TABLE OF CONTENTS

1.0 POLICY

2.0 PURPOSE

3.0 SCOPE

4.0 REFERENCES

5.0 DEFINITIONS

6.0 RESPONSIBILITIES

- 6.1 Directors
- 6.2 Managers
- 6.3 Supervisors
- 6.4 Employees
- 6.5 Risk/Ergonomics Program Manager
- 6.6 Ergonomics Coordinators
- 6.7 Information Services Department
- 6.8 Public Works

7.0 WORKSTATION EVALUATION

- 7.1 Request for Ergonomic Evaluation Process
- 7.2 Ergonomics Evaluation Process
- 7.3 Ergonomics Evaluation Report
- 7.4 Re-Evaluation of Workstation

8.0 CONTROL MEASURES

- 8.1 Engineering Control
- 8.2 Administrative Control

9.0 CORRECTIVE MEASURES FOR ERGONOMIC ISSUES

- 9.1 Environmental
- 9.2 Task Performance
- 9.3 Posture
- 9.4 Lifting
- 9.5 Work Layout and Equipment Design
- 9.6 Design of Chair

9.7 Reaches
9.8 Clearance
9.9 Standing Still on Hard Surface
9.10 Equipment Control
9.11 Tools
9.12 Workstation
9.13 Work Habits
9.14 Workstation Standards
9.15 Work Habits
9.16 prescription Computer Eyewear Program

10.0 TRAINING

11.0 PROGRAM EVALUATION

1.0 POLICY

It is the policy of the County of San Mateo to provide employees information regarding the requirements and methods for this Ergonomics program for preservation of health and safety for fellow employees, customers, and visitors to County of San Mateo.

2.0 PURPOSE

The purpose of this Ergonomics program is to inform County of San Mateo employees of the requirements of and methods for implementation of safe work environment by designing physiological and psychological job demands to be compatible with worker's attributes and in accordance with the California Ergonomics regulation, Title 8 CCR Section 5110. This includes the prevention of or reduced exposure to Work-Related Musculoskeletal Disorder (WMSD).

3.0 SCOPE

This Ergonomics program applies to all personnel under the direct supervision of County of San Mateo (i.e., temporary, part-time, per diem, and full-time employees). All personnel shall comply with the provisions outlined in this document.

4.0 REFERENCES

A) Title 8 CCR Section 5110.
B) NIOSH Publication 99-135, "NIOSH Publications on Video Display Terminals, Third Edition." http://www.cdc.gov/niosh/docs/99-135/
C) NIOSH Publication 97-117, "Elements of Ergonomics Programs." http://www.cdc.gov/niosh/docs/97-117/
D) NIOSH Publication 97-141, "Musculoskeletal Disorders and Workplace Factors." http://www.cdc.gov/niosh/docs/97-141/
E) Occupational Safety and Health Administration (OSHA), "OSHA Ergonomic Solutions: Computer Workstations eTool" http://www.osha.gov/SLTC/etools/computerworkstations/index.html

5.0 DEFINITIONS

A) Ergonomics - Multidisciplinary methods of study concerning interactions between humans and their total working environment. Included are the stresses related to such environmental elements as atmosphere, heat, light, and sound, as well as all tools and equipment of the workplace.

B) Awkward Postures - Body postures determine which joints and muscles are used in an activity and the amount of force or stresses that are generated or tolerated. Manipulative or other tasks requiring repeated or sustained bending or twisting of the wrist, knees, hips, or shoulders also impose increased stress on these joints.

C) Forceful Exertions - Tasks that require forceful exertions that place high loads on the muscles, tendons, ligaments, and joints. Increasing force means increased body demands and greater muscle exertion along with other physiological changes necessary to sustain an increase in effort. Prolonged or recurrent experiences of this type may also lead to musculoskeletal problems.

D) Vibration – The oscillatory motion of a physical body. Segmental, or localized, vibration can occur in body parts such as the hand and arms. This occurs when a specific part of the body comes into contact with vibrating objects such as electronic staplers, building construction, and packaging machines.

E) Repetitive Motion Injury – an injury to a part of the body that is caused by performing the same motion over and over again thereby straining the body part.

F) Neutral Posture – The posture when the joints are not bent, and the spine is aligned and not twisted. Working in neutral postures is preferable to working while twisting the back or bending the wrists.

G) Musculoskeletal Disorders (MSDs) - Musculoskeletal disorders (MSDs) can affect the body's muscles, joints, tendons, ligaments, and nerves. Most work-related MSDs develop over time and are caused either by the work itself or by the employee's working environment. They can also result from fractures sustained in an accident.

H) Repetitive Strain Injury (RSI) - A repetitive strain injury (RSI), also called cumulative trauma disorder (CTD), is any of a loose group of conditions resulting from overuse of a tool, such as a computer keyboard. It is a syndrome that affects muscles, tendons and nerves in the hands, arms and upper back.

I) Cumulative Trauma Disorder (CTD) - Disorders of musculoskeletal or nervous system components caused or aggravated by repeated and/or forceful movements of the same musculoskeletal systems.

J) Duration - The amount of time a person is continually exposed to a risk factor. Job tasks that require the use of the same muscles or motion for prolonged duration increase the likelihood of both localized and general fatigue. The longer the period of continuous work, the longer the required recovery or rest time.

K) Biomechanical Risk Factor - Aspects of a job or task that impose physical stress on tissues of the musculoskeletal system, such as muscles, nerves, tendons, ligaments, joints, cartilage, spinal discs, or blood vessel of the upper extremities.

L) Contact Stress - Activities involving either repeated or continuous contact between sensitive body tissues and hard or sharp objects. Contact stress commonly affects the soft tissue on the fingers, palms, forearms, thighs, shins, and feet. Pressure may be unwittingly induced over a small area of the body (e.g. wrist, forearm) that can inhibit blood flow, tendon and muscle movement, and nerve function.

M) Administrative Control - Methods of controlling employee exposures by job rotation, work assignment, time periods away from the hazard, or training in specific work practices designed to reduce the exposure.

N) Engineering Control - are the most preferred method for controlling ergonomic risk factors because they are more permanent and effective. Engineering controls include modifying, redesigning or replacing:

- Workstations and work areas
- Materials/objects/containers design and handling
- Hand tools used
- Equipment

Engineering Controls are the heart of ergonomics: changing the workplace to fit the worker. The design should accommodate the wide range of people assigned to the task.

O) Other Conditions - Workplace conditions that can influence the presence and magnitude of the risk factors for (Work-related Musculoskeletal Disorders) WMSDs can include:

- Cold temperature.
- Insufficient pause and rest breaks for recovery.
- Machine-based work.
- Unfamiliar or unaccustomed work.

6.0 RESPONSIBILITIES

6.1 DIRECTOR

Responsibility for safety throughout County of San Mateo rests with the Director who establishes the Department's goals, policies, and expectations for safety. Responsibilities include:

A) Approving new or revised employee health and safety programs and procedures.

B) Authorizing the allocation of physical and financial resources necessary to maintain an effective Ergonomics Program.

C) Designating an internal Department Ergonomic Coordinator(s) whose assigned role is to implement and monitor this policy at the department level;

D) Working with Safety and Ergonomics program Manager in correcting any workstation deficiencies when an employee reports a workers' compensation claim;

E) Using the assistance of Safety and Ergonomics Program Manager and Purchasing, a certified Space Planner in office moves and remodels;

6.2 MANAGERS

Responsibilities include, but are not limited to:

A) Designating an internal Department Ergonomic Coordinator(s) whose assigned role is to implement and monitor this policy at the department level;

B) Reviewing and acting upon Ergonomic evaluation recommendations made by department Ergonomics Coordinator and Safety and Ergonomics Program Manager and Ergonomics Consultant.

C) Gaining familiarity with the cause(s) of repetitive motion injuries and their control options.

D) Ensuring the restructuring of tasks to mitigate or prevent repetitive motion injuries.

E) Ensuring that the County of San Mateo Safety and Ergonomics Manager is notified whenever Cal-OSHA, or any environmental, health, and safety regulatory agency, arrives on site or requires any form of correspondence.

F) Allowing operators regular work breaks from the computer to do alternate work. These work breaks shall be no less than 10 minutes for every 2 hours of computer work. These work breaks shall be in addition to regular breaks.

6.3 SUPERVISORS

Responsibilities include, but are not limited to:

A) Ensuring that all provisions of this ergonomics program are adopted and are in compliance within the section and division.

B) Assuring the availability of Ergonomics Coordinator to attend necessary training in computer ergonomics and related education programs and activities;

C) Providing job instruction for new employees and employees new to a job to include a review of safety rules and procedures at the start of employment within their area.

D) Ensuring that health and safety information is properly communicated to their employees. Assure that anyone who may be affected by repetitive strain injury (RSI) is provided information and training to reduce repetitive motion injuries.

E) Ensuring that employees are properly trained in this ergonomics program at hire and annually.

F) Providing employees with appropriate tools as required for hazardous exposures and/or task, requiring its use, and ensuring its proper maintenance.

G) Approve Ergonomics tools/necessary items to perform assigned tasks in an ergonomically correct manner.

H) Performing formal and periodic safety inspections of operations under supervision.

I) Ensuring that work-related injuries and illnesses are reported immediately and appropriate medical attention is rendered in accordance with County of San Mateo Policy

J) Recognizing employees who perform safe and healthful work practices.

6.4 EMPLOYEES

Responsibilities include, but are not limited to:

A) Endeavoring to do his/her job safely and safeguarding the health and wellbeing of fellow employees.

B) Completing an Ergonomic Self-Assessment Training (IMitigate) within 30 - 45 days after the time of hire, when moved into a new workstation(s), and when assigned. Upon completion of the self-assessment evaluation, you will receive an email from InjuryPrevention@remedyinteractive with the results of your IMitigate ergonomics evaluation. It's your responsibility to forward

that email to your department Ergonomics Coordinator, Supervisor and Safety and Ergonomics Program Manager. Based on the outcome of the ergonomics pre-assessment/training Safety and Ergonomics Manager may submit a request to our consultant to conduct an ergonomics evaluation if needed based on individual ergonomics needs.

C) Taking regular work breaks from the computer to do alternate work. These work breaks shall be no less than 10 minutes for every 2 hours of computer work. These work breaks shall be in addition to regular breaks.

D) Conscientiously applying training in the Ergonomics program as needed in his/her daily activities.

E) Maintaining an awareness of the need for Work-related Musculosketal Disorders (WMSDs) protection in working areas.

F) Refraining from performing tasks in which specialized training has not been received.

G) Participating in the Ergonomics training program on an annual basis if use is required to safely perform a job.

H) The employee is responsible for promptly reporting repetitive strain injuries to their management.

I) The employee may request an evaluation of his/her workstations, work processes or equipment through his/her management and Safety and Ergonomics Manager. Employee may follow the steps outlined in Section 7 of the Ergonomics Program.

6.5 RISK/ERGONOMICS PROGRAM MANAGER

Responsibilities include, but are not limited to:

A) Administering the Ergonomics program. Identifying jobs and process that have resulted in repetitive motion injuries and making recommendations to reduce these injuries.

B) Consulting, training, and assisting the County of San Mateo Management in order to support repetitive motion injury prevention.

C) Providing technical assistance to the services on the identification, evaluation, and selection of tools and equipment.

D) Preparing and providing resource materials on the Ergonomics program.

E) Assisting departments in scheduling ergonomics evaluations with Ergonomics Consultant.

F) Assisting in the identification and selection of products and new furniture orders during departmental moves to correct ergonomics issues identified by this program.

G) Periodically evaluate the effectiveness of this Ergonomics program and reviewing it against applicable regulations to ensure regulatory compliance.

H) Reviewing workers compensation claims for potential WMSD-related cases.

I) Investigating employee complaints or concerns of Ergonomics-related issues.

J) Collecting, maintaining, and reviewing all cumulative trauma disorder – related injury and illness reports.

K) Assisting Facilities Services in maintaining a safe work environment.

6.6 ERGONOMIC COORDINATORS

Responsibilities include, but are not limited to:

A) Providing employee's with IMitigate self-assessment/training link within 30-45 days after the time of hire, when moved into a new workstation(s), and when assigned.
B) Completing a basic **Ergonomic Evaluation** for computer operators who request assistance and who are identified through the self-assessment process (IMitigate) as being low risk for injury, and facilitating the acquisition and installation of necessary adaptive devices for the operator upon reviewing the recommendations with Safety and Ergonomics Manager.
C) Documenting and maintaining an archive of completed Ergonomic Evaluation Checklists. Submit the completed Ergonomic Evaluations Checklist including recommendations to the Safety and Ergonomic Manager for approval.
D) Providing ergonomic program updates to department management, including analysis regarding computer-related injury trends after each Ergonomics Committee Meetings.
E) Inform and communicate with the Safety and Ergonomic Program Manager whenever new computer-based operations or equipment is proposed;
F) Attending the Quarterly Ergonomic Coordinator Council Meetings;
G) Consulting with Safety and Ergonomics Program Manager, as needed;
H) Supporting ergonomic program awareness, such as providing new operator orientation, posting ergonomic training materials, and ensuring department employees are receiving the ergonomic training.

6.7 INFORMATION SERVICES DEPARTMENT

Departmental IT Coordinators and the Information Services Department are responsible for:

A) Being familiar with this policy, with related County ergonomics program documents, and with ergonomic fundamentals;

B) Working with the Safety and Ergonomics Manager to identify and assist Departments in purchasing a computer and related electronic equipment that conforms to the ergonomic specifications of this policy;

6.8 PUBLIC WORKS

The Public Works Department is responsible for:

A) Remodeling or completing new facilities/work areas that conform to this policy, including but not limited to workstation size, electrical, ventilation and lighting needs, and glare reduction; to evaluate, upon department request, and existing facility and/or workstation(s) and provide space planning support for workstation configuration to conform to this policy;
B) Working with departments to assure appropriate environmental conditions, including lighting and ventilation.

7.0 WORKSTATION EVALUATION

Workstation evaluations are critical to understanding the dynamics between human and machine interactions. County of San Mateo works to evaluate workstations and determine the fitness of the workstation to the end user. This ensures that the workstation is designed for optimal efficiency and reduced fatigue to the user. County of San Mateo workstation evaluations include the following:

7.1 REQUEST FOR ERGONOMICS EVALUATION PROCESS

A) An employee may initiate an ergonomics evaluation request through their supervisor/manager. The employee must be able to communicate the specific ergonomic issue and needs they are seeking assistance for.

B) The Manager can review the request from the employee and email the requested information below to the Safety and Ergonomics Program

Manager. The request for an ergonomic evaluation must include the following information:

1. Employee Name
2. Specific location where ergonomics evaluation is needed
3. Brief description of the ergonomics concern that the employee is experiencing.
4. Contact information for the employee.

C) The Safety and Ergonomics Program Manager or Safety Coordinator will send the Ergonomic Self-Assessment Training (IMitigate) link to the employee to further assess the need for an Ergonomics Assessment. Upon completion of the self-assessment evaluation, the employee will receive an email from InjuryPrevention@remedyinteractive with the results of IMitigate ergonomics evaluation.

The employee will forward that email to the department Ergonomics Coordinator, Supervisor, and Safety and Ergonomics Program Manager. Based on the outcome of the ergonomics pre-assessment/training Safety and Ergonomics Manager may submit a request to our consultant to conduct an ergonomics evaluation if needed based on individual ergonomics needs.

7.2 PROCESS OF ERGONOMICS EVALUATION

A) The Ergonomics Consultant are qualified individuals able to conduct ergonomic evaluations for employees, who will:

a. Observe employees during the course of their work, identifying body parts used in their specific tasks, interviewing employees, and calculating work area heights and distances. Each evaluation must determine and document the cause and corrective action needed to prevent injury/illness or the recurrence of an existing injury/illness.

b. Photograph a task, using measurement instruments, estimating the frequency of use percentages in order to identify and group tasks into specific areas and recognize the potential hazards that may be present.

c. Identify and review potential risk to muscles and joints.
d. Request employee's participation through questionnaires and surveys.
e. Methods to ensure that procedures, tasks, and workstations are designed to meet the basic Ergonomics principles listed below:

- Adhere to work zone principals. The most commonly used items should be closest to the person or repetitive access within the primary work zone, occasional access within the secondary work zone, and seldom access in the tertiary work zone.
- Work in good posture and maintain the normal slight inward curve in the lower back, to properly align the neck, head, and shoulders, change position and posture from time to time, as the task allows, provide access and clearance to needed equipment.
- Enhance employee understanding of the proper layout and configuration of workstations,
- Minimize direct pressure points, and
- Place monitors at proper heights and in a direct line

7.3 PROCESS OF WRITING REPORT

A) The Ergonomics Consultant, and those trained in conducting Ergonomics Assessments will email a summary Memo of the Ergonomics Assessment to the employee and the employee's manager, supervisor and Safety Ergonomics Program Manager.

B) The report generated by the Ergonomics Consultant or trained employees will discuss the workspace and employee observed, with specific recommendations submitted on how noted deficiencies can be corrected.

7.4 RE-EVALUATION OF THE WORKSTATION

Management and Employee

A) Ensure that a re-evaluation of the workspace is performed once the recommended ergonomic items have been received and put to use by the affected employee.

8.0 CONTROL MEASURES

In order to control risk by eliminating or mitigating work-related hazards, measures such as engineering controls and administrative controls must be utilized.

8.1 ENGINEERING CONTROLS

Engineering controls guidelines are the primary method used to prevent and control WMSDs. These controls include:

A) Changing workstation layout, which might include using height-adjustable workbenches or placing tools and materials frequently used within short reaching distance.

B) Selecting tools and equipment that have stress-free grips and other stress-free movable parts.

C) Providing equipment designed to assist employees and ensure that heavy materials or products can be transported stress-free.

D) Providing sufficient lighting for employees.

E) Ensuring appropriate optimal temperature for employees.

8.2 ADMINISTRATION CONTROLS

The daily overseeing of operational practices and tasks by management to reduce or prevent exposure to ergonomic hazards includes:

A) Changing policy rules and guidelines designed to create micro-breaks and rest periods in between job tasks to allow employees the opportunity to reduce fatigue.

B) Rotating employees continuously if the job requires excessive physical demands.

C) Broadening the daily routine to offset potential repetitive movement or awkward posture.

D) Instructing employees on how to recognize and/or reduce potential ergonomic hazards related to the task at hand.

E) Educating employees through frequent training regarding ergonomics.

9.0 CORRECTIVE MEASURES FOR ERGONOMICS INJURIES

A variety of corrective measures can and should be used to correct factors leading to physical stress on employees. All employees will be trained, via video, on risk factors and corrective measures.

9.1 ENVIRONMENTAL

High-level environmental factors can be corrected to reduce and eliminate the risk of ergonomic injuries to single and multiple employees working in a given area.

A) Lighting – sufficient lighting must be provided both for the task at hand as well as for the individual employee.

B) Temperature – a comfortable climate should be maintained during the entire length of the working day, especially in cases of exposure to extreme temperature changes.

C) Vibration – effects of vibration should be kept at minimal levels so that prolonged exposure will not affect the worker; improvement of tools used should also be utilized.

D) Noise – reduce noise levels or insulate workers from noise where levels exceed 85 decibels, which can be measured on a hand-held noise dosimeter when/if complaints of ‘white noise’ or equipment noise are received. Noise may be an issue in the Server Room and Copy Center.

9.2 TASK PERFORMANCE

Ergonomics injuries can be reduced and eliminated by analyzing the individual physical tasks exerted by an employee. Analysis of tasks should focus on these factors:

A) Repetition – provide a work area adapted to eliminate excessive repetitive motion stress or strain.

B) Force – reduce the level of exertion and decrease unnecessary or excessive grasping motion.

C) Rate – decrease the number of manipulations per minute by redefining the work procedure or increasing the staff attending to the job at hand.

D) Duration – determine the likelihood of fatigue and stress over long periods of time-related to the required job tasks.

E) Contact Stresses – incidental contact with sharp or hard objects, such as desk corners, furniture or other equipment, that might add excess stress and pressure to one part of the body should be limited and replace hard or sharp corners with padding or insulated trim.

9.3 POSTURE

Correcting employee posture is a key element in reducing ergonomic injuries. The following conditions should be addressed:

A) Bending – redesign workstation layout for optimal height as well as reduce tasks in which position changes may occur.

B) Stretching – easy access to all equipment and tools required in completing a job.

C) Bent Neck – redesign workstation layout to provide the employee with minimal stress on the neck. Tilt work surfaces to allow optimum position changes.

D) Bent Wrist – redesign/modify workstation layout and equipment to ensure a neutral positioning of the wrist.

E) Extended Elbow – reconfigure workstation, equipment, and tools in order to eliminate excessive twisting movements.

9.4 LIFTING

Proper lifting techniques will help reduce and eliminate ergonomic injuries to the employee. The primary injury when lifting occurs to the back. Employees performing lifting tasks should follow these procedures:

A) All lifting should be done at optimum height without lifting above the shoulders.

B) Maintain an erect position in order to avoid any twisting or bending of the waist.

C) Anything to be lifted should be done with the load as close to the body as possible. Ensure that lifting is performed with the knees, not with the back or hips.

D) When lifting a load, maintain a wide area of base support and a secure grip.

E) Use mechanical lifting devices or lifting aids for all heavy loads.

F) Push heavy objects instead of pulling them.

G) Pivot feet when turning to avoid twisting the body.

H) Eliminate excessively heavy and unnecessary lifting by redesigning material handling procedures.

9.5 WORK LAYOUT AND EQUIPMENT DESIGN

Design a work layout to fit employees that enables both large and small persons to fit comfortably and reach materials easily. The following corrections should be performed in the work area:

A) Place all materials and tools in front of the employee to reduce twisting motions. Provide sufficient workspace for the whole body to turn.

B) Use gravity to move materials.

C) Design layout, so arm movements pivot about the elbow rather than the shoulder to avoid stress on the shoulder, neck, and upper back.

D) Use ergonomic work zone principles to arrange the work area:
   a) **Primary work zone** - the distance from elbow to hand. Things you touch on a daily basis.
   b) **Secondary work zone** - Within arm's reach. Use this zone to position those items that you use frequently, but don't need all the time.
   c) **Reference zone** - Outside arms reach. Use this zone for your least often used items.

9.6 DESIGN OF CHAIR

An ergonomically fit chair provides not only comfort but also enhances productivity. The following comprise the criteria for properly designed chairs and floor space:

A) Easily adjustable height and lumbar supports.

B) Adjustable and roll back armrests.

C) Adjustable seat pan with different seat pan depth availability.

D) Provide five caster and floor mats for easy mobility on uneven floors.

E) Chairs with no pressure points that may impact or impede the back, arms, or legs.

No personal protective equipment (i.e., mouse device, keyboard, exercise ball, etc…) shall be brought from the outside (i.e., home) and used by any employee while on the premises of San Mateo County

Re: Exercise Balls

- County of San Mateo provides three chair options for our employees, which meet, or exceed the CalOSHA recommended/industry standards for an Office Ergonomic Chair. The exercise ball might be great for strengthening and toning in the gym or at home, but it can't compete with a truly ergonomic chair for long-term sitting in an office environment.

- Exercise balls are not recommended for prolonged office sitting. Sitting on the exercise balls with no trunk support and the constant trunk movement certainly does activate trunk musculature and therefore aids in maintaining muscle tone.

However, since the muscles shorten during this contraction, there is a huge compression placed on the spine. Prolonged compression has a negative effect, especially during sitting, adding a negative penalty to the discs.

- Exercise Balls will not be allowed in the workplace, unless there is a specific, and written, request from a physician. Apart from the spinal risks already mentioned, there are general health and safety risks to consider: the potential for injury, if the user were to become so unbalanced as to fall off the ball.

9.7 REACH

Limiting overexertion will reduce and eliminate fatigue and ergonomic injury. The following addresses proper procedures for reaching:

A) Workspace surface dimensions should be lessened.

B) Slanted work surface or inclined platforms when reaching into boxes should be utilized.

C) Design the primary work area, so that arm movements or extensions of more than 15 inches are minimized.

9.8 CLEARANCE

Provide enough clearance on the work surface.

9.9 STANDING STILL ON HARD SURFACES

Prolonged standing contributes to the strain of legs and/or back. The following provisions will reduce these types of physical stress:

A) Redesign of workstation and task procedure in order to allow a change in position or alternate between standing and sitting.

B) Rotate workers or vary tasks to allow workers to perform different tasks.

9.10 EQUIPMENT CONTROL

Equipment control may be complicated when handled in a large volume and may result in strains due to repetition. Coordinating controls can be implemented by:

A) Following normal protocols to operate the equipment.

B) Standardizing control switch.

C) Providing logical order for the layout of materials and tools.

D) Contrasting signs and labels with their background.

9.11 TOOLS

Tools are an essential part of performing employee's tasks. Proper handling of tools augments productivity and limits strain. Tools should be selected and used in accordance with the following:

A) The handles should span across the hand and extend beyond the palm to distribute the grip force over as wide an area as possible.

B) Choose tools that allow that employees to use the large muscles in the shoulders, arms, and legs, rather than the smaller muscles in the wrists and fingers.

C) Avoid holding a tool continuously in a raised position or gripping a heavy tool. Properly designed tools allow the worker to keep the elbows next to the body to prevent damage to the shoulder or arm. Additionally, properly designed tools do not require the worker to bend the wrists, stoop or twist.

D) Choose handles that are long enough to fit the whole hand. This will help to reduce uncomfortable pressure on the palm of the hand or on the joints of the fingers and hand.

E) Do not use tools with spaces where fingers and skin can get caught.

F) Choose double-handled tools, such as scissors, pliers or clippers. These should have a span that does not overstretch the hand.

G) Do not select tools with contoured handles; they fit only one size of a hand and put pressure on hands they do not fit.

H) Select tools with handles that are easy to grip. Handles should also have good electrical insulation and should not have any sharp edges or corners. Put soft plastic covers on handgrips to reduce slipperiness.

I) Avoid using tools that force the wrist to bend or to be in an awkward position.

J) Choose tools with an evenly balanced weight and make sure they are used in the proper position.

K) Make sure tools are properly maintained.

L) Tools should be appropriate for right-or left-handed workers.

9.12 WORKSTATION

Improperly configured workstations in an office setting contribute to physical strains as well. Following the appropriate ergonomic procedures in performing office work lessens the chance of developing a Cumulative Trauma Disorder. Proper procedures and equipment to use while performing office work are the following:

A) Chairs should be adjustable and provide maximum comfort.

B) Use a footrest or keep feet flat on the floor.

C) Keyboards and workstation layout should be at elbow height.

D) Working tables should be at waist height.

E) The monitor should be positioned at eye level (use adjustable monitor support if necessary).

F) Keyboards should have a padded wrist rest.

G) Stations should have a hard copy holder (located in front of the monitor) for transcribing and/or data entry.

H) Install an under-the-desktop keyboard into a traditional desk by removing the center drawer, thereby creating a computer desk for desks that do not come with that equipment.

9.13 SIT-STAND COMPUTER WORKSTATIONS

A) Adjustable height "Sit-Stand" computer workstations may be provided to support specific medical or physical needs.
B) Staff afforded a sit-stand workstation shall receive additional training and familiarization with the set-up and use of the sit-stand station.
C) The adjustment range of the work surface of sit-stand workstations shall meet the sitting and standing elbow height of the intended user.
D) An evaluation by an ergonomic consultant will be conducted to assess workspace feasibility and determine a potential user 's compatibility in the use of a sit-stand workstation.

9.14 WORKSTATION STANDARDS

A. Workstation Height

Workstations in the County will be a standard height of 29 inches and will be a continuous flat fixed surface. If a workstation needs to be adjustable and if it is a modular system workstation, the fixed support(s) will be changed to adjustable support(s).

B. Work Surface

Work surface tops should have no sharp edges and a minimum depth of 24 – 36 inches. The front edge of the work surface should be a waterfall or rounded to minimize sharp edges. The work surface material shall have a matte finish to inhibit glare.

C. Computer Surface

1. If the computer surface is fixed-height without a keyboard platform, the depth should be a minimum of 30 inches. This would generally not be provided for moderate to intensive computer users.
2. If the surface is straight with a keyboard platform, the depth should be a minimum of 24 inches.
3. If the computer surface is straight with a cutout, it should include

a long arm keyboard mechanism and have a minimum depth of 30 inches.

D. Corner Computer Surface

The size of the corner work surface is dependent on the side surface, which shall have a minimum depth of 24 inches, and must accommodate a 28– inch wide keyboard platform.

E. Leg Clearance

1. Where there is only one task location, e.g., a computer station, the leg clearance should be no less than 29 inches wide.
2. Where a multiple task location exists, the leg clearance at the primary task point should be no less than 29 inches wide, and the leg clearance at the secondary task points should be no less than 27 inches wide.
3. For both primary and secondary task points within a single workstation, the depth of the clearance should be no less than 23 inches at the floor level.

F. Keyboard Cutouts

Workstation cutouts should be a standard feature for moderate to intensive computer users, which allow frequently used items to be placed within the primary reach zone. A cutout shall be large enough to fit a 28-inch wide keyboard platform. The Workstation cutouts are not required for the sit and stand workstations.

9.15 WORK HABITS

Working prolonged hours throughout the day contributes to physical fatigue and strain. Following a few recommendations will lessen this effect. They are:

A) Allow micro breaks for exercise or stretches during the workday.

B) Alternate tasks to allow for different work motions during long work periods.

9.16 PRESCRIPTION COMPUTER EYEWEAR PROGRAM

Employees are responsible for seeking eye exams, eye care and corrective lenses from the doctor of their choice. Eye examinations and eyeglasses are covered through the employees' vision care benefits program.

Employees who are computer operators with a multi-focal prescription are eligible to receive **near distance, single vision computer glasses** through Risk Management. This program is provided through the County's Prescription Safety Eyewear Program as an ergonomic resource to eliminate the risk of a repetitive motion injury due to the head and neck motion common to operators wearing multifocal lenses.

Operators who qualify may contact Safety and Ergonomics Program Manager to request glasses for computer use. Employees may schedule an appointment with Risk Management to select frames and submit a current (within two years) multifocal prescription. Risk Management will replace these glasses when a prescription is updated or if the glasses become damaged.

10.0 TRAINING

Training is an essential element of any effective safety and health program. For ergonomics, the overall goal of training is to enable managers, supervisors, and employees to identify aspects of job tasks that may increase a worker's risk of developing WMSDs. Trainees must learn to recognize the signs and symptoms of the disorders, and how to develop strategies to control or prevent them. Training ensures that employees are well informed about the hazards so they can actively participate in identifying and controlling exposures.

An employee trained in ergonomic awareness should be able to:

A) Recognize workplace risk factors for musculoskeletal disorders and understand general methods for controlling them.

B) Identify the signs and symptoms of WMSD that may result from exposure to risk factors, and be familiar with the company's health care procedures.

C) Know the process the employer is using to address and control risk factors; the employee's role in the process and ways employees can actively participate.

D) Know the procedure for reporting risk factors and WMSD. This includes knowing the names of designated persons who should receive the reports.

Training is intended to enhance the ability of managers, supervisors, and employees to recognize work-related ergonomic risk factors and to understand and apply appropriate

control strategies. Training in the recognition and control or ergonomic risk factors will be given as follows:

A) To all new employees during orientation.

B) Annually for all employees

C) To all employees assuming a new job assignment.

D) When new jobs, tasks, equipment, workstations or processes are introduced.

E) When high exposure levels to ergonomic risk factors have been identified.

Training will be provided in one, or a combination, of the following formats:

A) Oral presentation
B) Videos
C) Distribution of educational literature
D) Hands-on equipment and work practice demonstrations

Trainers will be experienced in delivering training programs that address all work and non-work related risk factors and will be familiar with County of San Mateo's operations. Training will be provided from one or a combination of sources listed below:

A) Internally developed resources
B) The workers' compensation carrier
C) An outside consultant

11.0 PROGRAM EVALUATION

This ergonomic program will be evaluated on an annual basis to evaluate the program to ensure its effectiveness for the control of WMSD and compliance with applicable state and federal regulations.