

## WELCOME to the JGI

### PGF 10

## Introduction to Environmental Health & Safety at the JGI

Created by: Stephen Franaszek M.P.H. C.I.H., & Cheryl Chu M.S.





EHS10 training completion is an LBNL requirement and must be completed prior to taking this training. This training is a supplement to EHS10 and has been made available for guests who attend meetings at the JGI frequently. This also serves as an annual refresher training for JGI employees. If you have not completed the online EHS10 training, *you may not proceed until the EHS10 training requirement has been fulfilled.* If you have completed the online EHS10 training, you may proceed.

## Course Objectives

**Upon completion of this training, JGI employees/guests will be able to:**

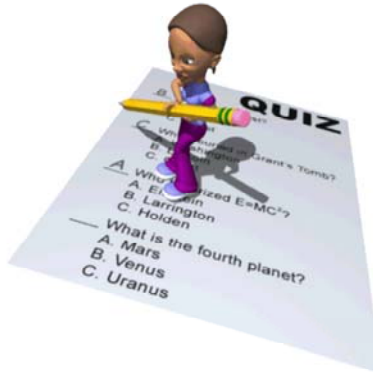
- Recall Integrated Safety Management (ISM), its 5 core functions, & purpose
- Know/understand your responsibilities for safety
- Know/understand LBNL/JGI safety policies and procedures
- Recognize what hazards exist at the JGI
- Recognize how to identify and report hazards at the JGI
- Recognize what to do in a natural disaster emergency
- Recall the evacuation response procedures for natural disasters
- Recall when it is safe to leave an Assembly Area
- Define the term ergonomics
- Identify the difference between discomfort and injury
- Recognize what to do if you experience discomfort or incur an injury



## Course Credit Assignment

A link to a quiz for this course will be provided at the end of this training:

- To obtain credit for this course, be sure to complete the quiz
- You must achieve a pass rate of 80% to obtain course credit



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## Safety Compliance

**The JGI complies with a variety of regulations and standards:**

- DOE Regulations (10CFR851)
- DOE Work Smart Standard
- OSHA Regulations
- EPA Regulations
- Industry Standards
- Pub-3000 (LBNL Safety Manual)
- Integrated Safety Management (ISM)




**Whatcha Doin?**

The JGI complies with regulations and standards set forth by the DOE, OSHA, EPA, and LBNL.



Safety at the JGI follows the Integrated Safety Management (ISM) model – we want you to define your work, analyze the hazards you’d be exposed to from performing the work, control these hazards so that you’d be protected, perform your work as safely as possible, and provide feedback so we can improve in ensuring your health and safety at your workplace – all so you’d be successful in maintaining a healthy and safe life! All in all – we want to prevent injuries and illnesses in the workplace.

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## Safety Responsibilities

**Everyone has a responsibility for health & safety in the workplace. Let's learn what our responsibilities are...**

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**It smells bad.... It looks bad... who did this?!?**

In order to truly follow Integrated Safety Management's model, we must know, understand, and follow through on our responsibilities for safety. We all have a collective responsibility to work safely. Let's learn about these responsibilities.





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## Employee Responsibilities

- Take your JHA within two weeks of start date
- Register for and complete required training
- Know and observe all regulatory and LBNL safety standards
- Follow established procedures
- Use appropriate Personal Protective Equipment (PPE)
- **STOP WORK** if an imminent danger exists
- **PAUSE WORK** if it can be made safer
- Immediately report safety issues, work-related injuries and discomfort to your **SUPERVISOR** and a **Safety Coordinator**
- Follow safety and ergonomic recommendations from your Supervisor/Manager, Safety Coordinators, and Ergonomist



Employees as individuals first and foremost have the responsibility for their own safety at work and at home. Let's learn what their responsibilities for safety are at the JGI.



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# Management Responsibilities

- **Provide resources** to ensure a safe and healthful workplace
- **Use JHA** to design safe work practices
- Ensure employees **know, understand and follow** all JGI safe work practices/ policies
  - Take adequate work breaks
  - Follow required ergonomic practices
  - Use PPE
  - Avoid excessive work hours
  - Avoid excessive lifting
- Ensure employees **complete** all required trainings on time
- Include **safety or ergonomics as part of all meetings**
- Work closely with JGI Safety Team to:
  - **Identify and abate workplace hazards**
    - Conduct routine safety walkthroughs
    - Enter and close out issues in CATS
    - Issue the STOP Work or PAUSE Work policies
    - Procure safety and ergonomic equipment for employees through JGI Safety Team
  - **Identify root causes** of injuries and determine feasible solutions to **prevent recurrence**, then **verify that corrective actions are taken**






Management has additional responsibilities for safety as the safety of their employees is most of the time within their hands. Let's learn what those responsibilities are.


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## Safety Team's Responsibilities

- **Ensure a safe and healthful workplace by the following actions:**
  - Develop, implement, manage safety programs (e.g. ISM, Ergo, MSDS...)
  - Develop and provide safety trainings (e.g. PGF10, PGF57, EHS60...)
  - Develop and manage safety committees (includes working groups)
  - Review JGI processes and employee work tasks
  - Provide safety and ergonomic recommendations
  - Work closely with management to correct/abate hazards
  - Manage all safety databases
  - Provide safety tools and equipment to employees
- **Improve and maintain workplace safety overall at the JGI**

Visit the JGI Intranet EH&S website for more information:  
<http://www.jgi-psf.org/EHS/index.html>



The JGI Safety Team has a variety of safety responsibilities that range from developing, implementing and managing safety programs to providing safety tools and equipment to employees. Overall, the Safety Team is constantly trying to improve and maintain workplace safety at the JGI. But it definitely takes the help of employees and managers/supervisors to make a workplace safety program effective.

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## Meet the JGI Safety Staff



**JGI Ergonomist**  
Melanie Alexandre



**JGI Safety Coordinator** Stephen Franaszek





**JGI Safety Administrator**  
Terri Bartolome



**JGI Nurse**  
Cathy Wentworth




**JGI Asst. Safety Coordinator/  
Ergo Advocate/Safety Tech.**  
Cheryl Chu

Meet your JGI Safety staff!




The LBNL EH&S Division has plenty of resources that are helpful to the JGI Safety staff as well. The LBNL Occupational Safety Manager, Richard DeBusk, assists with the development and implementation of a variety of safety programs and trainings. The LBNL EH&S Division Liaison, Bruce King, provides guidance and consultation on Biosafety and other laboratory safety issues and concerns. The LBNL Ergonomics Manager, Ira Janowitz, is our JGI Certified Ergonomist's supervisor and assists with the development and implementation of the ergonomics program. The JGI-LBNL Waste Management representative / Waste Generator Assistant, Amy Tanouye, provides expertise in waste management, including addressing questions and issues with laboratory wastes and recyclable wastes (i.e., batteries, cell phones, etc.).

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## More Safety Help




JGI Instrumentation  
Engineer/Safety  
Culture Working  
Group Leader  
**Steve Wilson**

### Safety Culture Working Group (SCWG)

- 1-hr meetings twice per month
- Avenue for employees to voice safety concerns/suggestions
- Safety Advocates relay employees' safety concerns and suggestions to larger Safety Committee meetings
- Members research, develop & distribute safety information
- **Mission**
  - Consists of employees dedicated to the following:
    - Improve the overall safety awareness level of employees
    - Ensure success of JGI's safety programs
    - Reduce injuries/reportable incidents site-wide

A list of SCWG members and Safety Advocates are available at


<http://wiki.jgi-psf.org/cgi-bin/twiki/view/Main/SafetyCultureMeshWG>



Employee-led safety is important to the JGI. There are 3 safety subcommittees that are completely employee-led by volunteers. All JGI employees are encouraged and welcome to join any of these subcommittees, should they be interested. The first group is the Safety Culture Working Group. If you are interested in joining this group, please contact Steve Wilson.



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## More Safety Help


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### Ergonomics Working Group (EWG)



**JGI**  
Instrumentation  
Engineer Ergo Rep/  
Ergo Working Group  
Leader #1  
**Christine Naca**


- 1-hr meetings bi-weekly
- Means for employees to be more active in ergo-issue solving process
- Members research, develop & work closely with SCWG to distribute ergo information
- Mission
  - Consists of employees dedicated to the following:
    - Improve the overall ergo awareness level of employees
    - Ensure success of JGI's ergo programs
    - Reduce ergo-related injuries/reportable incidents site-wide



More info on the EWG is available at:  
<http://wiki.jgi-psf.org/cgi-bin/twiki/view/Main/ErgoWG>

The second safety subcommittee is the Ergonomics Working Group. If you are interested in joining this group, please contact Christine Naca.


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## More Safety Help

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JGI Researcher/  
EAP Working Group  
Leader/ ERT  
Leader  
**Wendy Schackwitz**

### Emergency Action Plan Working Group (EAPWG)

- 1-hr meetings bi-weekly
- Members research, develop & work closely with the SCWG to distribute emergency response information
- Members plan drills and training for the Emergency Response Team (ERT)
- **ERT Mission & Responsibilities**
  - Meets quarterly
  - Consists of employees dedicated to the following:
    - Assist JGI employees in emergencies such as: major earthquakes, fire, and to a limited extent, spill containment
    - Save lives and minimize injury
    - Protect environment and property
    - Assist in transition to recovery operation as needed
    - Participate in required training, refreshers, and drills

More info on the EAP/ERT is available at:

<http://wiki.jgi-psf.org/cgi-bin/twiki/view/Main/EmergencyActionPlanWorkingGroup>

The third safety subcommittee is the Emergency Response Team (ERT) or Emergency Action Plan (EAP) Working Group. If you are interested in joining this group, please contact Wendy Schackwitz.



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## **JGI Safety Network**

**Line Management - Your Supervisor**

**Area Safety Leader - Designated Supervisor or Peer**

**Department Safety Advocate - Your Designated Peer**

**Safety Coordinators - Stephen Franaszek x5807  
Cheryl Chu x5649**

**JGI Ergonomist - Melanie Alexandre x2553**

**EHS Division Liaison - Bruce King (510) 495-2768**

**EHS Occupational Safety Manager- Richard DeBusk**

**Operations Dept. Head - Ray Turner x5804**

**Facilities Manager - Greg Stanley x5788**


**Senior Management - Eddy Rubin, Jim Bristow, Vito Mangiardi**



Your safety network will always start with your supervisor as he/she is your primary contact for all safety issues / concerns. If you are unable to contact your supervisor, contact the next-in-line within your safety network.

## LBL and JGI Safety Policies

LBNL/PUB-3000



HEALTH AND  
SAFETY MANUAL

- [Table of Contents](#)
- [Guide to Using the Online PUB-3000](#)
- [Responsible Chapter Authors](#)
- [Log of PUB-3000 Changes](#)
- [How to Request a Revision to PUB-3000](#)

[Search the Health & Safety Manual](#)  
[Questions & Comments](#)

Lawrence Berkeley National Laboratory  
University of California  
Berkeley, California 94720

## LBL Workers' Rights

**You have the right to a safe and healthful workplace**  
**It's the Law!**

- You have the right to express concerns without reprisal
- You have the right to information about hazards and exposures
- You have the right to refuse work or stop work that could cause death or serious physical harm



## LBNL STOP WORK POLICY & LBNL PAUSE WORK POLICY

Whenever an employee, contractor, or guest encounters conditions or practices that appear to constitute an **imminent danger**, such individuals have the authority and responsibility to **STOP WORK**:

Whenever an employee, contractor, or guest encounters conditions or practices that appear to be a **questionable hazard** of a minor level, such individuals have the authority and responsibility to **PAUSE WORK**:

- Step 1: Alert persons engaged in the unsafe or questionably unsafe work and request that work be immediately stopped / paused
- Step 2: Notify immediate supervisor, responsible manager and a JGI Safety Coordinator (Stephen Franaszek or Cheryl Chu).

### Definitions:

**"Imminent Danger"** is defined as any condition or practice that could reasonably be expected to cause serious injury, environmental harm or death.

**"Questionable hazard"** is defined as any condition or practice that might cause non-serious injury or harm to workers or the environment.



## EXAMPLE – STOP WORK

These photos are example situations where the Stop Work Policy should be issued.



*This photo was not taken at the JGI.*

No safety glasses



*This photo was not taken at the JGI.*

Awkward postures

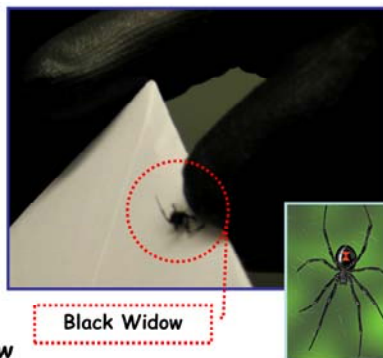



## EXAMPLE – PAUSE WORK

A JGI employee from the Production Department's Freezer group observed a black widow lurking in the freezer area.

### What did the employee do?

- The employee contacted his supervisor
- The supervisor issued the Pause Work policy and contacted the JGI Safety Coordinators
- The JGI Safety Coordinators investigated the issue and contacted trained personnel from Facilities to get rid of the black widow
- Once the black widow was exterminated from the area, affected employees were communicated to that the area was safe to return to work
- Conclusion: The employee followed the Pause Work policy correctly



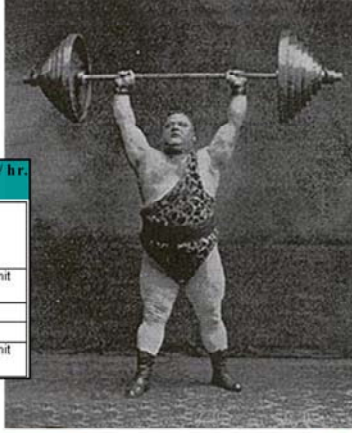


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# LBNL LIFTING POLICY


**LBNL POLICY PROHIBITS LIFTING  
GREATER THAN 50 POUNDS  
WITHOUT A MEDICAL  
CLEARANCE.**



**Table A: Low-frequency lifting: <2 hrs / day or >2 hrs / day with <12 lifts / hr.**

Horizontal Location	Close: 0-12"	Intermediate: 12-24"	Far: 24-31"
<b>Vertical Location</b>			
Shoulder to 12" above shoulder	24	No known safe limit	No known safe limit
Knuckle to chest	31	20	11
Shin to knuckle	20	15	4
Floor to shin	No known safe limit	No known safe limit	No known safe limit


**Keep the load close to your body, use neutral postures, and keep the load under 50 pounds**



Do not lift items greater than 50 pounds without a medical clearance. Never lift or attempt to carry items that are more than your capacity to handle – Know your limitations and don't attempt to go beyond your limits.



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# JGI PPE POLICY

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## Personal Protective Equipment (PPE) Policy

- Safety glasses, closed-toe shoes, and long pants are required to enter **ALL** laboratories and shops.
- Safety Glasses, lab coats, gloves, and closed-toe shoes are required while performing work in the laboratory (i.e., handling hazardous/biohazardous materials).
- Tight-fitting chemical goggles and appropriate gloves are required while handling corrosives and highly toxic chemicals.
- Failure to follow the PPE Policy is a performance issue.
- Note: Be sure to use PPE that **fits you!**

The written JGI PPE Policy is available at:  
<http://wiki.jgi-psf.org/cgi-bin/twiki/view/Main/EHSPoliciesAndProcedures#PersonalProtectiveEquipment>



Pick a pair at Room 302




Safety glasses for Guests

Used safety glasses bin


Safety glasses, closed-toe shoes and long pants are the minimum required PPE for entering all lab areas, including shops (i.e., Instrumentation shop Lab 119, Facilities carpentry shop in B-500/warehouse). Guests can use the provided guest safety glasses in the safety glasses bins outside of each lab. Please ensure the guests return the used safety glasses in the blue used safety glasses bins – located at B-100 and B-400 mailboxes, and located at the sink nearest to the office area in Lab 331 in B-310. Never place used safety glasses back in the safety glasses bins. If you need a pair of safety glasses or goggles, please come see the Safety staff at Room 302 in B-310.

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# Lab Coat Policy

 If you must handle hazardous/biological materials, perform an inspection/audit, or perform equipment maintenance activities in a laboratory, then you must **wear a lab coat** in addition to the minimum PPE requirements:

- Sign out and take one lab coat
- Place used lab coats in the laundering bin by **each Tuesday/week**
  - **Do not** leave used lab coats around in the labs for more than 2 weeks
  - **Report** contamination of lab coats due to spills of hazardous materials
  - **Do not** leave items (i.e. writing tools) in the coat pockets



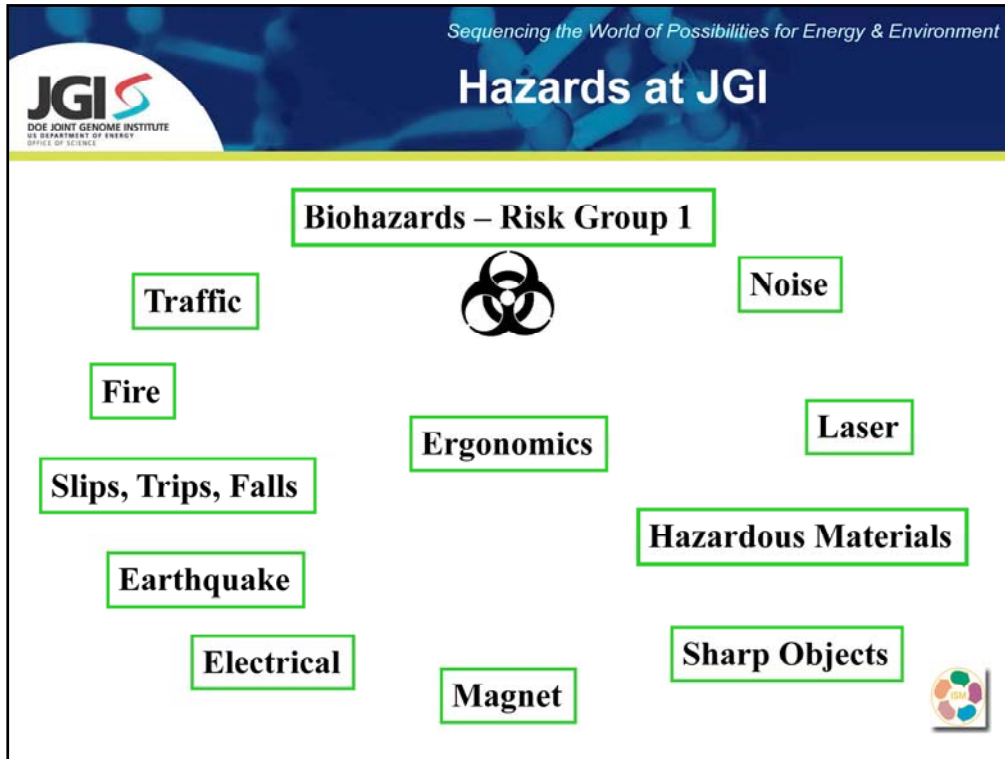
Sign out & take one lab coat



Place used lab coat in laundering bin

If you handle hazardous/biohazardous materials, and/or will be observing tasks closely that involve the handling of hazardous/biohazardous materials, you must wear a lab coat. Sign out a lab coat and take a lab coat that is of an appropriate size for you. Be sure to turn in used lab coats to the laundering bins by Tuesday of the following week or next, but do not hold onto your used lab coat for more than two weeks. If you only needed the lab coat for one day, please be sure to turn in the lab coat to the laundering bin when you have completed its use. Be sure to never leave items in the coat pockets when turning them into the laundering bins. And if your lab coat is contaminated due to hazardous spills, report the contamination to your supervisor and a Safety Coordinator.





Do you remember or know the hazards that exist at the JGI? Which hazard(s) are you exposed to the most?

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## Identifying Hazards

**Ways hazards are identified at the JGI:**

- Management/Area Safety Leader (ASL) formal walkthroughs
- Safety/Ergonomics informal walkthroughs
- Safety/Ergonomics review of job tasks/processes
- Safety/Ergonomics review of discomforts/injuries
- Safety Advocate Inspections
- **Employees**


**YOU are the best tool for identifying hazards!**

Which is better?  
Identifying a hazard before an injury occurs or after?



It's important to know what hazards you're exposed to so actions can be taken to insure your safety. There are many ways to identify hazards: formal walkthroughs performed by management and area safety leaders (ASLs), informal walkthroughs performed by the safety/ergo staff, reviews of job tasks/processes and discomforts/injuries by the safety/ergo staff, safety advocate inspections... but most importantly, you as employees are the best tool for identifying hazards because you're the experts of your jobs and areas (or will be if you're a new hire)! The purpose of identifying hazards is to prevent work-related injuries and illnesses.


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# Reporting Hazards

**Ways you can report hazards at the JGI:**

- Contact your Supervisor/Manager or ASL directly
- Contact Safety/Ergonomics staff directly
- SafetyTrack (allows for anonymous reporting) 
- Safety Culture meetings and Safety Advocates

**Help us help you!**

**Early reporting** can help identify hazards **before** an injury occurs.








If you don't report hazards, they may never be acted upon or controlled and an injury may occur because of this lack of reporting/knowledge. So if you identify hazards that aren't being controlled or controlled properly, say something! There are many avenues available for you to use for reporting hazards. Remember – early reporting can help identify hazards before an injury occurs.



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## Controlling Hazards

<b>Engineering</b> Fume hoods, safety equipment, emergency eyewash/shower		
<b>Administrative</b> Policy & Procedures (SOPs), signage		
<b>Personal Protective Equipment (PPE)</b> Gloves, safety glasses, lab coats, close-toed shoes		

After you know what hazards you're exposed to, we want to put controls in place to protect you from those hazards




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## Administrative Control Example - Laboratory Door Signs

 **CAUTION**


**Hazards Present in Room 139**




**Toxic Materials**



**Flammable Liquids**




**Biosafety Level 1**




**Corrosive Materials**

Other hazards present:


**Required Precautions and Personal Protective Equipment for Entering Room 139 Laboratory Area**




No eating or drinking




No open toe shoes




Safety glasses required when working with hazardous materials




Lab coat required while working with hazardous materials



Gloves required while working with hazardous materials



Chemical goggles required while handling corrosives



Wash hands after laboratory work

Contact Information: Building 100 Room 139			
Name	Name	Work Phone	Work Cell
Department Head	Steven Loria	925-294-2628	925-294-2676
Area Supervisors	Kathleen Lall	925-927-2966	925-213-5763
	Marcella Warrone-Smith	925-294-2715	925-499-4074
Safety Coordinator	Hughes Foreman	925-294-2867	925-988-8328
EHS Technician	Nicole Burt	925-294-2447	925-451-8714
Facility Manager	Greg Healey	925-294-2768	925-997-4804

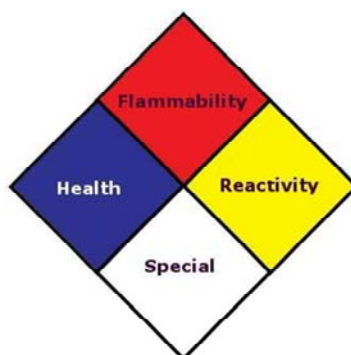
← Hazards present

← Personal Protective Equipment and precautions

← Emergency contact information including supervisor(s), ASLs, and other responsible persons

A laboratory door sign is an example of an administrative control – we’re communicating to you through these signs what the hazards and associated precautions are so you’re equipped with the knowledge and awareness to keep yourself safe when entering a JGI laboratory.

## Chemical hazard controls



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## Chemical Management

JGI Lab Workers Must Manage Chemicals Properly

- Follow LBNL requirements: **Chemical Hygiene & Safety Plan**
  - Inventory all chemicals
    - Track hazardous chemicals using **Chemical Management System** database <https://cms.lbl.gov/jsp/login.jsp>
  - Store chemicals in designated locations when not in use
  - Understand the hazards posed by the chemicals you use
    - Review the Material Safety Data Sheets (MSDSs) of the chemicals you use
  - **Do not dispose hazardous chemicals down the drain / sink**
  - **Accurately label all chemicals** (including sample vials / tubes)



Proper chemical tracking




Proper chemical labeling



Lab workers at the JGI handle hazardous chemicals. They must comply with LBNL's requirements as stated in the Chemical Hygiene & Safety Plan to properly handle and store the chemicals they use.



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## Hazard Information: Material Safety Data Sheets

**MSDSs are sources of hazard information that:**

- Summarize hazards and control of chemicals
- Include information such as physical & chemical properties, fire & reactivity, toxicity, carcinogenicity, reproductive toxicity
- MSDS database:  
Access via EH&S Web Page:  
<http://www.lbl.gov/ehs/index.shtml>  
or type "msds" in the URL browser if using a LBNL / JGI computer  
Note: UC ChemQuik is the best out of the 2 available MSDS databases
- Any questions regarding MSDS information, contact Stephen Franaszek (B310-302; x5807) or Cheryl Chu (B310-302; x5649)

As part of the OSHA Hazard Communication Standard, all manufacturers or suppliers of hazardous substances/chemicals must provide Material Safety Data Sheets (MSDSs) that describes the hazards and controls of the substances and other important information (i.e., physical & chemical properties, fire & reactivity, etc.). LBNL provides MSDSs of the substances used throughout the lab electronically via two MSDS databases listed at <http://www.lbl.gov/ehs/index.shtml>. But note that the UC ChemQuik MSDS database is the best to use. Any questions regarding MSDS information at the JGI can be directed at the JGI Safety Coordinators.

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## Waste Management - SAAs

JGI Waste Generators Must Manage Wastes Properly

- Follow LBNL requirements: **Chemical Hygiene & Safety Plan**
  - All hazardous waste must be accumulated in an established "Satellite Accumulation Area" (SAA)
    - **Accurately label all SAAs and wastes**
      - Empty waste containers should not be labeled until waste accumulation begins
      - Fill out SAA start date when waste accumulation begins
      - Accurately describe waste contents
  - Dispose of all wastes **prior to 9 months** from accumulation start date
  - **Complete** and **submit** hazardous waste requisitions **on time**
  - NCAR notices will be sent to the DOE and placed on the Division Self Assessment if SAAs are not managed well



SAA



Lab workers at the JGI generate wastes. They must comply with LBNL's requirements as stated in the Chemical Hygiene & Safety Plan to properly dispose of these wastes.

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## Protect the Environment and the Local Sanitary Treatment Plant

**NEVER:**

- Pour chemicals down a sink
- Store chemicals next to a sink
- Dispose of chemicals in the trash
- Dispose of liquids in the trash
- Let tap water get into storm drains
- Let rainwater get into sewer drains



**Report spills and Storm Drain issues to a Safety Coordinator!**



The JGI must also comply with the local Central Contra Costa Sanitary District's rules and regulations for protecting the environment. Follow these rules and report any spills and/or drain issues to a JGI Safety Coordinator.



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## JGI Waste Management & Minimization



(Follow poster guidelines)



Cans



Diskettes/CD  
-Roms

**Waste Management:**  
[www.lbl.gov/ehs/waste/index/htm](http://www.lbl.gov/ehs/waste/index/htm)

**Waste Minimization:**  
[www.lbl.gov/ehs/wasemin/](http://www.lbl.gov/ehs/wasemin/)

LBNL/JGI's recycling program includes:

- Hazardous Materials
- Computer/Office Supplies/Paper
- Scrap Metals, Cardboard
- Glass
- Packing Materials
- Electronic Devices, CRTs, Peripherals
- Other Miscellaneous Items



Dead Batteries



Paper & Glass



Pipette tip boxes  
Plastic containers



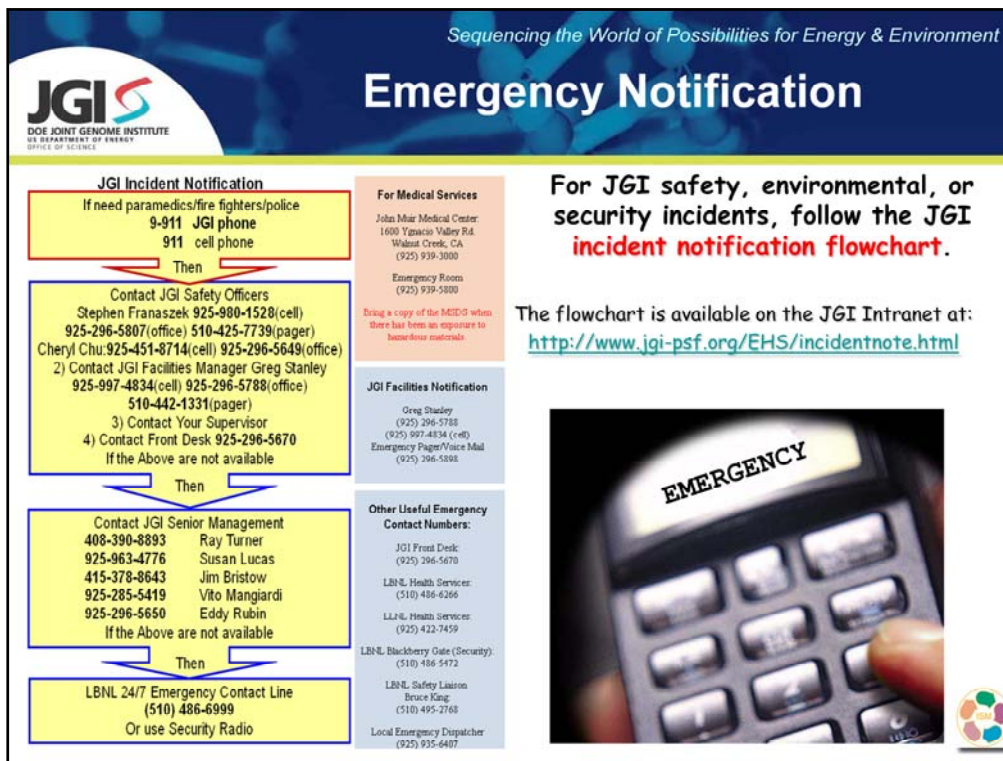
The JGI also participates in LBNL's waste management and minimization program – there are many avenues for recycling a variety of items (i.e. hazardous materials, computer/office supplies/paper, etc.). Contact the JGI-LBNL Waste Management representative / Waste Generator Assistant, Amy Tanouye, for any questions regarding this waste management and minimization program.



## What should you do in an emergency?



As a general practice for being prepared for emergency situations, be sure to take note of all evacuation routes available in each building at the JGI. Evacuation route maps are posted in the hallways of each building. When you come on-site to the JGI, observe these evacuation route maps and become familiar with different ways of exiting the buildings.



In a serious or life-threatening emergency, dial 9-911 from a JGI land line phone. If calling from a cell phone, you may dial 911, but note that it may take you to another city's Fire District. The JGI has an emergency notification flowchart that is posted in many common areas throughout the JGI buildings and is also available online on the JGI intranet site – the local Emergency Dispatcher's number is provided in this flowchart for your convenience if you must use a cell phone. Follow the flowchart to contact all the necessary persons or to get a hold of an appropriate person in the event of an emergency.


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## Earthquake Response


**In the event of an earthquake emergency....**

**Duck**





**Drop** down on the floor


**Cover**



Take **Cover** under a sturdy desk, table or other furniture.



**Hold**



**Hold** onto it and be prepared to move with the furniture.

In the event of an earthquake emergency, drop cover and hold. If you are unable to take cover under a sturdy desk, table or other furniture, be sure to look at your surroundings and use your intuition/common sense to find a sturdy area to take cover under (i.e. door frame) – stay away from windows and overhanging items that may cause injury or death.

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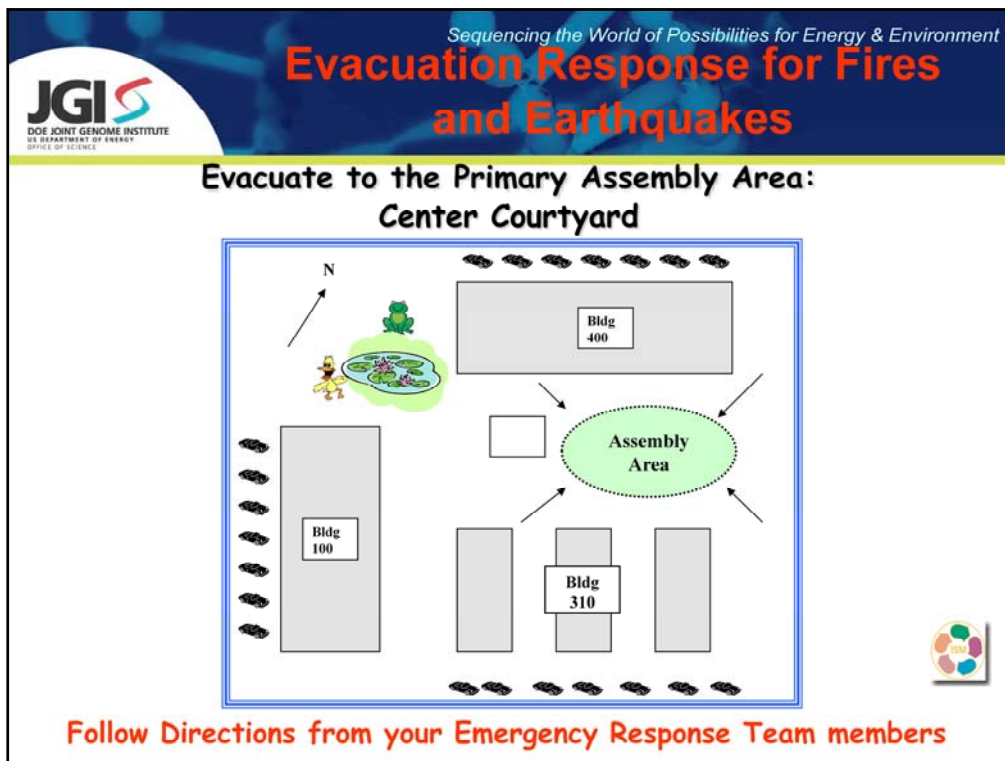
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## Fire Emergency Response

**When you hear a fire alarm or see the flashing fire alarm lights:**

- **Evacuate** the building immediately using the clearest and nearest exit route
- **Assemble** at the designated assembly area
- **Follow directions** given by the JGI Emergency Response Team members
- **DO NOT reenter** the affected building(s) until it is declared safe by the Fire Department

In a large fire emergency, evacuate the affected building(s) immediately using the nearest and safest exit route. Evacuate to the designated assembly area and follow directions given by the JGI Emergency Response Team members. Do not attempt to reenter an affected building until it is declared safe by the Fire Department. For small fires, activate the nearest fire alarm, call 9-911 from a JGI land line phone and contact your supervisor and a JGI Safety Coordinator. If you are trained in using a fire extinguisher, you may use one if you feel comfortable operating the extinguisher and/or handling the small fire. Always maintain access to an exit. If you do not feel comfortable operating the extinguisher, leave and isolate the area by closing the door. Also, note that fire pull alarm stations are located by hallway door entrances/exits – just as you would want to observe different evacuation routes throughout each JGI building, please observe the locations of the fire pull alarm stations as well.



The primary assembly area at the JGI is located in the center courtyard. A secondary assembly area has been identified for fire emergencies. Be sure to follow directions from the JGI Emergency Response Team (ERT) members so you know exactly what to do to keep yourself safe during the emergency situation. The ERT members will direct you to the secondary assembly area if it is determined that the primary assembly area is inadequate.




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**After Evacuation, Wait for the "All Clear"**

**After you've evacuated to the Primary Assembly Area, do not leave until you have received the "All Clear" from one of the following persons:**

- **JGI Incident Commander**  
(a designated Emergency Response Team member)
- **A firefighter**
- **A JGI Senior Manager**
- **The JGI Facilities Manager**



**Do not leave the assembly area unless you hear the "All Clear" from one of these four persons.**  
**Do not rely on hearsay.**

When waiting in the assembly area, do not leave the area until you receive an "All Clear" from one of the four persons: JGI Incident Commander, a firefighter, JGI Senior Manager, or JGI Facilities Manager. If you do not hear the "All Clear" from one of the aforementioned persons, it is appropriate to assume it is not yet safe to leave the assembly area. Do not rely on hearsay as a peer / co-worker may tell you that they heard the "All Clear" but it still may not be safe to leave the assembly area.



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## Emergency Supplies



**Fire Extinguishers**  
For controlling or extinguishing small fires if you're trained **(PASS)**



**Hazardous Waste/Chemical Spill Kits**



**Disaster Trauma Kit**  
Used only during emergencies by 1<sup>st</sup> Aid trained JGI ERT members



**Emergency and Rescue Boxes**  
Extra emergency equipment



**Biological Spill Kit**



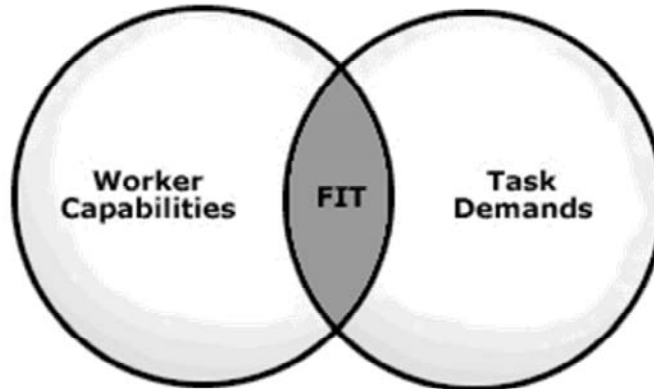
Plenty of emergency supplies are available. These supplies are only to be used by those who are trained to use the supplies (i.e., Emergency Response Team members, JGI Safety Coordinators). If you have incurred a minor cut (i.e., paper cut) and need a band-aid, contact your supervisor and a Safety Coordinator for a band-aid. Emergency Response Team members who are trained in first aid may also be contacted for a band-aid or first aid measures – a list of Emergency Response Team members can be found at: <http://wiki.jgi-psf.org/cgi-bin/twiki/view/Main/EHSEmergencyResponseTeam> (cut & paste into your browser to view this website). Please note that the emergency first aid kits / disaster trauma kits are not to be used for addressing minor cuts.

**What is ergonomics?  
What ergonomic-related risks  
exist at JGI?  
What can you do to prevent them?**



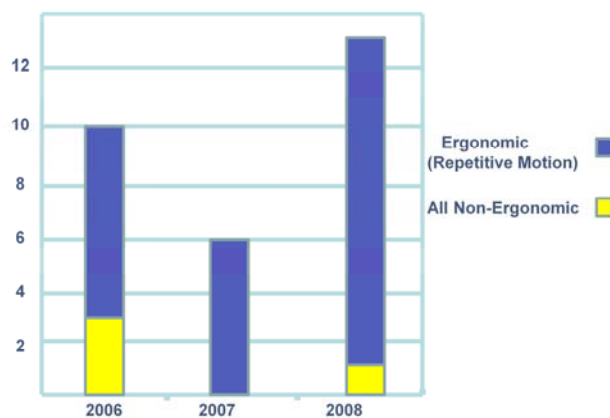
## What is ergonomics?

Ergonomics is fitting the task to the person to optimize safety and comfort  
JGI takes a proactive approach to ergonomics



## JGI Injury Statistics

**Ergonomic injuries are the most frequent type of injuries that occur at the JGI**



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**Ergonomic Risk Factors are all around you!**

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**Ergonomics Risk Factors**

- Prolonged Activities
- Repetition
- Localized Pressure
- Excessive Force
- Awkward Postures & Positions

**# of risk factors + duration of exposure = greater likelihood of injury**

Can you identify the risks in the photos? What can be done to mitigate the risks?


## What is discomfort?

- Discomfort is an unpleasant sensation that has minimal to no impact on a person's daily functioning.
  - The unpleasant sensation is usually not present constantly.
  - Discomfort disrupts or interferes with a person's comfort.
  - Discomfort is highly subjective and very individualized.
- Discomfort is **NOT** the following:
  - "I don't like the color of my chair."
  - "My desk is oriented uncomfortably. I'd rather have it facing the door."
  - "My printer is not working."





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## Example - Discomfort


**- Example:**

**"My wrist started tingling after typing for 2 hours non-stop at work today... I finally took a mini-break and the tingling went away the rest of the work day."**



- How could this discomfort symptom been prevented?
- What should this employee do now?
  - Prevent by taking a mini-break after typing for 30 min - 1 hr or by varying tasks every 30 min - 1 hr throughout the work day.
  - Employee should report this discomfort to his/her supervisor/manager

Example 1: This is discomfort. It could have been prevented if the employee took a mini-break after typing for 30 minutes or an hour. The employee also could have benefited from varying his/her tasks every 30 minutes or every hour during the day. The employee should report his/her discomfort to the direct Supervisor/Manager. The employee and his/her direct Supervisor/Manager should also consult the Safety Coordinators and Ergonomist to place the employee in the Early Intervention Program so the Ergonomist can follow up with the employee and ensure the employee was provided with the right ergonomic tools to perform tasks at his/her workstation safely. (If the employee is a contractor, the direct Supervisor/Manager should ensure that the employee seeks advice from his/her home organization's Safety Officer and medical center. The direct Supervisor/Manager should ensure that the employee receives consultation from the Ergonomist as well to make sure that he/she is provided with the right ergonomic tools to perform tasks at his/her workstation safely.)

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## Causes and symptoms of ergonomic-related discomfort

<ul style="list-style-type: none"> <li>• <b>Causes</b> <ul style="list-style-type: none"> <li>- Poor posture and positions                             <ul style="list-style-type: none"> <li>• Sustained</li> <li>• Awkward                                     <ul style="list-style-type: none"> <li>- Bent, twisted, or forward</li> </ul> </li> </ul> </li> <li>- Sedentary</li> <li>- Reduced flexibility</li> <li>- Poor diet and/or overweight</li> <li>- Poor strengthening and conditioning</li> <li>- Stress</li> <li>- Pre-existing medical conditions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Symptoms</b> <ul style="list-style-type: none"> <li>- Stiffness</li> <li>- Tightness</li> <li>- Soreness</li> <li>- Burning</li> <li>- Tingling</li> <li>- Clumsiness</li> <li>- Loss of coordination/sensation</li> <li>- Throbbing</li> <li>- Coldness</li> <li>- Numbness</li> </ul> </li> </ul>
	 <div style="position: absolute; bottom: 10px; right: 10px; background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p>Early intervention is key  <b>Notify</b> your supervisor at  <u><b>first signs</b></u> of symptoms              and request an ergo              evaluation</p> </div>

Good news: discomfort takes time to develop and does not happen overnight

Bad news: when it happens, the discomfort is often ignored until it becomes severe and long lasting discomfort is present as a result which then leads to an injury

Stage 1: Discomfort experienced at the end of the day, but subsides during nights and weekends

Stage 2: Recurring discomfort experienced at start of the workday - rest, decreasing repetition/awkward postures and ice will help mitigate this stage of discomfort


Stage 3: Discomfort affects sleep and rest; there are decreased abilities to do activities and the recovery process takes longer

Look at the many causes of discomfort symptoms and the list of symptoms you'll experience if you have discomfort. Compare these causes of discomfort with your lifestyle – is there anything in your lifestyle you can change to prevent yourself from experiencing discomfort symptoms?

## What is an injury?

- An injury is defined as **serious physical damage or harm to the body that results in pain.**
  - Pain is
    - discomfort that lingers and does not go away.
    - typically present throughout the day/night.
    - highly subjective and very individualized.
  - Pain may or may not radiate to other areas of the body.
  - Pain may be present in the absence of activity.
  - Pain generally disrupts a person's daily routine.
- Types of Injuries:
  - **Work-related injury vs. Personal injury**
    - A **work-related injury** is an injury that is incurred from performing a job task at the workplace
    - A **personal injury** is an injury that is incurred while performing a task outside of work





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## Examples - Injury

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- **Example 1:**  
**"My wrist hurts after typing for 2 hours non-stop at work today... I've been feeling something in my wrist for the past few months, but I didn't think it was a big deal... now it hurts too much to type; I can't even hold a pen without my hand shaking, and my wrist is in so much pain."**
  - What kind of injury is this? How could it have been prevented?
    - **Work-related injury:** Prevent by reporting first symptoms immediately to direct supervisor/manager and request help from the JGI Safety Team.
- **Example 2:**  
**"I was playing tennis yesterday and my wrist started hurting, but I didn't want to stop playing because I need the exercise. But when I got home, I couldn't make dinner last night because it was hurting so badly."**
  - What kind of injury is this? How could it have been prevented?
  - What do you think will happen if this person goes to work the next day?
    - **Personal injury:** Prevent by stopping the exercise at the first sign of pain.
    - **Going to work the next day will very likely result in this personal injury becoming a work-related injury.**

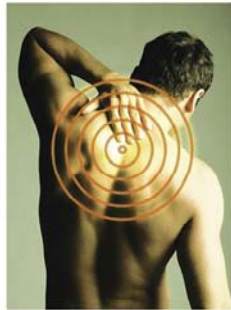
Example 1: This is a work-related injury because the injury occurred at work and because the employee's symptoms are serious (i.e. affecting ability to work). This injury could have been prevented if the employee reported his/her symptoms from the moment he/she felt something in his/her wrist to the direct Supervisor/Manager so they could work together to prevent the injury from becoming worse. Never assume that these kinds of symptoms are not a big deal as they can definitely become a big deal in the long run.

Example 2: This is a personal injury as the injury occurred outside of work. It could have been prevented if this person stopped playing tennis at the first sign of pain. If this person goes to work the next day, he/she will injure him/herself more and may cause this to be a work-related injury resulting in lost time, lost productivity, and possibly lost salary while increasing medical costs. This person should not go to work the next day and should seek medical attention or advice from his/her personal physician.

## Can discomfort lead to an injury?

**Yes!**

Discomfort can lead to an injury if preventative measures are not taken to alleviate the worsening of the symptoms and/or if proper treatment is not provided or adhered to in a timely fashion



## What you can do to protect yourself and prevent an ergonomic-related injury

- **Notify** supervisor at **first signs** of discomfort
- **Think** about the safest and most comfortable way to perform tasks
- Take **frequent** mini-breaks
- **Request** an ergonomics evaluation
- Make recommendations regarding ergonomics **improvements**







## Request an Ergo Evaluation

Whether or not you've completed Remedy Interactive (EHS0059 training & self-assessment), you can request a 1:1 ergonomics evaluation by the JGI Ergonomist or JGI Ergo Advocate

- Office Ergonomics: Send an e-mail request to Melanie Alexandre ([MMAlexandre@lbl.gov](mailto:MMAlexandre@lbl.gov)) or Cheryl Chu ([CAChu@lbl.gov](mailto:CAChu@lbl.gov))
- Laboratory Ergonomics: Send an e-mail request to Melanie Alexandre ([MMAlexandre@lbl.gov](mailto:MMAlexandre@lbl.gov))

We will schedule an evaluation with you ASAP!




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## JGI ErgoMates Program

ErgoMates are an option for reducing fatigue on the lower back, hips, and legs when performing work tasks that require four or more hours of standing and walking in areas where anti-fatigue matting is not practical or safe.

**It's matting you wear!**



ErgoMates serve the same purpose as anti-fatigue matting, except instead of searching for matted areas to stand on, the matting is already on your own two feet!

**Acceptable Uses of ErgoMates**

- While performing work tasks that require four or more hours of standing and walking per day
- Traveling between JGI buildings or locations
- During break time and lunch as long as recreational activities are not performed

For further information or to participate:  
Contact your supervisor, Cheryl Chu or Melanie Alexandre

The JGI ErgoMates Program is available to all eligible employees who stand and/or walk to perform their job tasks for 4 hours or more per day. ErgoMates are like sandals that are applied over your regular footwear to provide anti-fatigue matting under your own two feet wherever you go while performing your job tasks. It's a great solution for reducing fatigue to the lower back, hips, and legs. If you're interested in this program, please contact your supervisor, the JGI Assistant Safety Coordinator Cheryl Chu (CACHu@lbl.gov, (925) 296-5649), or the JGI Certified Ergonomist Melanie Alexandre (MMAlexandre@lbl.gov, (925) 927-2553).

## What to do when injured

When you incur any type of injury (minor or serious, ergo or non-ergo related):

- **Notify** your supervisor/manager immediately!
- Investigation meetings occur to identify the **root cause** of the injury & determine solutions to **prevent recurrence**
- If treatment is needed, your supervisor/manager and Safety staff will direct you to the appropriate medical services



## Other things you need to know...



## Smoking Safety (an oxymoron??)

- Use the "BUTT CANS"/Ash Urn provided in many areas for proper disposal of cigarette butts.
- Ensure that your cigarette is completely extinguished before you walk away.
- You must be >20 feet away from the building



## Vehicle Safety

The maximum speed limit in JGI parking lots is 5-15 MPH



- Park only in designated areas.
- Do not block access areas needed by emergency vehicles.
- Drive carefully.
- Wear your seat belt.





## Computer Security



The JGI/PGF is patterned after the LBNL Computer Use Policy

- Computers are to be used for official business only
- Computers can be audited at any time
- Any information obtained through such audits can be disclosed to a third party, such as law enforcement

Incidental Personal Use is permitted, as long as it:

- Does not involve illegal activities, gambling or sexually explicit materials
- Does not involve personal gain
- Does not violate LBNL policy
- Does not involve any activity which will potentially embarrass LBNL, JGI or DOE



## Questions?



Got  
Questions?

Contact JGI Safety Coordinators for questions regarding this training:

Safety Coordinator - Stephen Franaszek, [SMFranaszek@lbl.gov](mailto:SMFranaszek@lbl.gov), (925) 296-5807

Assistant Safety Coordinator, Cheryl Chu, [CChu@lbl.gov](mailto:CChu@lbl.gov), (925) 296-5649



## Course Credit for PGF 0010

To get credit for this training, copy and paste this link into your browser and complete the final Quiz

<https://coursebuilder.lbl.gov/course/exam.aspx?cid=133&sid=1745>