In either case, the survival of your business in the event of a loss is dependent on a practical approach to this topic.

In speaking with claims adjusters on the topic of business interruption insurance, they stress the importance of accurate accounting records to construct a fair and accurate settlement of time element losses. Your gross receipts and tax returns for the past three years are a good place to start. As was the case with other property insurance, a minimum co-insurance limit is normally requested by your carrier (ranging from 50 to 125%) to compute adequate coverage and premiums for the exposure present.

The amount of coverage selected should give your business enough money to cover your continuing expenses such as mortgage payments and lease payments on your equipment. Payroll needs to be considered. Would you lay off personnel or continue their pay? Because the market for qualified individuals is so tight, consideration needs to be given to make sure that ordinary payrolls are included in your estimated business interruption limit.

The coverage also provides an opportunity to realize some amount of net income which would be realized during a certain time period. The net income projection becomes a difficult amount to predict, given the sales trends of a printing operation. If most of your business comes from traditional clients, or jobs which run every year or several times a year, the amount of net income to include in the business interruption calculation becomes an easily identifiable figure.

If your sales trends are not reflected in your accounting records, the amount of coverage selected and the amount of claims settlement will be a most difficult task. Just as a building burns to the ground and a business owner must paint a picture for the claims adjuster to recoup their plant and equipment, so too does the accounting record act as a paintbrush to help recoup net income and pay your creditors while your business cycle is interrupted by loss.

Time Element Co-insurance Requirements

As referenced above, the amount of coverage you provide for must be obtainable from accounting records, to justify the limit carried. You must also determine how long you feel you will be shut down in the event of a major loss. How long will it take you to fix existing press equipment? Will you buy new or used equipment and how long will it take to set up a new production line? How long will it take for you to reproduce negatives, plates or electronic files for existing customers?

Once the above variables have been determined, you must then sit down with your Insurance professional and compute the amount of coverage desired. Most carriers provide business interruption worksheets for agents and their customers to fill out. Many times confusing, let's illustrate the proper coverage amount:

"ABC Commercial Offset Printing," is located in Anytown, Texas. They generate \$3,000,000 in annual sales (\$2.8 million and \$2.2 million in the two years prior) and they need to determine how much business interruption insurance should be opted for.

They have a monthly mortgage payment on their building of \$4,500 and also another \$7,000 each month is paid to finance companies on leased press equipment. Total monthly leasehold payments equal \$11,500.

Salaried employees and key press and prepress operators (who will most likely help you get back in business after a loss) total gross monthly requirements of \$29,500. Traditional long term customers to the printing operation total 100 and each customer has an average printing expenditure each year of \$6,500. Projected income from this traditional base would be \$650,000 or \$54,000 monthly.

Given the above variables, your minimal monthly income needs would be \$95,000. If multiplied by 12 months, you would have a probable annual business income need of approximately \$1,140,000. This would be the maximum amount of coverage required by your business or the 100% value. You may opt for coverage requirements that are less than this based on a number of factors.

Most losses at printing plants won't always be major fire losses. If ABC Printing had a sprinkler system which contained say a smaller fire loss to a corner of your plant and your operations were only interrupted for let's say three months, then your insurance need only consider a three month shut down or \$285,000.

Under most circumstances, the minimum allowable co-insurance percentage for business interruption insurance is 50%. In our above example, this would generate a minimum coverage requirement of \$570,000. Should this minimal amount not be carried, in lieu of your annual coverage requirements, your firm again would be in a position to potentially experience a co-insurance penalty.

Premiums charged for business interruption coverage, are a function of the base insurance building rates. The percentage of this rate used for business interruption premium goes down, as the amount of co-insurance percentage selected increases. Simply stated, as you elect higher amounts of coverage which more closely approximate your annual need, your premium charges proportionally drop.

Extra Expense Insurance is usually sold in combination with business interruption coverage. This coverage provision handles those extra expenses incurred by you the business owner to maintain minimal business operations. As a printing concern, you may be able to subcontract out work while your press is being repaired. Possibly you could rent out office space in another location until your renovations are complete. In either case these expenses are normally considered when settling the time element loss.

Of course it goes without saying that the accuracy of your accounting records will be the best and only tool available to settle your loss. Computer programs should be backed up on a regular basis and stored off premises. The same fire which destroys your plant will also destroy your records.

There are other types of printing-specific business interruption coverages which may be opted for.

Mechanical Breakdown — Built into Utica's Insurance Printer's program, this coverage can also be supplied through the utilization of some type of boiler and machinery form on your production equipment.

Electronic Data Processing — Floaters can also provide Business Interruption Insurance as a result of computer breakdown and subsequent loss of pre-press programming.

Manufacturer's Selling Price – Normal policies cover the replacement cost of goods destroyed. For example, if you had work in process or finished goods destroyed, the policy would cover the cost of materials, not the loss of sales or the cost to reprint

those items. Consequently, ask your agent to provide a policy that covers manufacturers selling price so those lost goods will be valued at the selling price to your customer.

Dependent Properties – In our industry we are quite frequently dependent on other firms to supply us with material or provide trade services. What would happen if one of these businesses was destroyed by fire or had some form of disaster? Ask your agent if your business interruption insurance provides dependent properties coverage.

Leasehold Interest – If a company leases/rents rather than owns property, it may have a business interruption exposure. If you have made leasehold improvements and lost them in a disaster to the building, you would not have use of these improvements. You may have also locked in reduced rents at the time of your negotiations. Leasehold interest coverage may provide some coverage to these exposures.

Whatever property coverage options are selected in creating an appropriate insurance program for your business, the key elements to consider are: conduct annual insurance reviews with your insurance professional. Make sure to select sufficient amounts of building coverage, based on building size type and condition of your premises. Adequate coverage on your personal property should be based on its functional value and your replacement intentions in the event of a major loss. These amounts should be measured against Replacement cost or Actual Cash Value co-insurance requirements set by insurance carriers.

With regards to time element coverage, through the utilization of accounting data, the amount of coverage selected should be sufficient to make lease payments on building and equipment, provide loss of monthly anticipated net income, and the expense of salaried employees (if opted for) as well as key hourly employees who will assist you in getting your business operations underway again. The extra expenses incurred during this time period to maintain minimal business operations are also included.

What Happens After the Loss Occurs

What are the insured's expectations, who is involved in the claims settlement process and how long does it take to fully settle the claim? Other than funerals and possibly mortgage closings, there are very few analogies in life that offer the frustration of a major disaster in your place of business.

Experiencing a major insurance loss at your place of business is not a happy or enjoyable time. It can however be a time to learn many things about insurance and the claim adjustment process.

What and who are involved in the claim filing process? -- The insurance contract will normally outline that the carrier should be made aware of a claims instance within 24 hours after a claim occurrence is recognized (or whenever is reasonably possible). In turn, the insurance company should make contact with you through one of its loss adjusters within 48 hours of this loss notification

A good planning tool will be to have your agent at the time of policy purchase explain how your losses will be handled. Ask for a written procedural outline of who to contact and make sure there is a way to reach someone at any hour of the day. If this isn't clearly laid out, you might want to question the level of service that is going to be provided in the future.

Your Responsibilities at the time of loss -- While reviewing the claims procedure process with your agent, you will learn that you have three primary responsibilities as the insured, which must be observed in the event of a loss. As you review these items, you

will come to appreciate the pre-loss coverage planning you have done with your insurance professional which hopefully will lessen the burden and the grief involved with the post-loss experience.

Timely notice of loss – Short of being on vacation or plant shut-down, you will most likely be made aware of a loss occurrence on the next business day. As soon as it is reasonably possible, your insurance carrier should be made aware of the loss. Please remember, notice to the agent is not always notice to the insurance carrier. Make certain your agent will be making immediate contact with your carrier.

Protect undamaged property – You have a responsibility to make certain no further damage occurs to either damaged property or undamaged property at your place of business. In the event of fire or burglary, you must sort out the damaged goods and attempt to secure your premises to protect against the elements and or theft of additional personal property (more on this topic under Uninvited Guests).

Prepare an inventory or Statement of Loss for the Company – In a timely fashion, a list of all damaged property should be prepared for the company. Your agent should be leading the charge here; however, both you and your employees will most likely assist in the process. Be sure to keep track of all the time and labor spent on this exercise, as your carrier should reimburse the labor costs of preparing this data. Again the assistance of Inventory sheets, depreciation schedules, Insurance Statement of Values, videotape or pictures of the premises, etc., will help you, your agent and the claims adjuster construct this Loss Statement for the insurance company.

This Statement of valuation will also require, depending on the nature of the loss, for you to obtain estimates on the repair or replacement of damaged property or building values. The amount of loss settlement provided will be dependent on the intent of your coverage. If Replacement cost has been opted for, equipment and buildings of like functional value will be pursued. Using an example of a damaged 4 color, 1986 Heidelberg press with an intended coverage amount of \$150,000: The marketplace will be researched for a press of similar quality and functional value. If none are available, this \$150,000 amount would be applied towards a new press of similar functional use.

If no replacement press is sought, you and your carrier would have to settle on a reasonable sum for the loss of this equipment. In some cases, the settlement option may be less than the intended \$150,000. This negotiation process is where the real frustration of the loss experience can be sometimes felt.

Much more could be written on the topic of Loss Settlement. The major point to realize is that you as the business owner have the initial responsibility of obtaining estimates for these replacement items.

Uninvited Guests – Who are these people? -- Similar to the buzzards who circle the dead in old Western movies, you will encounter a number of people you didn't know existed prior to your loss experience. For starters, these uninvited guests all have access to police and fire department scanners. When the call goes out to respond to a disaster at your place of business, these folks will show up at the business before the owner does. Just who are these people and what do they want?

Restoration Specialists – They go by a variety of names but these firms can be very helpful immediately after a loss assisting you the business owner with your claims responsibilities of securing your premises against further loss. These firms will inform you that you needn't worry about paying them, as your insurance carrier recognizes them as a necessity to your immediate needs and will include them in the claims settlement process.

If you cannot get in touch with your agent, it normally is acceptable to employ these people to board up your building to protect against further damage. They will ask you to sign an assignment form which will authorize your carrier to pay them. This is probably acceptable; however, if you develop a pre-loss list of available specialists in your area, you could control who you are using.

These Restoration Specialists may also offer to help you inventory your damaged goods, help clean up your premises after a loss and may even offer damage and repair estimates to reconstruct your building or premises. These offerings should be run by your agent to make certain they will be covered by your carrier. Again, if the agent isn't available at four in the morning, you may comfortably employ these folks for boarding up purposes only. You should instruct them to contact your agent for further authorization on clean up and other related services.

Although restoration firms can provide a valuable service from an immediate need standpoint, the process to inventory lost goods is more effectively handled by you and your agent to assure accuracy and efficiency.

Public Adjusters – Public claims adjusters offer to step into claims situations where someone isn't doing their job(s) and you, the business owner, are building up a high level of frustration with the claims settlement process. There are normally a number of elements which precipitate the need to consider the utilization of a public adjuster.

To begin with, a major loss must have occurred for a public adjuster to show up at your doorstep. These people are paid through a proportion of the loss settlement provided by the insurance carrier. If the loss isn't substantial, these folks won't normally waste their time.

Secondly, your pre-loss coverage planning process probably lacked some important thought in the area of sufficient coverage. A public adjuster will promote the fact that they will get the most amount of recovery out of any loss situation (actually pre-loss coverage planning will derive the most amount of satisfaction from a loss occurrence).

Third, and the most probable reason any business owner would consider utilizing a public adjuster, is that neither the insurance carrier or agent are responding fast enough to ease your concerns about your claim situation. Public adjusters promise the insurance carriers and agents will respond to them, because they know how to deal more effectively with the claims handling process. Herein lies the irony of their employment.

Public adjuster involvement has its place. Should a building burn to the ground and all of your records are destroyed and you most likely do not intend to initiate your business operations again, a public adjuster may in fact have some success in adjusting monies which might not otherwise be offered. There is traditionally more time involved when any third party intermediary acts on your behalf. You must be willing to wait for your money.

To summarize the uninvited guest section, if everyone does their job prior to a loss occurring, there will be little need for third parties to assist the loss adjustment process. The restoration specialist has its place and depending on the circumstances, can be helpful in the securing of your premises and the cleaning up process.

When do I get my Money? -- The most often asked questions regarding most claim situations are, "How long will all this take and when do we get our money?" There are no rules of thumb here. Every claims situation stands on its own. If everyone is doing their job and you as the insured met your handling responsibilities in a timely fashion, the claims settlement will be perceived as being timely. If at any time you feel the process is taking too long, it probably is and you should be communicating with your agent as to any frustrations you are feeling.

As far as when you get your money, this is normally a function of how large your claim was, to what extent the loss has disabled your business and how urgent the cash need is. Again, there are no rules of thumb. Most carriers will attempt to meet your immediate needs with regard to temporary working quarters, substitute business needs and immediate out-of-pocket costs. The larger ticket items will be researched and paid once the insurance company and insured have agreed upon appropriate values. Time frames vary based on the available market for replacement equipment.

Summary

Pre-loss planning from both a coverage and logistics standpoint will help to lessen the frustrations tied to a loss experience. This planning should include accurate inventories and accounting records (for business interruption consideration), appropriate coverage amounts based on either a replacement cost or actual cash value intent and sufficient amounts of business interruption insurance to cover your continuing business expenses in the event of a loss.

This planning process should coincide with insurance company co-insurance requirements and also expectations placed on you and your insurance professional in the event of a loss. Your agent should provide you with a written outline of claims handling procedures at the time of policy delivery. There should be no surprises when a loss occurs.

After the loss occurrence, there are a number of events which should happen in a somewhat timely fashion, in order to minimize the amount of frustration which inevitably develops during the claim settlement process. Knowing what to do and who you will be dealing with, pursuant to uninvited guests, will help you the insured to develop realistic expectations in the area of timely loss settlement.

Appendix V

Resources

Appraisers

Alpha Graphic Machinery (Equipment)
2000 Baltimore, Suite 210
Kansas City, MO 64108
(816) 474-3131

Foster Services (Equipment)
1620 E. 8th Street
Kansas City, MO 64106
(816) 471-6100

Winco Equipment Co., Inc. (Equipment)
3601 Kim Drive, #101
Irving, TX 75061
(972) 986-9146

Hazardous Waste/Spill Containment

Effective Environmental, Inc. (E2)
2515 S. Beltline Road
Balch Springs, TX 75181
(972) 329-1200

Eagle Construction & Environmental Services, Inc. (corporate office)
9701 East I-20, P. O. Box 872
Eastland, TX 76448
Phone: 800-336-0909 (24 hour)
Fax: (817) 306-8086

Computer

Enovation
1146 Booth Street
Kansas City, KS 66103
(913) 342-1234

Pitman Company
9900 Pflumm Road, #42
Lenexa, KS 66215
(913) 888-2151

Johnston Technical Services
2877 LBJ Frwy.
Dallas, TX 75234
(972) 620-1435

Appendix V (Continued)

Computer (Continued)

Liasion Resources, LP
4302 Airport Blvd.
Austin, TX 78722
(512) 323-0550

David Clauss
Mesquite, TX 75185
(214) 993-7299

Emergency Management Offices (State & Federal)

Spills

Missouri Department of Environmental Services

Environmental Emergency Response (Spills) (573) 634-2436 (24 hours)

Kansas Department of Health & Environment

Kansas Environmental Emergencies (Spills)
Daytime (785) 296-1679
Evenings and Weekends (785) 296-0614

Environmental Release Hotline (Texas)

Texas Commission of Environmental Quality
(800) 832-8224 (M-F; 8:00 -- 5:00)
(512) 239-2507 (24 hours)

Spill Notification Hotline (Oklahoma)

Oklahoma Department of Environmental Quality
(800) 522-0206

Emergencies

Federal Emergency Management Agency (FEMA)

Region 6: Denton, TX
(817) 898-5104

Region 7: Kansas City, MO
(816) 283-7061

State of Kansas Division of Emergency Management

(785) 274-1409
Emergency - (785) 296-3716

Missouri Emergency Response Commission

(573) 526-9240/(800) 780-1014

Appendix V (Continued)

Emergencies (Continued)

Oklahoma Civil Defense

P.O. Box 53365
Oklahoma City, OK 73152-3365
(405) 521-2481

Texas Division of Emergency Management

P.O. Box 4087
Austin, TX 78773-0001
(512) 424-2000 - Non-duty hours
(512) 424-2138 - Duty hours

National Response Center (NRC -- Federal)

(800) 424-8802

Note: Notification of the NRC does not constitute notice to the state)

Loss Consultants

H.R. Margolis, CPA
555 City Line Avenue, 4th Floor
Balacynwyd, PA 19004
(610) 667-4310

Public Insurance Adjusters

National Association of Public Insurance Adjusters (NAPIA)
21165 Whitfield Place, #105
Potomac Falls, VA 20165
(703) 433-9217

Texas Association of Public Insurance Adjusters (TAPIA)
Contact: Mark Pistorius
Telephone: (214) 369-8501

Publications (FEMA)

A variety of excellent publications on disaster planning can be found at:
<http://www.fema.gov/fima/planresource.shtm>

Fire and Water Damage Restoration Specialists

Use your internet search engine and look in the yellow pages in your area for:

fire and water damage restoration

Appendix VI

Pre-Disaster Planning - Information Technology

Prepared by Johnston Technical Services
Dallas, Texas

Today's printing and imaging company is totally reliant on its computers and information processing. The loss of a machine and/or a network due to a natural or man-made disaster can destroy a business.

Johnston Technical Services has developed this planning outline to assist the Association's members in assessing how well they might be prepared to handle a disaster and then recover.

Step 1. Identify the Value of information technologies in terms of business goals by calculating computing costs. Here's an outline of how to make the calculations:

1.) Estimate Potential Downtime (In addition to the direct Downtime caused by the disaster, additional Downtime may have to be considered for the following elements of Restoration and Recovery of Systems)

a. Determine the amount of time necessary to access interim hardware, software, communication lines & expertise if needed. Possible issues are: Accessing "Hot Spares" or Cold Spares for critical equipment; Does a maintenance contract exist to guarantee availability of replacement or technical expertise on site within "x" hours

b. How long will it take to restore functional System, Network ,Applications and User (See VI Server, Tape Library Tech Notes)

2.) Calculate the Cost of Downtime

CDT = Cost of Downtime

A = Avg Number of users logged in

W = Avg wage of those users

V = Overhead

T = Time Down

$CDT = A*(W+V)*T$

3.) Calculate the Cost of Data Loss

CDL=Cost of Data Loss

C= Avg number of creative people required to re-enter data

W=Avg wage of creative people

V=Overhead Costs

T = Time Spent

$CDL = C*(W+V)*T$

4. Calculate Cost of Recovery of Orphan Data (Data entered between the last good backup and the time of disaster. This may be the same as CDT above or it may require more extensive system analysis to recover some data in addition to or instead of recreating data.)

5. Calculate Cost of Orders Lost

OrV= Average value of orders

R = Rate of Orders

T = Time System Down

Orl = Average cost of orders lost

ODL = R*T*Orv

6. Determine if the costs of 'lost' data and time balance against cost of redundancy to minimize Downtime. Alternative redundancy options include: Off-site tape, Mirrored Drive off-site, Multiple Sites, etc.

Step 2. Identify potential risks and the need for off-site replacement of computer service

1.) Identify Disasters resulting in loss of use of CPU and box

Fire

Terrorism – bombs and viruses

Hurricane/Tornado

Earthquake

Power Outage

Software error

Flood

Hardware error

Burst Pipe

Network Outage

Theft of cpu and box

2.) Review other risks

Loss of Communication line

Lightning

Hard Drive Failure

Communication Failure

Server Destroyed

Cluster Destroyed

3.) Compare building, business and network design to risk type

Step 3. Determine type of off-site service required

1.) System Restore Procedures (The off-site situation can vary anywhere from a single tape and hardware that must be purchased to a complete system with data that has automatically been transferred via electronic data transfer (EDT).)

- a. New computer must have operating system loaded before tape can be read
- b. Operating system on tape should not be read in
- c. Operating system need only be saved from last update
- d. Operating system must reside on bootable media
- e. Configuration information for tuning and peripherals must be kept separate from operating system
- f. System capacity may need to increase due to the recovery of missing and orphan data
- g. Loss analysis requires data at the time of the disaster to be retained
- h. Extra capacity may be needed to support disaster communication and disaster inventory

2.) Network Restore Procedures

- a. Network must be connected to the alternate site
- b. New lines may have to be laid and attached
- c. Local users may become remote users and vice versa

3. Application Recovery Procedures

- a. Vended
 - CD's or tapes may suffice on and off-site
 - Source may be required if operating system changes
- b. Home grown
 - Documentation saved on and off-site
 - Source code saved on and off-site
- c. Application Configuration
 - Back up whenever it changes
 - Tape copies should be maintained on and off-site
- d. License Keys
 - Store on and off-site
 - Available to designated individuals

- 4.) Application Data Recovery Procedures (How much data is lost depends on the frequency of backups and the time of the last good backup)
 - a. Remember that the tape or CD at the CPU site may be lost in disaster
 - b. Preserve for many months working copy of all data bases at last good backup
 - c. Backup data may be best source for loss analysis

- 5.) Orphan Data Recovery Procedures
 - a. Orphan data can be reduced by mirroring drive on site with drive off-site, but communication costs increase
 - b. Communication Costs increase
 - c. Restoring data depends upon its interdependence
 - d. Data may be preserved as unprocessed transactions at terminals and remote computers
 - e. A transaction record may be preserved off-site that is separate from the backup of the system
 - f. Data must be processed by an application before it can be part of the active data
 - g. Data entered between the time of the last good backup and the disaster may be lost
 - h. It may be reentered when angry customers call up and ask about their lost order
 - i. When the system is down, data may need to be handled manually until the system comes up

Step 4. Test the procedures in a live situation. (There are numerous reasons why good plans will fail, but in the case of a disaster your options are more limited and failure becomes very painful. So an actual test is very desirable.)

- 1.) Identify "Most Likely To Fail" Causes
 - a. Some types of files not backed up
 - b. License keys may not function
 - c. Capacity calculations may be inadequate
 - d. Missing Information
 - Names and contact information for critical personnel
 - Lists of users and log in information
 - Normal and backup configuration of systems and network
 - Service level agreements and contact information
 - Pre-written messages to media regarding disaster
 - Any Authorizing signatures required on disaster recovery plan
 - e. Develop an Action Plan to Correct

Step 5. Document and maintain the plan

Step 6. Server, Tape Library Tech Notes

- 1.) Separate Operating System and other backup software
- 2.) Tapes should have 2 days on site 2 days off-site
- 3.) Do a full volume backup every day
- 4.) Incremental backups complicate the situation undesirably
- 5.) Backup one system on one tape
- 6.) Prepare a printed document with key server aspects
 - a. User list
 - b. Print Cues
 - c. Server Name
 - d. Context where users log in to
 - e. Domains
 - g. Primary Domain Control
 - g. Critical Info about System to Reload Software
 - h. Use an electronic document if accessible
- 7.) Note Configuration Issues
 - a. UNIX configuration information is accessible off of a backup tape
 - b. Novell configuration info off a backup tape can not be recovered
 - c. NT configuration can be partially restored off a backup tape
- 8.) Loss of a Communication Line
- 9.) Disaster Recovery should be Planned into design of system
- 10.) Different data is available at different times
- 11.) Redundant Servers and data lines are helpful
- 12.) Some incidents cause an uncertainty factor which is hard to evaluate
- 13.) Lightning may cause damage which is immediately evident in some cases, but is hidden until months later for others
- 14.) Beware encryption problems. If auto locks are missing, software is lost
- 15.) Sample Recovery Times for File Servers
 - a. Hard drive failure 2-4 hours
 - b. Communication failure 1 min to 3-4 days. Often a telco problem
 - c. Server Destroyed – suitable machine/software in hand. 2-3 hours
 - d. Cluster Destroyed – segment cluster so machines are in different locations.
 - e. Fire wire facilitates segmenting cluster
 - f. Plan recovery so servers can be replaced simultaneously

b. Most recovery projects involve 90% communication problems and 10% software configuration