



# How High is the Water?

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MANILDRA MILLING CORPORATION  
HAMBURG, IOWA

LUKE STOCKSTELL

# Manildra Milling Corporation

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MMC began manufacturing wheat gluten and wheat starches in Hamburg, IA in 1994. Since then we have continued to innovate and diversify to meet customer needs in a changing market. As consumers continue to seek new and healthier options, we have developed ingredients to help food manufactures meet those demands.

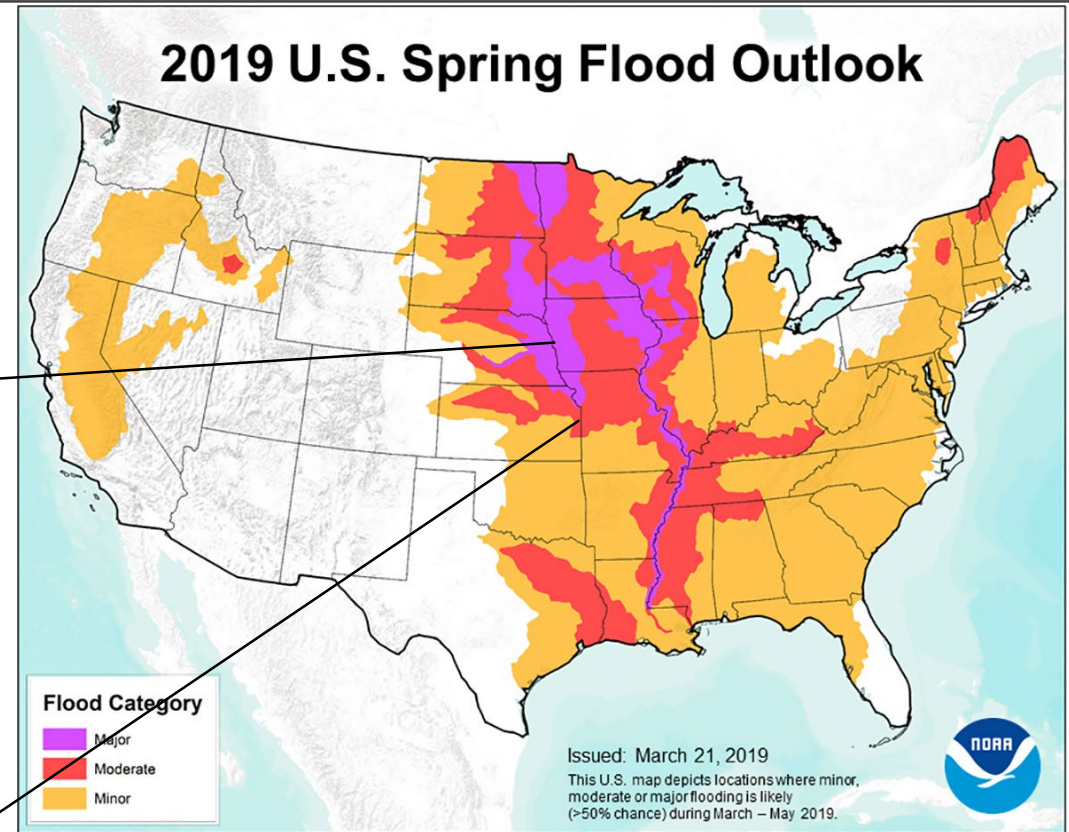
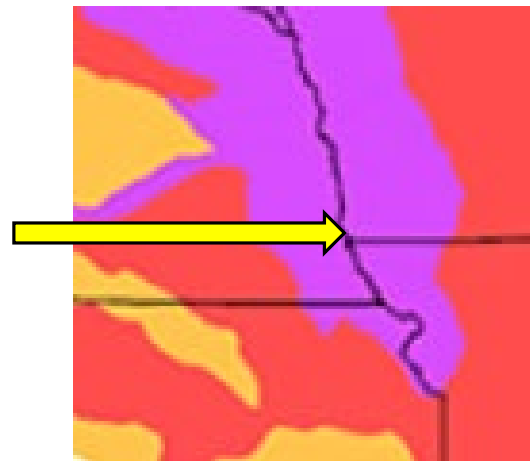
# The Perfect Storm

What happened?

- Everything.

Area affected: Purple is Major, Red is Moderate, Yellow is Minor.

Hamburg, IA



<https://grist.org/article/terrifying-map-shows-all-the-parts-of-america-that-might-soon-flood/>

# Effects on Hamburg

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## Residents:

500-600 people displaced

225 houses affected- 73 are now in government buyout

2 months without drinkable water

## Industry:

27 businesses

538 jobs







# Water Surrounds Facility

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Water surrounded Manildra's production facility and streets for 30 days.

From March 18<sup>th</sup> to April 20<sup>th</sup> the only way to and from the production facility was via boat/large truck.







# Remediation Plan

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## Meetings Held to Discuss Next Steps

- **Who**- Corporate to Plant Level Management
- **What**- Discussion of **Remediation Plan**
- **Where** to start and **when**.



# Remediation Plan Outline

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## 1. Clean Up

- Flood debris, old equipment, damaged equipment, etc.

## 2. Consultant

- Extra Set of Eyes
- Disaster Experience
- Assist in completing Remediation Plan

## 3. Restoration of Utilities

- Gas, Electrical, Water, and Sewer

## 4. Restoration of GMP's

- Drains, Floors, and Walls
- Sinks-Handwashing

# Remediation Plan Outline- Continued

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5. Installation of Equipment

6. Cleaning, Sanitizing, and Environmental Swabbing

7.Regulatory Audit

- Initial Response
- Pre-Operational

8. Partial Restart

9. Repeat steps 7 and 8 until Full Restart

# The Clean Up

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Clean up items to include:

- Removal of Flood Debris
- Disposal of flood damaged product.
- Removal of Equipment
- Assessing the utilities: Water, gas, and electricity.
- Removal of shipping vessels
- Clean out of MCC's and water treatment.



# Exterior Clean Up





# Interior Clean Up



# The Consultant

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Purpose of the consultant was to lend a pair of eyes from the outside to:

- Review Manildra's plan.
- Review plant to offer insight into action items that must be completed.
- Discussion of remediation plan.
- Help consolidate multiple opinions into facts based on experience.

The additional set of eyes to provide outside information, greatly improved our recovery, and added efficiency to the recovery.



# Before and After Consultant

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To do list:

- ☐ 1. Make a To-Do list
- ☐ 2. Check off first item.
- ☐ 3. Realize you already completed 2 items.
- ☐ 4. Reward yourself with a nap.
- ☐ 5. Rebuild facility.

- 1. Clean Up
  - Flood debris, old equipment, damaged equipment, damaged flooring, etc.
- 2. Consultant
  - Extra Set of Eyes
  - Disaster Experience
  - Assist in completing Remediation Plan
- 3. Restoration of Utilities
  - Gas, Electrical, Water, and Sewer
- 4. Restoration of GMP's
  - Drains, Floors, and Walls
  - Sinks-Handwashing
- 5. Installation of Equipment - New and Refurbished
- 6. Cleaning, Sanitizing, and Environmental Swabbing
- 7. Regulatory Audit
  - Initial Response
  - Pre-Operational
- 8. Partial Restart
- 9. Repeat steps 7 and 8 until Full Restart

Master Phase Plan- Remediation per room

Phase 1																			
Area/Equipment	Task to be completed				Personnel Assigned	Date Assigned	Date Completed	Verification	Picture Before	Picture After	Documents Related to Completion							Comments	
Removal of Equipment																			
Pumps																			
Motors																			
Product Lines																			
Electrical Components																			
Air lines																			
Replace Equipment																			
Pumps																			
Motors																			
Electrical Components																			
Lines																			
Assess GMP's																			
Walls																			
Handwashing																			
Doors/Windows																			
Ceilings																			
Repair GMP's																			
Clean Ceiling	East to West																		
Clean walls and Equipment	Top-Down																		
Floor Repair																			
Clean and Seal Floor to Equipment																			
Sanitize Interior of tankage																			
Sanitize Room and Equipment	Ceiling to floor																		
Swab-Negative Results																			
Repeat clean, sanitize, swab																			

# Restoration of Utilities and GMP's

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Water - Moved to new room with new RO treatment.

Gas- Wait for new lines to be ran.

Electrical- Multiple phase approach to get various parts of facility online.

Sewer- City of Hamburg

Waste Treatment- Restoration of Activated Sludge plant.

Floors, walls, and drains- refurbished.



# Restoration of Equipment

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Clean Room established.

- Incoming and refurbished equipment cleaned and sanitized prior and post installation.

Installation was performed in the order to get various parts of facility online.

Replacement and placement of all lines- air, product, water, electrical, gas, etc. for each newly installed piece of equipment and stationary equipment

Equipment prepared and started to ensure proper functioning.

# Contacting the State of Iowa- Department of Inspections and Appeals

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Contacted State of Iowa Department of Inspections and Appeals to start process for reopening of the facility- end of July.

Walked through the process with State of Iowa auditor and the steps needed.

- 1<sup>st</sup> step- Initial Response
- Worked on completing remaining items shared with State of Iowa prior to partial reopening planned for early September.
- Began 4 step cleaning/sanitizing followed by environmental swabbing.

# Cleaning, Sanitation, and EMP

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Pre-Sanitation Swabs to determine “Hot Spots”

4 Step Approach to Cleaning and Sanitize

Swab areas that are hard to clean (cracks, crevices, welds), highest risk (drains), and all Zones (1-4)-  
E. Coli, Salmonella, and Listeria

After swabbing- redo 4 step approach (mitigation to spreading)

Vector test spots found- followed with additional cleaning.

# Regulatory Audit and Partial Restart

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## Audit with State of Iowa for partial reopening- Part 1 September 2019

- Shared Site details, upgrades, WIP, etc.
- EMP program- findings and continuous monitoring activities.
- Plant Tour- Areas for current production proposed and all adjacent areas.
- Overview of next steps and needs from State of Iowa
- 2-3 more visits to open various other production areas/lines

## Audit with State of Iowa for partial reopening- Part 2 December 2019

Repeat of above inspection/tour with added areas for production.

Full Production granted outside of Bag Packaging.



# Final Steps

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State of Iowa Part 3: March 2<sup>nd</sup>, 2020- Approval to resume 50-pound bagging operation on site.

State of Iowa Part 4: Offsite Warehouse approval.

# Conclusion

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Constant communication is key to progress through a natural disaster remediation plan.

Always look for the opportunity to promote and implement positive improvements, even in the worst events.

## Perseverance

Success is the sum of small efforts, repeated day in and day out. – Robert Collier