
E.A.S.E.

**Ergonomic Assist
Systems and Equipment**

A Product Council of Material Handling Industry

Thank you for allowing me to be here!

**Mario Feletto, MS, MPH,
Area Manager**

Cal/OSHA Consultation Services

Research & Education Unit

Sacramento, California

Ergonomics and Manual Material Handling



Ergonomics and Manual Material Handling

Federal Ergo Standard - What Happened ?

- Original standard in 2000 was long / controversial
- Congress Overturned Original Standard
- CRA rules would not allow another standard

Ergonomic and Manual Material Handling

Federal Ergo Standard - What Happening ?

- Fed OSHA - “Ergonomic Guidelines”
 - Nursing Homes, Poultry Processing, Retail Grocery, Shipyards
- National Advisory Committee on Ergonomics
 - Charged with reducing workplace MSDs
 - Determines industries covered

Ergonomics and Manual Material Handling

MMH Guideline Advantages

A “Best Practices “ or Guideline Approach
is Better Than A Standard

- Focuses On Improvements Not Problems
 - You Folks (not government or safety and health professional) dictate the improvements / fixes
 - Our Job Together - get the word out about what you have to “fix” things and improve the workplace

Ergonomics and Manual Material Handling

MMH Guidelines Advantages

- MMH Friendly - have your voices heard / products advertised nationally / internationally
- Promote Improvements / Economic Savings
 - balancers, work station cranes, hoists, manipulators, conveyors / other equipment
 - reduced employee turnover / workers comp rates
 - increased productivity and worker morale
- Practical and non-regulatory

Ergonomics and Manual Material Handling

MMH Guidelines Advantages

- Chance for MHIA to Get In on the “Ground Floor” to partner with government to help write the guidelines
- National / International Scope
 - Federal OSHA publishes / distributes nationally Cal/OSHA Ergonomic Products
 - Same for MMH guidelines

So what is needed?

INTRODUCING ...The NATIONAL

***“The Ergonomics
Guidelines for
Manual Material
Handling”***

The Ergonomic Guidelines for Manual Material Handling

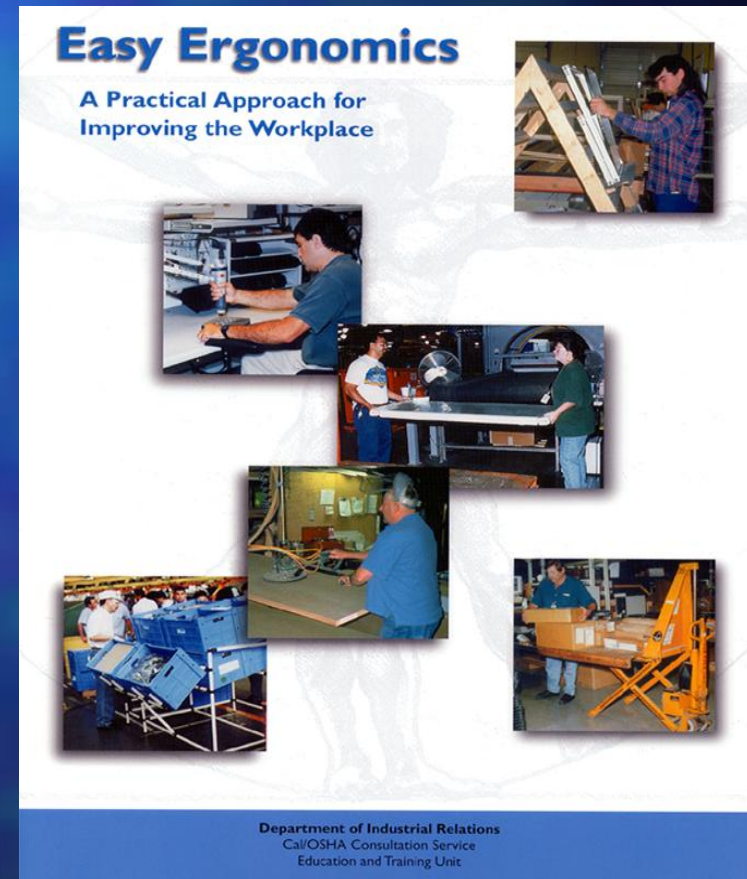
What Does Cal/OSHA "Bring To The Table"

- A national / international "pipeline" to distribute and promote your products
 - Federal OSHA / State OSHA Consultation Programs nationwide will support the guidelines
 - Co-publishers
 - ✓ NIOSH
 - ✓ St. Paul Insurance Companies
 - ✓ MHIA
- Experience in producing high quality, user friendly educational materials

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

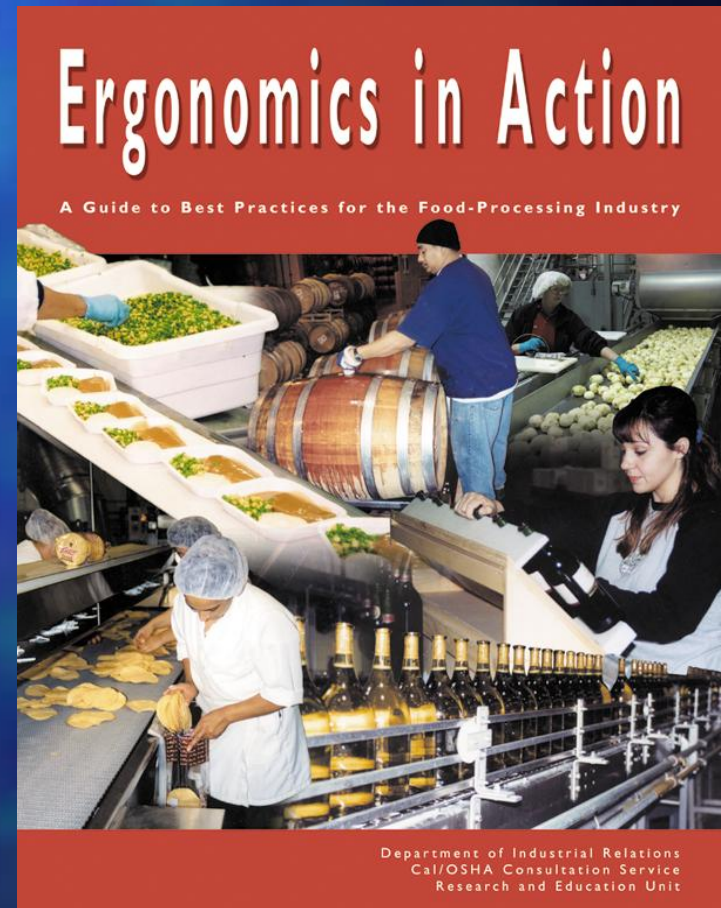
- A "Best Practices" Approach
 - making informed choices
 - improvement options
 - follow-up
- Simple examples/photos/worksheets
- Problem solving exercises
- Additional resources



The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA “Bring To The Table”

- A “Best Practices” Approach
 - how to reduced injuries
 - examples of improvements
 - step- by- step worksheets
- Simple examples/photos/worksheets
- Additional resources



The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- Each trade specific guide covers:
 - risk factors & MSD symptoms
 - responding to symptoms
 - how to warm up & stretch
 - typical vs. safer ways of working
- Pocket size (English / Spanish)

ERGONOMIC SURVIVAL GUIDE FOR CARPENTERS and FRAMERS

ERGONOMIC SURVIVAL GUIDE FOR CEMENT MASONS

GUÍA ERGONÓMICA DE SUPERVIVENCIA PARA TRABAJADORES DEL METAL LAMINADO

What will happen to your family if you get injured and can't work? What will you lose if you get injured?

- Your salary
- Your quality of life
- Your job advance
- Future job opportunities

AVOID THE PAINFUL COST OF AN INJURY

¿Qué le sucederá a su familia y a su estilo de vida si Ud. se lesiona y no puede trabajar? ¿Qué perderá si se lesiona?

- Su salario
- Su calidad de vida
- Su promoción en el trabajo
- Futuras oportunidades de trabajo

¿QUÉ PUEDE HACER PARA EVITAR UNA LESIÓN?

What will happen to your family and lifestyle if you get injured and work? What will you lose if you get injured?

our salary our quality of life our job advancement future job opportunities

HAT CAN YOU DO TO AVOID AN INJURY?

VIVAL GUIDE is designed to raise awareness of safe work practices for CARPENTERS and FRAMERS. Please call 1-800-963-9424 or download the pdf or html version from our VWeb site www.dir.ca.gov/dosh/puborder.asp.

For this guide and other trade-specific ergonomic survival guides, please call 1-800-963-9424 or download the pdf or html version from our VWeb site www.dir.ca.gov/dosh/puborder.asp.

Para solicitar esta guía, y otras publicaciones que sean específicas a su oficio, por favor llame al 1-800-963-9424 o descargue un archivo en versión pdf o html de nuestra página VWeb: <http://www.dir.ca.gov/dosh/puborder.asp>.

OSHA

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- Ergonomics for Very Small Business
- Ergo "Best Practices" Approach
 - Basic principles
 - Before/after photo examples
 - Signs & symptoms of MSDs
 - Improvement Options / Process
 - Poster series (English & Spanish)

Fitting the Task to the Person:

Ergonomics for Very Small Businesses



California Department of
Industrial Relations
Cal/OSHA Consultation Service
Education Unit

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- Credibility - a 'High Powered" Group of Scientists, Professors, Educators, Insurance Companies and contacts inside and outside government
- **John Howard, M.D., J.D. Director, NIOSH**
National Institute for Occupational Safety & Health
200 Independence Avenue, S.W.
Room 715-H; HHH Building
Washington, D.C. 20201
(202) 401-6997 Jhoward1@cdc.gov

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- **Thomas R. Waters, Ph.D., C.P.E. Chief**

Human Factors and Ergonomics Research Section, (NIOSH)
(MS-C24), 4676 Columbia Parkway, Cincinnati, Ohio 45226
(513)533-8147 trw1@cdc.gov

- **Brian Lowe, Ph. D., CPE, Research Industrial Engineer**

National Institute for Occupational Safety & Health (NIOSH)
4676 Columbia Parkway, MS C-24, Cincinnati, OH 45226
(513) 533-8161 bf14@cdc.gov

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- **Dave Bare, Program Manager**

Cal/OSHA Consultation Service, 2424 Arden Way,
Suite 485, Sacramento, California 95825
(916)263-5767

dbare@hq.dir.ca.gov

- **Scott Schneider, Director**

Occupational Safety & Health
Laborer's Health & Safety Fund of North America
(202)628-5465

Schneider@lhsfna.org

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- **Bill Boyd, M.S., CPE, CIH, CSP, Risk Control Assistant
Vice President**

St. Paul Companies

4157 Milstone Court, Norcross, GA

(770) 864-6222

Bill.Boyd@stpaul.com

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- **Don Leonard, Operations Director for Commercial Risk Control**

St. Paul Companies

13105 Woodward Street, Overland Park, KS

(913) 685-0429

Donald.Leonard@stpaul.com

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA “Bring To The Table”

- **Bob Bringgold, Technical Director for Risk Control**

St. Paul Companies

St. Paul CHQ-Mail Code 505 R

385 Washington Street, St. Paul MN, 55102

(651) 310 – 5436

Bob.Bringgold@stpaul.com

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA “Bring To The Table”

- **Fadi A. Fathallah, PhD, CPE, Assistant Professor,**
U. C. Davis, Biological & Ag. Engineering, 3020 Bainer Hall,
One Shields Ave, Davis, CA 95616-5294
(530) 752-1612 Fathallah@ucdavis.edu
- **Suzanne H. Rodgers, Ph.D., Consultant in Ergonomics**
169 Huntington Hills – Center, Rochester, NY 14622
(585) 544-3587 Shrodgers@aol.com

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA “Bring To The Table”

- **Ira Janowitz, PT, CPE, Ergonomics Consultant**

U. C. Berkeley, 1301 South 46th St., Building 112

Richmond, CA 94804

(925) 256-0628

Janowitz@earthlink.net

- **Fran Hurley, MS, CIE, CRC, Certified Industrial Ergonomist & Certified Rehabilitation Counselor**

First Response Ergonomics, PO Box 60268,

Sacramento, CA 95860

(916) 482-5741

fran1@surewest.net

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA "Bring To The Table"

- **Kristy Schultz, CAE, Associate Ergonomic Specialist**
Cal/OSHA Consultation Services, Research & Education Unit
2211 Park Towne Circle, Suite 4, Sacramento, Ca 95825
(916) 574-2528 Kschultz@hq.dir.ca.gov
- **Zin Cheung, MT(ASCP), MS, Associate Industrial Hygienist**
Cal/OSHA Consultation Services, Research & Education Unit
2211 Park Towne Circle, Suite 4, Sacramento, Ca 95825
(916) 574-2528 Zcheung@hq.dir.ca.gov

The Ergonomic Guidelines for Manual Material Handling

What Does Cal/OSHA “Bring To The Table”

- **Richard Hight, Associate Safety Engineer**

Cal/OSHA Consultation Services, Research & Education Unit
2211 Park Towne Circle, Suite 4, Sacramento, Ca 95825

(916) 574-2528

Rhight@hq.dir.ca.gov

- **Mario Feletto, MS, MPH, Area Manager**

Cal/OSHA Consultation Services, Research & Education Unit
2211 Park Towne Circle, Suite 4, Sacramento, Ca 95825

(916) 574-2528

Mfeletto@hq.dir.ca.gov

The Ergonomic Guidelines for Manual Material Handling

What Will the Guidelines Look Like ?

- Why Improve Your Workplace ?
- How to Improve Your Workplace? A “Best Practices” Approach
- What Changes Will Improve Your Workplace ?

The Ergonomic Guidelines for Manual Material Handling

What Will the Guidelines Look Like ?

- Why Improve Your Workplace ?
 - Increase
 - ✓ productivity, product & service quality, employee morale
 - Reduce Costs
 - ✓ production bottlenecks, error rates
 - ✓ medical services, workers' compensation premiums
 - ✓ employee turnover, absenteeism, retraining
 - Prevent Injuries

The Ergonomic Guidelines for Manual Material Handling

What Will the Guidelines Look Like ?

- How to Improve Your Workplace ?
- A “Best Practices” Approach”

Integral to the MMH Guidelines and supported

- ✓ Cal / Federal OSHA & NIOSH
- ✓ Healthcare Professionals
- ✓ Industry - E.A.S.E. Council / MHIA

You Folks Can Carry the Guidelines With You and Suggest This Approach To Your Customers

The Ergonomic Guidelines for Manual Material Handling

What Will the Guidelines Look Like ?

- What Changes Will Improve Your Workplace ?
 - Series of Job Duty Descriptions
 - ✓ Most common MMH Jobs / tasks
 - Apply Across Very Broad Variety of Industries

The Ergonomic Guidelines for Manual Material Handling

MANUAL MATERIAL HANDLING JOB DUTY DESCRIPTION

Job Duty Description: Unloading parts from containers, baskets, gaylords

Main Body Parts Affected:

- Back
- Neck/Shoulders



Possible Risk Factors:



Awkward, static posture



Forceful exertion

Improvement Options:

Alter the workplace

- Provide a clear pathway

Change the objects used in the task

- Xxxxx xxxxx xx xxxxxx xxxx
- XXXXXXXX x xxxxxx xxxxx xx xxxxxx

Change the Job Tasks:

- Rotate this task with other, non-loading, tasks
- Take short, frequent breaks from this task

Improvement Options: Equipment



Use a lift and tilt table



Use a lift and tilt table



Use a mobile bin tilter



Use a mobile bin tilter

The Ergonomic Guidelines for Manual Material Handling

More Improvement Options



Use a portable stacker



Use a lift and tilt device



Use lift and tilt tables



Use pick and place tilt stands



Your Product Here



Use a portable lift and tilt



Use collapsible bins with drop down side



Use a Container Rotator



Use Collapsible bins with drop down sides

National Guidelines for Manual Materials Handling

What Will the Guidelines Look Like ?

■ Job Duty Description – Loading

1. boxes, cartons or crates onto pallets
2. flat sheets of material (wood, plastic, metal) onto pallets
3. sacks of material onto pallets
4. drums onto a platform truck, cart, or pallet
5. buckets of material (powder, liquid, granular) into a hopper
6. material onto a scale or table for Quality Assurance Testing
7. boxes, trays / totes from a conveyor to a vertical wheeled rack or shelf
8. boxes up into a truck or semi-trailer from the ground
9. boxes from a pallet to a conveyor
10. parts from an industrial container (wire basket, Gaylord, metal or plastic) into a machine center

National Guidelines for Manual Materials Handling

What Will the Guidelines Look Like ?

■ Job Duty Description – Unloading

11. boxes, cartons, or crates from pallets
12. flat sheets of material (wood, plastic, metal) onto pallets
13. sacks of material from pallets
14. drums from a platform truck or cart
15. buckets of material (powder, liquid, granular) from a cart
16. boxes, trays or totes from a conveyor to a wheeled rack, or shelf.
17. boxes from a truck or semi-trailer to the ground
18. parts from an industrial container (wire basket, Gaylord, metal or plastic) into a machine center

National Guidelines for Manual Materials Handling

What Will the Guidelines Look Like ?

■ Job Duty Description – **Transporting Materials (Moving)**

19. material with a cart
20. material with a hand dolly
21. heavy boxes with a hand dolly
22. drums

■ Job Duty Description - **Manipulating/Reorganizing**

23. Stretch wrapping material on a pallet
24. Assemble part of product at a workstation or bench
25. Organize plastic bottles of various liquid into a package
26. Loading parts from an industrial container (wire basket, Gaylord, metal or plastic) & hanging them on a overhead conveyor

National Guidelines for Manual Materials Handling

What Will the Guidelines Look Like ?

■ Job Duty Description - **Work Positioning**

- 27. Locating large work pieces on assembly bench
- 24. Assemble part of product at a workstation or bench
- 25. Position welding a large workpiece
- 26. Position a large electrical panel for assembly

■ Job Duty Description - **Miscellaneous**

- 27. Stacking / unstacking pallets

The Ergonomic Guidelines for Manual Material Handling

MANUAL MATERIAL HANDLING JOB DUTY DESCRIPTION

Job Duty Description: Loading and unloading boxes, crates, cartons, and other material onto or from pallets

Main Body Parts Affected:

- Back
- Neck/Shoulders
- Hands

Possible Risk Factors:



Awkward, static posture



Forceful exertion

Improvement Options:

Alter the workplace

- Provide a straight pathway by removing obstructions
- Use a conveyor to transport box, cartons or crates from the picking location to the pallet

Change the nature of the task:

- Reduce the weight of the load by transporting fewer items
- Reduce the weight of the box, crate or carton
- Change the shape of the box, crate or carton
- Add or improve the handles on the box, crate or carton
- Don't over stack the pallets. Keep the height of the stack at or below shoulder height
 - Lower lift into recess in the floor

Change the Job Tasks:

- Rotate this task with other, non-loading, tasks
- Take short, frequent breaks from this task



Add or improve handles



Reduce the size of the load

Improvement Options: Equipment



Use Vacuum Lifts



Use a Lift and Positioner



Use an Adjustable Pallet Lift

The Ergonomic Guidelines for Manual Material Handling

More Improvement Options



XXXX XX XXXX X



Use a Scissor Lift with Turntable



Use a Spring Actuated Pallet Lift



Use a Pneumatic Lift Table



Your Product Here



Use a Portable Pallet Lift



Use Automatic Load Leveling Devices



Use a Vacuum Lift



Use a Portable Pallet Lift

The Ergonomic Guidelines for Manual Material Handling

What Can the E.A.S.E. Council & the MHIA "Bring to the Table"

- What Changes Will Improve Your Workplace ?
 - You Folks (not government /safety & health professional) have improvements / "fixes"
 - Our Job Together - get the word out about your "fixes" to improve the workplace

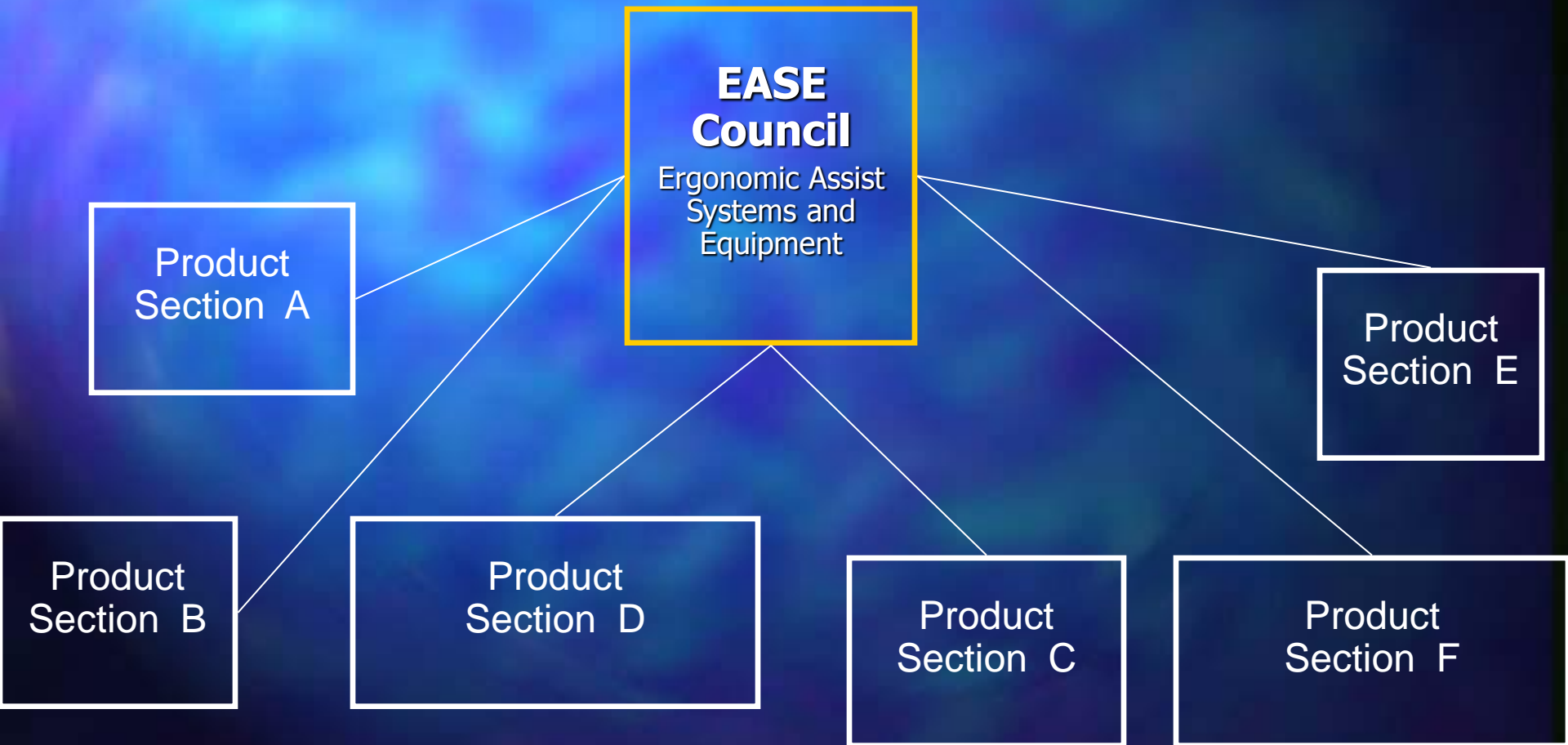
The Ergonomic Guidelines for Manual Material Handling

What Can the E.A.S.E. Council & the MHIA “Bring to the Table”

- What Changes Will Improve Your Workplace ?
 - You Folks Have The Improvements / “Fixes”
 - For Each Job Duty Description We Need As Many Improvements / “Fixes” As Exist

The Ergonomic Guidelines for Manual Material Handling

What Does E.A.S.E. "Bring To The Table"



The Ergonomic Guidelines for Manual Material Handling

What Can the E.A.S.E. Council & the MHIA "Bring to the Table"

■ DELIVERABLES

- Each individual member company of the EASE Council and each MHIA Product Section
 - ✓ 3 application photos for each product / product type
 - ✓ cut-line of 20 words or less for each picture
 - ✓ before/ after pictures for each product / product type
- Received By November 15th, 2003

The Ergonomic Guidelines for Manual Material Handling

What Can the E.A.S.E. Council & the MHIA "Bring to the Table"

■ DELIVERABLES - Send to either:

Mario Feletto

Research and Education Unit
2211 Park Towne Circle, Suite 4
Sacramento, California 95825

Fax (916) 574 – 2528

Email mfeletto@hq.dir.ca.gov

Jim Galante

Southworth Products Corp
P. O. Box 1380
Portland, ME 04104

Fax (207) 797-4734

Email JJG@SouthworthProducts.com

Questions ?

**The Ergonomics
Guidelines for
Manual Material
Handling**

Thank you!

Mario Feletto, MS, MPH,

Area Manager

Cal/OSHA Consultation Services

Research & Education Unit

Sacramento, California