

ROWING WEIGHT CONTROL PROGRAM WEIGHT CONTROL PROGRAM MANUAL TABLE OF CONTENTS

EXECUTIVE SUMMARY (COACHES MUST READ, please print out and retain for reference)..2-9

GOALS AND OBJECTIVES..... 9

INTRODUCTION

OVERVIEW10

FREQUENTLY ASKED QUESTIONS.....11

SPECIFIC PROGRAM LOGISTICS

IMPLEMENTATION13

ROWERS NATURALLY BELOW 7% OR 12% BODYFAT16

ROWERS TESTED AS MODERATELY DEHYDRATED16

APPEALS PROCESS17

DEFINITIONS19

MATERIALS AVAILABLE20

INSTRUCTION ON PROCEDURAL TECHNIQUES

CERTIFIED MEASURERS PROCEDURES21

RE-CERTIFICATION PROCEDURES FOR CERTIFIED MEASURERS.....25

SPECIFIC ASSESSMENT PROCEDURES.....26

FORMULAS FOR CALCULATING MINIMUM WEIGHT.....31

SOFTWARE SPREADSHEET INSTRUCTIONS.....32

COACH-OFFICIAL TEAM REPORT.....33

WEIGHT LOSS SCHEDULE VIOLATIONS.....34

Strategies to Prevent False Hydration Test.....35

Crew Coaches Quick Reference Guide.....36

VHSL WEIGHT CONTROL PROGRAM REQUIRED FORMS

HYDRATION TIP SHEET FOR ATHLETES.....37

PHYSICIAN CERTIFICATION OF NATURAL WEIGHT.....40

NUTRITION INFORMATION

NCAA WEBSITE...http://www1.ncaa.org/membership/ed_outreach/nutrition-performance/index.html

ROWING WEIGHT CONTROL PROGRAM

EXECUTIVE SUMMARY

COACHES REFERENCE

PAGES 3 - 9

Please print pages 2 – 9 and retain as reference

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

IMPLEMENTATION

1. MINIMUM WEIGHT CERTIFICATION: The baseline weight and body fat measurements are performed during a five week period beginning two weeks prior to the first VHSL allowed spring practice day and three weeks after the VHSL imposed official first day of practice. For rowers coming out for the team late, for whatever reason, s/he must be tested within one week of starting practice and/or conditioning or before s/he is allowed to compete in a competition. His or her name will need to appear on the Coach-Official Team Report before participation will be allowed. The earlier the measurements are completed, the more time the rower will have to safely reach their desired weight within the guidelines of the program. These results (VHSL Coach-Official Team Reports) should be maintained by the VHSL Certified Measurer and distributed to the school's coach, athletic administrator. All reports should be distributed within 3 days of completing the measurements.

2. CERTIFIED MEASURERS: Only VHSL Certified Measurers and Regional Master Testers may perform measurements and provide Coach-Official Team Reports. Health professionals with degrees as listed below are eligible to become official certified measurers upon completion of a VHSL sponsored educational workshop, documentation of experience by performing a minimum number of skin tests and urine specific gravity tests, and passing an examination on the program. Periodic re-certification of these measurers will be required. Criteria to become a certified VHSL Measurer are as follows:

- Have a medically related professional degree (MD, DO, DC, RN, LPN, NP, PT, RD, ATC, PA). Exceptions will be evaluated on a case-by-case basis where such qualified professionals are not available. For example, an EMT, based on the individual's education and experience would be considered.
- Have a current professional license/ certificate and be in good standing with your professional governing body
- Have attended, at minimum, one of the VHSL Certified Measurer official workshops
- Have attended a refresher workshop or completed the Online Tutorial for 2006-07
- Have submitted to VHSL office the "Documentation of experience" Form
- Have successfully completed the "Certified Measurers' Examination"
- Must follow protocols set forth by the VHSL Weight Control Program and maintain certification standards

3. INSTRUMENTS USED FOR MEASURING SKIN FOLDS: Lange calipers or equivalent precision instruments. There are many instruments for measuring body fat. Underwater hydrostatic weighing is the gold standard. However, it is not readily accessible, is time intensive, and also cost prohibitive to conduct this type of testing on multiple wrestlers. Dual Energy X-ray Absorptiometry (DEXA), Bioimpedance instruments (Tanita), near-infrared photospectrometry (Futrex), computerized calipers (Skyndex), air displacement (Bodpod), CT Scan, etc are also available, however are expensive and standardized only for adults, and therefore may not be used to determine body fat in this program. Precision calipers using the Lohman-Brozek formula and certified measurers have been shown to have the highest level of accuracy, greatest intra-tester reliability, and are reasonably priced.

ROWING WEIGHT CONTROL PROGRAM

4. **SCALE CERTIFICATION:** Scale certification is strongly recommended but has not been enforced because of problems with scale certification since the State Weights and Measures Division no longer visits schools to do this.

- Recommended that scales purchased for wrestling (digital platform) be used

5. **MONITORING WEIGHT:**

- The goal of this program is to allow for healthy gradual weight loss in those individuals who have body fat to lose and a desire to achieve a lower weight. Such weight loss can be accomplished most successfully if there is monitoring of progress along the way.
- The program will formulate a weight loss schedule indicating 1.5% of the baseline weight loss per week.
- The responsibility for monitoring this weight loss falls to coach, rower, and family. At anytime a coach or parent suspects a rower is not following the program and finds him or her to be out of line from where s/he should be, a recalculation of target dates should be completed, no additional body fat testing is necessary.
- With the baseline weight and date provided, along with the number of pounds recommended loss per week, the athlete, parents and coach should estimate their target weight each week depending on the overall amount of weight the athlete is scheduled to lose. Understanding that body weight fluctuates daily depending on the time of day and time since the last meal, etc, it is recommended that this target weight be a steady progression of weight loss reflective of fat loss, not fluctuations in hydration.
- The Coach-Official Team Report will have two defining sets of numbers for each player:
 - The lowest weight allowed (Minimum Weight)- No rower is eligible to compete at a lower weight, at any time.
 - The weight eligibility on a given date - Based on 1.5% weight loss per week allowed by this plan, the minimum weight permitted for a given week will be entered into the team sheet.

The administrator or the official doing the weigh-ins will need to consult the Coach-Official Team Report sheet to see if the athlete is within the allowable weight for the time of the event.

6. **COMPETITION AND WEIGH-IN REQUIREMENTS:**

- Crew WCP Coach-Official Team Report will be required at each competition and weigh-in for reference and validation of a rower's allowable competitive weight.
- The weigh-in administrator and/or official should verify the athlete's ability to row at a given weight based on the Crew WCP Coach-Official Team Report.
- If the appropriateness of a rower's weight class is challenged, the match administrator and/or referee will determine eligibility to row at that weight based on Coach-Official Team Report.
- If the coach does not have the appropriate paperwork, the athletes **cannot** compete in any **lightweight** events on that day. However, the athletes are eligible to compete in a non-lightweight event on that day with approval from the organizer/officials.
- No MD, parent, coach, ATC, Certified Measurer, or administrator can overrule the Coach-Official Team Report results to allow participation at a lower weight. See appeals within this manual.

ROWING WEIGHT CONTROL PROGRAM

COMPETITION AND WEIGH-IN REQUIREMENTS (continued)

- All athletes are required to weigh-in wearing their competition uniform (typically a unisuit)
- Athletes are required to weigh-in as a boat (including possible alternates) with all members of the boat weighing in as a group. The boat weigh-in should not exceed ten minutes.
- Weigh-in procedures are to be conducted in a 2 hour block determined by the site director
- Athletes who fail to make weight are permitted to re-weigh immediately after all other teammates have attempted to weigh in. Each athlete is allowed two attempts to weight in.
- At anytime the use of sweat boxes; hot showers; whirlpools; rubber, vinyl and plastic-type suits; or similar artificial heating devices; diuretics; or other methods for quick weight reduction purposes is prohibited and shall disqualify an individual from competition.

ROWING WEIGHT CONTROL PROGRAM WEIGHT LOSS SCHEDULE VIOLATIONS

Procedures to follow to determine an athlete's eligibility to compete if weight loss from previous week (or weeks) exceeds the recommended 1.5% body weight loss per week value. There must be an official weight sheet from a competition for this rule to apply.

Five pound allowance

A five-pound allowance will be assigned to the maximum weight allowed beginning with the first regatta, and continue through the fifth week from the championship. The allowance will be reduced by one pound per week until the championship race.

Male	150.0 maximum
Female	130.0 maximum

Weigh-ins will begin with the first regular season regatta. The maximum weight allowed for each rower is as follows:

Weeks Prior to VSRC/NCC	Male Maximum Wt. (lbs)	Female Maximum Wt. (lbs)
5 or more	155.0	135.0
4	154.0	134.0
3	153.0	133.0
2	152.0	132.0
1	151.0	131.0
Championship	150.0	130.0

Buffer Zone

The buffer is an added allowance to the weight loss possible to compensate for minor fluctuations in scale accuracy and to prevent penalizing the athlete for minor body weight fluctuations. The buffer applies only to the minimum allowable weigh-in weight.

Example:

If an athlete weighs in at a competition at a weight that exceeds the amount of weight loss per week allowed from a previous weight recorded at an official weigh-in, the following "BUFFER ZONE" has been established to offer some flexibility for minor infractions without penalizing the athlete. A "BUFFER ZONE" was created that allows between a minimum of 0.5 pounds and a maximum of 0.9 pounds buffer for that weigh-in. Therefore, a rower who is permitted to lose 1.3 pounds per week as indicated on the Coach-Official Team Report which results in a target weight of 135.2 for that week, the athlete would still be eligible to compete in a lightweight boat weighing in as low as 134.8 (.5 minimal buffer). The WCP allows 1.3 pound loss for the next week which would limit the weight for the next weeks weigh-in at 133.5, but the buffer would allow the rower to be eligible if the weight in as low as 133.0.

If the athlete weighs in at a weight LESS THAN their minimum allowed (previous week weight minus allowable weight determined by the Coach-Official Team Report), AND the Buffer Zone, the athlete is not permitted to compete on that day. No competition at any weight class for that day.

ROWING WEIGHT CONTROL PROGRAM

CREW COACHES QUICK GUIDE

- Identify the rowers that you believe could potentially row in a lightweight boat
- Contact a VHSL certified measurer to discuss an appropriate time to meet and test
- Educate the lightweight rowers and parents about how to prepare for the test and staying hydrated at least 3 days prior to testing (use forms in packet)
- Set a date and time for body fat testing (within 3 week period from Feb 12th to March 3rd)
- Help certified measurer with testing procedure (keep line moving, monitoring athletes, etc.)
- Look over results with certified measurer and clarify any questions or need for hydration re-testing or an appeal
- Keep the Coach-Official Team Report in a safe place and make copies for assistants and extras to bring to races
- Monitor athletes weight, weight loss, and weight loss practices at least once a week and refer to the Coach-Official Team Report to make sure they are at an appropriate weight
- Bring the Coach-Official Team Report and Weigh-in sheets to all races!!!!!!!!!!
(if there is no COTR the athletes cannot compete in a lightweight event on that day)
- Crew WCP Coach-Official Team Report, Official Weigh-in sheet and all previous weight in sheets will be required at each competition and weigh-in for reference and validation of a rower's allowable competitive weight

Refer any athletes who show signs of excessive weight loss, unhealthy weight loss practices or difficulty achieving their target weight to the athletic training staff or other health care professional

ROWING WEIGHT CONTROL PROGRAM

Hydration Tip Sheet

[Table of Contents](#)

Rowers:

The following are tips that will help rowers report to body fat testing properly hydrated. Please do not take nutritional supplements for one week prior to testing date (unless under specific direction from physician).

Two days prior to test day:

- **Drink plenty of fluids throughout the day, (Water has no calories). Athletes should be drinking at least 8-10 glasses of water during the day**
- **Increase intake of foods high in fiber- this will help with removal of excess GI content from body. (salad, cereal with skim milk, vegetables, fruits, etc are examples of foods high in fiber)**
- **Eat smaller, more frequent meals**
- **AVOID foods high in fat (fried foods, meat, french fries, pizza, nuts, salad dressings, etc.)**
- **AVOID salty foods (potato chips, pretzels, pizza, tuna, crackers, soft drinks, sports drinks)**
- **Be sure that you eat and drink. Do not dehydrate! Do not starve!**

One day before test:

- **Continue drinking fluids, you should be urinating on a frequent basis. Urine should be clear if you are fully hydrated**
- **Eat smaller, but more frequent meals. Continue eating fibrous foods, to minimize GI content from body**
- **Fatty foods / snacks will stay in your body – STAY AWAY**
- **Drink 16 ounces of fluid replacement beverage (Gatorade, Powerade)**

Day of test:

- **Eat small portions, eat a very light lunch (if afternoon testing)**
- **Eat lighter foods such as fruit, grains, etc.**
- **Continue to drink water**
- **Do not drink salty drinks such as Sodas**
- **Urinate as frequently as possible throughout the day until one-two hours prior to test time**
- **Use the bathroom (defecate) before the test**
- **Please be ready to urinate for hydration testing**

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

CREW COUNCIL MEDICAL ADVISORY COMMITTEE ROWING WEIGHT CONTROL PROGRAM

GOALS AND OBJECTIVES

1. Improve the safety of rowing by attempting to control the amount of weight loss over time, to limit weight cycling, and eliminate potentially dangerous methods of weight loss.
2. Improve the enjoyment of lightweight rowing by minimizing the time, effort, and discomfort associated with making weight, including excessive weight loss.
3. Educate coaches, rowers, and parents on healthier methods of weight loss and the potential for enhanced performance, endurance, and strength if the athlete rows at a more “ideal body weight”.
4. Educate coaches, rowers, and parents on basics of good nutrition for active sports participation in growing youngsters.
5. Maximize the chance for fair and equal participation of all rowers by standardizing methods for weight determination and by minimizing the health risks among rowers.
6. Create a more positive public image for the sport of rowing by attempting to eliminate one of the major criticisms leveled against the sport, (i. e. unhealthy weight loss).
7. Accomplish these goals without detracting from the discipline, mental and physical toughness, and conditioning that are very positive aspects of the sport.

ROWING WEIGHT CONTROL PROGRAM OVERVIEW

[Table of Contents](#)

The Crew Council Weight Control Program involves the determination of the **MINIMUM** weight (MW) at 7% body fat for males and 12% body fat for females. It is ill advised and frequently harmful for high school rowers to reduce body fat content below that level. Measurement of skin folds, baseline weight, and assessment of hydration are the ingredients utilized to determining the MW. The program emphasizes that the MW and the resultant Minimum Weight are not necessarily the optimal or most desirable target. However, the athlete will not be permitted to row at a weight below that **MINIMUM** weight identified by this program. The program also calculates a schedule for safe weight loss to allow a rower to gradually reach his desired and allowable weight while rowing down through lightweight guidelines during the season.

BASIC COMPONENTS FOR MINIMUM WEIGHT CERTIFICATION

1. **URINE SPECIFIC GRAVITY:** Hydration is a critical component in the calculation of minimum weight. Hydration is measured by urine specific gravity (Usg). There are two VHSL accepted methods for determining Usg: Refractometer or urine dipstix. Athletes must be within acceptable levels of hydration for body fat testing to proceed. An extensive re-testing and appeals process has been established to assist those athletes experiencing problems achieving adequate hydration.
2. **BODY FAT DETERMINATION:** At the start of the rowing season, every rower will be weighed and will have his/her body fat determined using VHSL approved skinfold assessment techniques and procedures. The Crew Council weight control program requires that the official body fat analysis be completed no earlier than one week prior to and no later than two weeks following the first VHSL official practice date. Urine specific gravity is analyzed to verify normal hydration status, and baseline weight is determined. After establishing baseline weight, skinfold measurements are completed and current body fat is determined.
3. **MINIMUM WEIGHT:** Utilizing the rower's baseline weight and the body fat determination, the **LOWEST** weight at which the rower is able to compete is calculated. The program incorporates a hydration variance to accommodate athletes whose 7/12% weight is only marginally above the desired weight. This number determines the lowest weight at which the rower will be permitted to participate.
4. **SCHEDULE OF WEIGHT LOSS:** The Crew Council Weight Control Program allows athletes, who have body fat above the 7% for males and 12% for females, to lose a maximum of 1.5% of their baseline body weight per week. Coaches and athletes are provided with a schedule indicating an acceptable weight class for competition each week.
5. **NUTRITIONAL PROGRAM:** High School rowers are very active and require a healthy balanced diet that provides an adequate amount of energy for healthy growth and development, activities of daily living, and rowing. Even rowers that have an opportunity to lose some fat in order to reach a desired weight need calories to satisfy the above-mentioned needs.

ROWING WEIGHT CONTROL PROGRAM

What does the Crew Council provide in this program?

- *Organizational oversight
- *Education and training of certifying measurers via VHSL.
- *Updating and distributing current information on all components of the program.
- *Spread sheet that will automatically calculate body fat and minimum weight.
- *Educational booklet and information.
- *Organizational structure for testers, area coordinator, and appeals process.
- *Information on group purchasing of equipment needed which provides savings.

What are the school's responsibilities?

- *Contact and contract with a VHSL Certified Measurer skinfold tester.
- *Provide a certified, accurately functioning scale to determine weight.
- *Provide space, administrative support, and rowers in a timely fashion to be measured.
- *Provide calipers and urine specific gravity sticks or refractometer if not provided by tester.
- *Upload school's WCP Excel spreadsheet by attaching it to an email to sportsmedicineman@fcps.edu by March 21, 2007.
- *Verify compliance of all athletes participating in lightweight rowing with the WCP as required.

What is the cost to the school?

- *A onetime cost of \$100 - \$200 for a set of calipers if one is not already owned or provided by tester.
- *A yearly cost of \$0.50 per wrestler (\$50-\$55 per bottle of 100) to test urine specific gravity when skin fold measurements are made. Some schools or certified measurers may prefer a onetime purchase of a urine refractometer, which one model is available for under \$100, a preferred model is approximately \$200.
- *Those schools who do not already have an ATC on staff, or a school nurse who are VHSL Certified Measurer's may contract with a sports medicine group or local physician who are VHSL Certified Measurers and pay up to a maximum of \$5.00 per athlete to have their rowers tested.
- *Thus, the maximum first year cost for a school with 20 lightweight rowers would be \$100. With employed on-site certified measurers, the only cost would be the one time cost of equipment.

When do these measurements need to be done?

Official WCP testing must take place one week before the first allowable spring practice date as determined by the VHSL calendar and two weeks after the starting practice date – A three week period. Athlete's joining team late must be tested within one week of the athlete starting practice or conditioning. Special consideration is taken for the winter athlete who participates in late playoff contests. Unofficial testing is encouraged anytime prior to organized conditioning training sessions so all athletes are provided safe parameters and goals for weight loss.

ROWING WEIGHT CONTROL PROGRAM

Why is a urine test done prior to taking the skin fold measurements?

In other states where similar programs have been implemented, athletes learned that by dehydrating prior to skin fold measurements they could obtain a minimum weight lower than they should. By requiring the urine specific gravity to show reasonable hydration, this potentially harmful result can be minimized.

How do we deal with the occasional athlete who is naturally below the 7% minimum for males and 12% minimum for females?

Rowers testing with a body fat percentage of less than 7% (males), 12% (females) must obtain a waiver from a physician stating that their present weight is the natural weight for this athlete (no weight loss has occurred in last 8 weeks to achieve that weight). S/he will be allowed to participate at the present baseline weight as indicated on the Coach Official Team Report.

Will what you eat or drink affect the urine specific gravity test?

Certain items such as caffeine, many supplements and chocolate tend to act as diuretics and could result in excess water loss. These athletes might well not test within the acceptable range of the specific gravity test. It is recommended that athletes minimize intake of these substances prior to testing.

Could an athlete be fully hydrated and still have an unacceptable specific gravity test.?

The urine dip sticks for measuring specific gravity, used by trained testers, have been shown to be accurate and are used by every medical office and hospital in the country to test for dehydration. Although dipsticks are not as accurate as measuring the osmolality of the blood to determine the state of hydration, they are an inexpensive and painless means of assessing hydration. The preferred alternative to dipsticks is the use of a Refractometer, which has a higher degree of accuracy without the cost and invasiveness of a blood osmolality test.

The only consequence of not having an acceptable urine test is to defer skin fold measurements to another time or accept a weight adjustment based on test.

How accurate are these skin fold measurements and could different testers get different results on body fat determination?

By using only certified measurers who have been trained to perform the procedure exactly the same, the variation has been negligible.

What if a coach or athlete absolutely feels the measurement is inaccurate?

The measurement can be appealed following the appeals procedures. At the first appeal, a retest may be performed by the original certified measurer, for the second appeal, a Regional Master Tester shall be brought in to re-measure. This must be done within 7 days.

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

IMPLEMENTATION

1. MINIMUM WEIGHT CERTIFICATION: The baseline weight and body fat measurements are performed during a three week period beginning one week prior to the first VHSL allowed spring practice day and two weeks after the VHSL imposed official first day of practice. For rowers coming out for the team late, for whatever reason, s/he must be tested within one week of starting practice and/or conditioning or before s/he is allowed to compete in a competition. His or her name must appear on the Coach-Official Team Report before participation will be allowed. The earlier the measurements are completed, the more time the rower will have to safely reach their desired weight within the guidelines of the program. These results (Coach-Official Team Reports) should be maintained by the VHSL Certified Measurer and distributed to the school's coach, athletic administrator. All reports should be distributed within 3 days of completing the measurements.

2. CERTIFIED MEASURERS: Only VHSL Certified Measurers and Regional Master Testers may perform measurements and provide Coach-Official Team Reports. Health professionals with degrees as listed below are eligible to become official certified measurers upon completion of a VHSL sponsored educational workshop, documentation of experience by performing a minimum number of skin tests and urine specific gravity tests, and passing an examination on the program. Periodic re-certification of these measurers will be required. Criteria to become a certified VHSL Measurer are as follows:

- Have a medically related professional degree (MD, DO, DC, RN, LPN, NP, PT, RD, ATC, PA). Exceptions will be evaluated on a case-by-case basis where such qualified professionals are not available. For example, an EMT, based on the individual's education and experience would be considered.
- Have a current professional license/ certificate and be in good standing with your professional governing body
- Have attended, at minimum, one of the VHSL Certified Measurer official workshops
- Have attended a refresher workshop if your last one attended was prior to January 2002
- Have submitted to VHSL office the "Documentation of experience" Form
- Have successfully completed the "Certified Measurers' Examination"
- Must follow protocols set forth by the VHSL Weight Control Program and maintain certification standards

3. INSTRUMENTS USED FOR MEASURING SKIN FOLDS: Lange calipers or equivalent precision instruments. There are many instruments for measuring body fat. Underwater hydrostatic weighing is the gold standard. However, it is not readily accessible, is time intensive, and also cost prohibitive to conduct this type of testing on multiple wrestlers. Dual Energy X-ray Absorptiometry (DEXA), Bioimpedance instruments (Tanita), near-infrared photospectrometry (Futrex), computerized calipers (Skyndex), air displacement (Bodpod), CT Scan, etc are also available, however are expensive and standardized only for adults, and therefore may not be used to determine body fat in this program. Precision calipers using the Lohman-Brozek formula and certified measurers have been shown to have the highest level of accuracy, greatest intra-tester reliability, and are reasonably priced.

ROWING WEIGHT CONTROL PROGRAM

4. SCALE CERTIFICATION: Scale certification is strongly recommended but has not been enforced because of problems with scale certification since the State Weights and Measures Division no longer visits schools to do this.

- Recommended that scales purchased for wrestling (digital platform) be used

5. MONITORING WEIGHT:

- The goal of this program is to allow for healthy gradual weight loss in those individuals who have body fat to lose and a desire to achieve a lower weight. Such weight loss can be accomplished most successfully if there is monitoring of progress along the way.
- The program will formulate a weight loss schedule indicating 1.5% of the baseline weight loss per week.
- The responsibility for monitoring this weight loss falls to coach, rower, and family. At anytime a coach or parent suspects a rower is not following the program and finds him or her to be out of line from where s/he should be, a recalculation of target weight should be done. Retesting of body fat is not necessary or permitted.
- With the baseline weight and date provided, along with the number of pounds recommended loss per week, the athlete, parents and coach should estimate their target weight each week depending on the overall amount of weight the athlete is scheduled to lose. Understanding that body weight fluctuates daily depending on the time of day and time since the last meal, etc, it is recommended that this target weight be a steady progression of weight loss reflective of fat loss, not fluctuations in hydration.
- The Coach-Official Team Report will have two defining sets of numbers for each player:
 - The lowest weight allowed (7% or 12% weight)- No rower is eligible to compete at a lower weight, including the buffer, at any time.
 - The weight eligibility on a given date - Based on 1.5% weight loss per week allowed by this plan, the minimum weight permitted for a given week will be entered into the team sheet.

The administrator or the official doing the weigh-ins will need to consult the Coach-Official Team Report sheet to see if the athlete is within the allowable weight for the time of the event.

6. COMPETITION AND WEIGH-IN REQUIREMENTS:

- Crew WCP Coach-Official Team Report will be required at each competition and weigh-in for reference and validation of a rower's allowable competitive weight.
- The weigh-in administrator and/or official should verify the athlete's ability to row at a given weight based on the Crew WCP Coach-Official Team Report.
- If the appropriateness of a rower's weight class is challenged, the match administrator and/or referee will determine eligibility to row at that weight based on Coach-Official Team Report.
- If the coach does not have the appropriate paperwork, the athletes **cannot** compete in any **lightweight** events on that day. However, the athletes are eligible to compete in a non-lightweight event on that day with approval from the organizer/officials.
- No MD, parent, coach, ATC, Certified Measurer, or administrator can overrule the Coach-Official Team Report results to allow participation at a lower weight. See appeals within this manual.

ROWING WEIGHT CONTROL PROGRAM

- All athletes are required to weigh-in wearing their competition uniform (typically a unisuit)
- Athletes are required to weigh-in as a boat (including possible alternates) with all members of the boat weighing in as a group. The boat weigh-in should not exceed ten minutes.
- Weigh-in procedures are to be conducted in a 2 hour block determined by the site director
- Athletes who fail to make weight are permitted to re-weigh immediately after all other teammates have attempted to weigh in. Each athlete is allowed two attempts to weigh in.
- At anytime the use of sweat boxes; hot showers; whirlpools; rubber, vinyl and plastic-type suits; or similar artificial heating devices; diuretics; or other methods for quick weight reduction purposes is prohibited and shall disqualify an individual from competition.

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

ROWERS NATURALLY BELOW 7% OR 12% BODYFAT

Occasionally, a rower's baseline and natural body fat is below 7% for males or 12% for females. This is the athlete's body fat prior to dieting or attempts to lose any weight or body fat, and measured while the athlete is in a normally hydrated state. In this situation, the athlete's physician must complete a verification form to document that the student athlete's medical record supports that the existing body fat is the athlete's natural and normal body fat. A physician may not otherwise overrule the parameters of this program by rendering an opinion that a student athlete may row at a lower weight than provided for in this program. Although this rower would not be allowed to lose weight, s/he would be allowed to participate at the present baseline weight as indicated on the coach official team report.

[Table of Contents](#)

ROWERS TESTED AS MODERATELY DEHYDRATED

Usg measurements between 1.021 and 1.030 indicate the athlete is moderately dehydrated. When this dehydration occurs (above 1.025), a percentage of the actual weight is added to adjust the actual weight to a baseline weight according to the level of dehydration. This adjustment of baseline weight reflects the athlete's weight when normally hydrated and is used to calculate the minimum wrestling weight. If the result does not allow the wrestler to compete at the weight class s/he desires, the wrestler may elect to return in a more appropriately hydrated state, no less than 1 day and no more than 3 days later, to have Usg and weight retested. The option to have Usg retested following the initial test allows a wrestler to achieve a Usg of 1.025 or below, and avoid computerized baseline weight adjustment.

The one time "FREE HYDRATION RETEST" (Usg and weight retest) during this period will not count as an appeal. Once the Certified Measurer retests the athlete's Usg and weight, (if completed within the 3 day time frame) the values will be incorporated into the existing skinfold measurements for re-calculation. Additional retests for any reason will be considered an appeal and will require re-evaluation of all measurements. Coaches are encouraged to check the athlete's hydration status (using their own dipstix, refractometer or urine color chart) before calling in the Certified Measurer for an official test. A VHSL Certified Measurer must perform the official measurement of Usg using chemical dipsticks or refractometer.

(See below for continued failure to achieve acceptable hydrated state for testing.)

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

APPEALS PROCESS

In an effort to provide the athlete an opportunity to row at their desired weight in a lightweight boat, an appeals process has been established.

The “FREE HYDRATION RETEST” does not count as an appeal.

If an athlete does not agree with the results of his/her minimum weight determination:

1. First appeal is to the original certified measurer who can redo the entire testing, or to another certified measurer if the original one is not available in a timely manner.
2. Second appeal is to a Regional Master Tester (RMT). The school is responsible for paying the mileage costs and a fee up to \$10/rower to the tester for this appeal, as it requires a trip by the Regional Master Tester into the region.

The cost of any tests fall to the rower or the school

In all scenarios, the appealed results will be prevailing even if it is less desirable to the rower.

TIMING OF APPEALS

- Appeal must be requested within 2 days of the contested measurement
- The retest should occur within one week of the request but no sooner than 1 day after the prior test. If the retesting (first appeal) is not possible by the original Certified Measurer, the Regional Master Tester should be contacted for considerations or arrangements to move the process forward. The Regional Master Tester is responsible to conduct the retesting of the 2nd appeal.
- The initial testing and the first appeal must be completed during the three week designated window for testing. Therefore, the coach should attempt to have the testing done as early in three week window as feasible.
- Rowers coming out for the team late, for any reason other than participation in a winter sport post season playoff event*, must be tested within one week of starting practice and before they are allowed to compete in a race. Any appeals must be requested and initiated so the retest can be completed within 10 days of the athletes first day of practice. The athlete’s name will need to appear on the Coach-Official Team Report before participation in competition will be allowed.

* Athletes participating in a winter post season playoff event must be tested within 8 days of the last contest date.

ROWING WEIGHT CONTROL PROGRAM

REPEATED FAILURE TO ACHIEVE URINE SPECIFIC GRAVITY (Usg) OF 1.030 OR LESS

- Rowers with Usg > 1.030 cannot be measured and must return no sooner than 1 day later for retest.
- If a rower repeatedly fails to present with a Usg of 1.030 or below, the following procedure comes into play:
 - S/he must then be evaluated by a medical physician to rule out any conditions that would contraindicate participation in rowing.
 - S/he must present a note from physician indicating the individual has no condition that would make it unsafe for him/her to row in a lightweight boat and no discernable kidney or hydration disorder. This physician may not over-rule the parameters of the program.
 - S/he must be tested by a Regional Master Tester, including Usg, weight and skinfold measurements.
 - If the Usg is still above 1.030, the measurements will be made and 10% of his/her weight will be added to the presenting weight. This will serve as the adjusted weight for calculating minimum weight. No further appeal is available.

ROWING WEIGHT CONTROL PROGRAM

DEFINITIONS

CERTIFIED MEASURERS

- Professionals holding a medically related degree (MD, DO, DC, RN, LPN, NP, PT, RD, ATC, PA) who have a current professional license/ certificate and are in good standing with their professional governing body. They must attend, at minimum, one of the VHSL Certified Measurer official workshops and complete all required documentation with the VHSL.

REGIONAL MASTER TESTERS

- Certified Measurers who have had a minimum of one-year experience and have completed the Regional Master Testers workshop sponsored by the VHSL.

CERTIFICATION DATE

- Date of test to be used to calculate allowable weight in weight loss schedule.

MINIMUM WEIGHT

- When the rower is measured, his/her Minimum Weight (MW) is determined based on weight at HIS 7% body fat or HER 12% body fat. This represents the lowest weight at which a rower may compete.

FREE HYDRATION RETEST

- If the athlete's baseline weight has been adjusted due to a Usg of 1.026 - 1.030, the athlete is eligible to retest his weight and hydration (Usg) within 1 and 3 days of the original test. The new values shall replace the original values in the Excel Skinfold worksheet. This does not count as an appeal, the skinfolds are not re-measured, only the weight and Usg.

TARGET WEIGHT

- The approved weight a rower has chosen as the goal weight for competition.

WEEKLY WEIGHT LOSS ALLOWANCE

- Based on extensive literature originating with nutritionists, the maximum amount of fat that can be burned in a week is considered to be approximately two pounds. The Crew WCP will be consistent with recommendations from the National Federation of High Schools and will allow a maximum of 1.5% body weight loss per week. This does provide for somewhat larger weight loss by heavier rowers. For example, if a rower's minimum weight is 148# and on February 20th he weighs 158#, he could not row in a lightweight boat at his desired weight (target weight) weight for 4 weeks. This example emphasizes the importance of weighing in and making this determination as early as possible. The schedule of 1.5% of bodyweight loss per week should be used as a guide for individual lightweight rowers and their coaches to assure the athlete is maintaining an adequate diet to support the steady loss of fat in order for the athlete to achieve his/her weight goals. To facilitate calculations, a week will run from Monday through Sunday. Throughout that week the calculated weight an athlete is permitted to compete in is identified. It is important for athletes, coaches and parents to monitor weight loss daily, and monitoring of this weight is intended to represent actual body weight at a normally hydrated state, therefore should be taken prior to activity or practice at a consistent time each day.

ROWING WEIGHT CONTROL PROGRAM

MATERIALS AVAILABLE

[Table of Contents](#)

V107

***1. WEIGHT CONTROL PROGRAM MANUAL:** A full manual describing the basis for this program, program protocols, history, references, etc.

***2. BODY FAT MEASUREMENT:**

- a. Data collection worksheet to record skin fold measurements
- b. Lohman Equation to calculate Body Density
- c. Brozek Equation to calculate weight at 7% or 12% females Body Fat
- d. Slaughter/Lohman/Boileau equation for body fat on females
- e. Software to record information

3. CD-ROM:

The Crew Council will provide a CD-ROM that will include an MS Excel file for making the calculations on minimum rowing weight and body fat in an easy and time efficient manner. This software allows you to enter only the skin fold measurements, date, name, weight, and urine specific gravity, as well as the desired weight. Also included on the CD is a PowerPoint Certified Measurer's review of measurement techniques. You must have access to Microsoft Office with MS Word, MS PowerPoint and MS Excel to run the software and ADOBE to open some forms.

4. PURCHASE OF NEEDED EQUIPMENT:

VHSL has received bids on the following items, indicate you are ordering for the VHSL program:

CALIPERS:

Baseline Caliper \$99 Collins Sports Medicine 800 886-2825

Lange Caliper \$199 Collins Sports Medicine 800 886-2825

REFRACTOMETER:

Economy model: Mannix Refractometer (Resolution .002) (REF312ATC) \$99
Collins Sports Medicine 800 886-2825

Preferred model: Atago (Uricon 2722) (Resolution .001) \$199
NSG Precision Cells, Inc. 631-249-7474

Deluxe model: MISCO Digital accurate, easy to use, quick. Bid price of \$499
Contact Kathy at MISCO products 800 358-1100

URINE DIPSTIX – Approx cost \$52.50 for 100 sticks.

Shenendoah Medical Supply

Contact: David or Jerry (Identify yourself as with this program) 1 - 800 - 572 -4073 They will expect payment "net 30 days".

Lange or Baseline Calipers – Approx cost: \$99-250. Available through most athletic training medical supply vendors. Lange calipers are the premium quality, Baseline are acceptable.

Collins Sports Medicine 800 886-2825 <http://www.collinsurgical.com/>

Seneca Medical (614) 4868645

Micro Bio-Medics 1 800 431-2743

Medco 800 556-3326 #88280

School Health 800 323-1305

Urine Refractometer – Approx cost \$99 - \$630. Advantages are only a drops of urine needed and one time cost. Models available range from economy (resolution at .002) to Digital. The recommended model is the Atago (aka: Uricon 2722) with a resolution of .001 for \$199 through NSG Precision Cells Inc.

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

CERTIFIED MEASURERS PROCEDURES

Version 107

The Crew Weight Control Program is designed to encourage student athletes to maintain a healthy, safe body weight, and to compete at their optimal level.

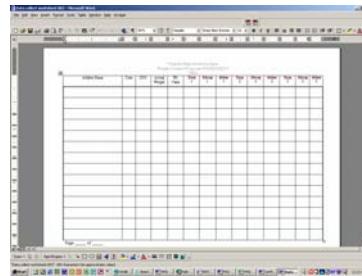
Due to the nature of, and the criteria for participation in lightweight rowing, all students participating in lightweight rowing must participate in this weight control program.

The Crew Weight Control Program

The Crew Weight Control Program will include the evaluation of the athletes' body fat and the determination of a safe minimum weight based on the loss of body fat to a level of 7% for males, 12% for females. A VHSL Certified Measurer, after completing a VHSL training session on the measuring criteria, will evaluate body fat and hydration status following the procedures below.

Procedures:

1. Communicate with coaches and determine a method of communicating with athletes for briefing, scheduling of tests, and alternatives for retesting procedures.
2. Print off and provide hydration handouts-for each athlete.
3. Provide information to athletes on tips to achieve normal hydration status for Usg assessment. Provide athlete's the handout with recommendations (see appendix) include nutrition and weight loss general information



4. Print off worksheet for data entry.
5. Assess hydration level using urine specific gravity (Usg) via refractometer or Multistix (dipstix) Reagent Strips Usg must be 1.030 or less for testing to continue.
6. A Usg of 1.026 to 1.030 will result in a percentage of the athlete's actual weight being added automatically in the spreadsheet provided, following the table below. All calculations of 7% or 12% minimum body fat will be based on the modified baseline weight. The modified baseline weight projects the actual weight of the athlete in a normally hydrated state. The adjustment to baseline weights is done automatically in the Crew WCP Version 107 Excel computer program.

USG	Baseline weight correction (done automatically)
1.026	Add 1% of actual body weight
1.027	Add 2% of actual body weight
1.028	Add 3% of actual body weight
1.029	Add 4% of actual body weight
1.030	Add 5% of actual body weight
1.031 and above	Re-evaluate after 24 hours of hydration

ROWING WEIGHT CONTROL PROGRAM

7. If the athlete's actual weight is adjusted, the athlete has the option to be retested for Usg and actual weight between 1 and 3 days later. This is considered a "FREE HYDRATION RETEST". The athlete is eligible for only one FREE HYDRATION RETEST regardless if the result is favorable or not. If the athlete returns and presents with a Usg indicating a more normal hydration (causing less or no modification to baseline) replace the Usg and actual weight numbers, no retesting of skinfolds is necessary and this does NOT count as an appeal. If the result of the FREE HYDRATION RETEST is not favorable (higher Usg value) for the athlete, no change is necessary and any further retesting would be under the first appeal criteria.
8. A Usg of greater than 1.030 will require the athlete to return no less than 24 hours later to repeat baseline weight and hydration measuring and continue with skinfold testing if hydration is within acceptable limits. If Usg is greater than 1.030, no further assessments of skinfolds or weight should be conducted at that time.
9. Record actual weight
10. Record date
11. Conduct body fat analysis using skinfold measurements per the VHSL Certified Measurer guidelines. Import the data into the spreadsheet which uses the Lowman-Brozak equation (males) and Slaughter, Lohman, Boileau equation (females) by VHSL certified measurers.
12. A minimum body weight based on 7% for males or 12% females will be determined using spreadsheet provided.
13. Minimal weight certification will be determined automatically by the spreadsheet and will be recorded on Coach-Official Team Report Sheet. This weight may only be reached if the athlete has achieved 7% body fat (males) or 12% body fat (females), and is fully hydrated. This value is also further rounded down to the whole number.
14. A schedule of weight loss consisting of 1.5% of baseline body weight is permitted each 7-day period of time.
15. Athletes initially measuring less than 7% or 12% body fat with hydration level within normal hydration limits may participate at their present weight. No further weight loss will be permitted. This calculation is completed automatically using the spreadsheet. Athletes initially measuring less than 7% or 12% body fat must have [physician's form](#) completed.
16. An athlete has the right to appeal following the appeals process outlined in this document. In any appeal, the latest measurement will remain official, regardless if it is more or less than the original.
17. Documentation of the baseline weight and percent body fat (Coach-Official Team Report) will be provided to coach and Athletic Administrator. The VHSL Certified Measurer must also keep a copy on file and email the completed school file to the sportsmedicineman@fcps.edu. Each school MUST upload a file by March 21st. Additions to the school file may be made at anytime and the file uploaded again to VHSL. DO NOT CHANGE NAME OF THE FILE!

ROWING WEIGHT CONTROL PROGRAM

18. Re-test resulting from appeals will require the certified measurer to add the athlete's name to a NEW line on your school's original Excel spreadsheet, placing a "2" or "3" after the last name and enter all values from the new test. Save the document WITHOUT changing the name of the file. Send the file to VHSL by email to sportsmedicineman@fcps.edu and attach the file. EACH TIME any change is made to the school Excel file, the file must be emailed to sportsmedicineman@fcps.edu . You may add rowers to the file at anytime, and must send the latest version in a timely manner. All potential lightweight rowers and all tests should be included on your school's Excel file. NEVER delete a rower or test. Because the file will have the same file name, it will automatically overwrite the previous file, therefore ALL measurements should be included in the school file and only one file should exist for each school.

Official body composition analysis shall be assessed within a five-week period between two weeks prior to the official VHSL opening day of rowing season, and three weeks after.

The earlier the athlete is evaluated, the more time the athlete will have to lose the weight necessary to reach their minimum weight. **During baseline measurements, the athlete should report to the testing area normally hydrated, at resting pulse, normal core body temperature, with minimal mass in stomach and bowels.**

Conducting measurements prior to one week before the 1st day of practice may be used as a "benchmark" to allow rowers, coaches and parents some information regarding potential for making a weight during the rowing season. This is recommended before any conditioning begins however, caution should be taken in this practice due to the growth the student-athlete may incur between the test and rowing season. Growth of one-half inch in height can account for a 5 to 10 pound gain in mass. Be certain the coach, athlete and parents are aware that an athlete tested several weeks prior to the Crew WCP testing window may grow and no longer be eligible for a lower weight that has been previously acceptable.

Utilizing this adjustment to actual weight compensates for the apparent loss of body weight due to dehydration as indicated in the Usg test. This is only appropriate to a dehydration level of up to 1.030 Usg. By estimating the actual body weight in a hydrated state, the 7% or 12% minimum weight can be calculated avoiding retesting after the 24-hour re-hydration period.

Drinking 8 ounces of water every four hours the day prior to, and morning of the day of measurements will help maintain normal hydration.

It is important to completely void all contents of urine often the day of the measurements. Do not void (urinate) during the one-hour prior to urine collection and void entire contents of bladder prior to measuring weight.

Optimal time for measurements is in the morning hours.

ROWING WEIGHT CONTROL PROGRAM

DUTIES OF CERTIFIED MEASURERS

IV ADMINISTRATIVE DUTIES

- ✓ Input first and last name, date, actual weight, Usg, weight-class, and skinfold measurements into spreadsheet
- ✓ Save Excel worksheet as a team file onto a Diskette, memory stick or hard drive (Save as: A:CloverHillHS 07)
- ✓ Print Coach-Official Team Report [If you click on “print preview”, you can see the number of pages your report has taken, then only print that number of pages]
- ✓ Review all assessments with coach and initial each athletes record upon review
- ✓ Print Certified Measurers Report and retain for YOUR record
- ✓ Provide follow-up testing on athletes who were not adequately hydrated
- ✓ Provide follow-up testing on athletes requesting an appeal (1st level)
- ✓ Request VHSL Regional Master Tester to provide testing on athletes requesting 2nd level appeals
- ✓ Provide Coach-Official Team Reports to Coaches and Athletic Administrators
- ✓ Retain Excel file to verify compliance with VHSL Certified Measurer requirements
- ✓ Email copy of Excel file to Crew council for record to sportsmedicineman@fcps.edu, attach the excel file to the email. Include in the email the name and mailing address of the school. Crew Council MUST have a file from each school by March 21st.
- ✓ Do not wait until ALL appeals have been completed to send the file, when any changes are made to your school file, simply add the athletes new record, do not replace any existing records, do not delete any rows of athletes, follow specific directions on re-tests by placing a “2” after the **last** name as it is entered on a **new row** on the spread sheet. **Save the file without changing the name of the file.** Ultimately, there should only be one file for each school in existence. When the newer file is uploaded, it will overwrite the older file.

[Table of contents](#)

ROWING WEIGHT CONTROL PROGRAM

RE-CERTIFICATION PROCEDURES FOR CERTIFIED MEASURERS

Certified Measurer's must maintain their certification status through VHSL by completing a web-based tutorial **OR** attend a workshop prior to the start of each wrestling season.

TWO OPTIONS OFFERED TO "RE-CERTIFY" AS A VHSL CERTIFIED MEASURER for the 2006-07 SEASON:

Option 1:

VHSL WCP WORKSHOP

You may also attend a scheduled workshop during the fall of 2006 where all new components of the program will be presented and discussed. There is no charge for the workshops and a schedule can be found at the VHSL website (www.vhsl.org).

Attendance at a workshop will also provide you an opportunity to refresh your skills and ask questions of issues you may have faced last season.

FIRST DATE OF TESTING IS FEBRUARY 12, 2007

Option 2:

WEB-BASED TUTORIAL

A web-based tutorial is available for completion by logging on to the VHSL website and following the links to Sports Medicine and then to Wrestling Weight Control Program.

Review the content by completing the questions at the end of each page of the tutorial, then complete and submit the form to receive your new 2006-07 version of the CD-ROM. The new 2006-07 Crew Weight Control Program CD-ROM version 107 will contain the required Excel spreadsheet to create the Coach-Official Team Report for the 2006-07 rowing season. Upon successful completion of the tutorial, you will retain and use the same certified measurer's number issued for the 2006-07 rowing season.

The tutorial can be completed at anytime, please allow time for the NEW CD-ROM to be sent to you after completion and prior to testing any athletes.

ROWING WEIGHT CONTROL PROGRAM SPECIFIC ASSESSMENT PROCEDURES

I. DETERMINATION OF STATE OF HYDRATION:

If one measures skin folds to determine percent body fat when the athlete is somewhat dehydrated, it will affect the calculation of the minimum wrestling weight. Urine specific gravity (Usg) is a reasonable method of determining an individual's state of hydration. Therefore, the official measurements for determining minimum wrestling weight cannot be obtained if the urine specific gravity is not within normal limits.

A. EQUIPMENT:

- ✓ Paper or plastic cups to collect urine
- ✓ Gloves
- ✓ VHSL data sheets to record information
- ✓ Pipets or suitable alternative such as coffee stirrers
- ✓ Method of measuring specific gravity
 - ✓ Urine dipstix that analyze multiple components in urine including pH and specific gravity.
 - ✓ Refractometer



B. PROCEDURE:

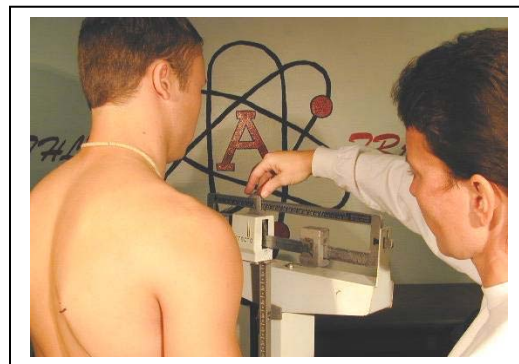
- ✓ Athlete takes cup, enters bathroom (in private) to minimize opportunities to exchange or mix urine samples
- ✓ Athlete brings urine to tester for testing, athlete should retain possession of the cup and dispose of contents and cup by appropriate means upon completion of the test
- ✓ Gloves should be used by tester following universal precautions of avoiding contact with bodily fluids of others
- ✓ Follow directions on the particular brand of dipstix or refractometer you are using.
- ✓ Record the specific gravity on the recording form



II. BODY WEIGHT

A. EQUIPMENT

- ✓ Calibrated scale
- ✓ VHSL data sheets to record information



ROWING WEIGHT CONTROL PROGRAM

III. SKIN FOLD MEASUREMENTS

A. EQUIPMENT

- ✓ VHSL data sheets to record information
- ✓ Lange, Baseline, or Harpenden calipers
- ✓ Tape measure
- ✓ Felt tip pen

B. PROCEDURE:

1. Determine and mark sites for skin fold measurement
2. Intersecting marks indicate caliper placement
3. Finger placement "pinch" should be 1 cm ABOVE caliper placement
4. Only the skin and subcutaneous tissue should be between the finger and thumb and no muscle mass should be included
5. Calipers should be applied at the intersecting marks perpendicular to the long axis of the skin folds
6. Calipers should be applied midway between the body skin surface and the bulbous crest of the skin fold
7. Calipers should be allowed to equilibrate for 2 - 4 seconds before recording measurement
8. Record measurement on data sheet to the nearest 0.5 mm
9. Three sets of measurements at each site should be taken. Rotate measurements from one site to the next (triceps - subscapular - abdominal - triceps - ...),
10. Skin should be dry to facilitate accurate measurement of skin folds
11. Avoid taking measurements immediately after a workout or then the athlete is overheated as this will create fluid shifts to the skin which will give falsely elevated readings
12. Look directly at caliper to avoid parallax resulting in an inaccurate reading
13. Arms should be relaxed and hanging down in the normal standing position with weight evenly distributed.
14. ALL MEASUREMENTS SHOULD BE TAKEN ON THE ATHLETE'S RIGHT SIDE

ROWING WEIGHT CONTROL PROGRAM

TRICEPS (Males and Females)

- ✓ Arm is relaxed by the side
- ✓ Flex elbow to 90 degrees
- ✓ Determine the midpoint between the acromium process of the shoulder and the olecranon of the elbow for a horizontal mark.
- ✓ Make a vertical mark to intersect the horizontal line over the triceps muscle in the midline of the posterior arm.
- ✓ The arm should be straightened and relaxed for actual caliper measurements
- ✓ A measurement of a vertical fold of the skin should be taken



ROWING WEIGHT CONTROL PROGRAM

SUBSCAPULAR (Males and Females)

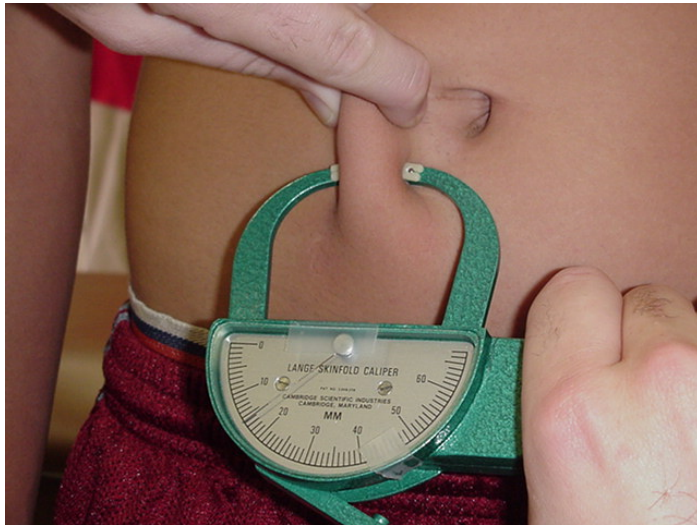
- ✓ Locate the inferior angle, lowest point of the scapula
- ✓ If this is not palpable with the arms at the side, ask the athlete to place their arm behind the back to palpate the inferior angle
- ✓ Place a mark on the tip of the inferior angle when the arm is relaxed at the side
- ✓ Measure 1 centimeter directly down from the mark on the tip of the inferior angle of the scapula, place a second mark.
- ✓ Mark a diagonal line below the scapula that is an extension of the natural hollowing of the skin. This should be on an angle on an axis from the left shoulder to the right hip which is approximately 45 degrees
- ✓ Draw a line from the 2nd mark 1 cm below the tip of the inferior angle of the scapula perpendicular to and intersecting the diagonal line
- ✓ A measurement of an oblique fold of the skin should be taken with the arm relaxed at the side



ROWING WEIGHT CONTROL PROGRAM

ABDOMINAL (MALES ONLY)

- ✓ A vertical line should be marked 3 centimeters to the right of the midpoint of the umbilicus
- ✓ A horizontal line should be drawn to intersect the vertical line 1 centimeter below the midpoint of the umbilicus
- ✓ The athlete should be standing relaxed on both feet
- ✓ The athlete should relax the abdominal muscles
- ✓ A measurement of a vertical fold should be taken



IV ADMINISTRATIVE DUTIES

- Input first and last name, date, actual weight, Usg, weight-class, and skinfold measurements into spreadsheet.
- ✓ Save Excel worksheet as a team file onto a diskette or hard drive (Save as: A:LangleyHS 07)
 - ✓ Print Coach-Official Team Report [If you click on “print preview”, you can see the number of pages your report has taken, then only print that number of pages]
 - ✓ Provide follow-up testing on athletes who were not adequately hydrated
 - ✓ Provide re-testing to those athletes requesting an appeal.
 - ✓ Request VHSL Regional Master Tester to provide testing on athletes requesting 2nd level appeals
 - ✓ Provide Coach-Official Team Reports to Coaches and Athletic Administrators
 - ✓ Retain Excel file to verify compliance with VHSL Certified Measurer requirements
 - ✓ Email copy of Excel file to sportsmedicineman@fcps.edu for record.



ROWING WEIGHT CONTROL PROGRAM

FORMULAS FOR CALCULATING MINIMUM WEIGHT USING SKINFOLD (SF) MEASUREMENTS

[Table of Contents](#)

MALES ONLY

LOHMAN EQUATION FOR CALCULATING BODY DENSITY (BD)

SUM SF = TRICEPS SF + SUBSCAPULAR SF + ABDOMINAL SF

$$BD = [1.0973 - (\text{SUM SF} \times .000815)] + [(\text{SUM SF})^2 \times .00000084]$$

BROZEK EQUATION FOR CALCULATING PERCENT BODY FAT (BF)

$$\% \text{ BF} = (4.57/\text{BD} - 4.142) \times 100$$

CALCULATING WEIGHT AT 7% BF
WEIGHT AT 7% BF = $[1 - (\% \text{BF}/100)] \times \text{CURRENT WEIGHT} / .93$

TO CALCULATE MINIMUM WRESTLING WEIGHT WITH 2% HYDRATION VARIANCE

$$\text{MINIMUM SCRATCH WEIGHT ALLOWED} = 7\% \text{ WEIGHT} \times .98$$

FEMALES ONLY

SLAUGHTER, LOHMAN, BOILEAU, EQUATION FOR CALCULATING % OF BODY FAT (BF) (Sum SF < 35)

$$\text{Triceps SF} \quad \text{Subscapula SF} \quad = \quad \text{Sum SF}$$
$$[(\text{Sum SF}) \times 1.33] - [(\text{Sum SF})^2 \times 0.013] - 2.50 = \% \text{ Body Fat}$$

SLAUGHTER EQUATION

$$\text{Sum SF} \geq 35\text{mm}: (0.546 \times \text{Sum SF}) + 9.7$$

CALCULATING MINIMUM WEIGHT AT 12% BF

$$\text{Minimum Weight at 12\%} = [(1 - \% \text{BF}/100) \times \text{weight}] / 0.88 =$$

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

Software Spreadsheet Instructions

Thank you for participating in The Crew Councils **Weight Control Program**. This computer program has been created to facilitate calculations of percent body fat, and reduce the incidence of user error.

The program has been written on EXCEL . *To run the program:* “**Open**” the workbook entitled “**Crew WCP V107**” from your CD-ROM. [Appendix H contains more specific tips on using Excel.](#)

You must save the file onto a diskette or your hard drive immediately, and you must name the file using your school name and date identifier (ie: MyHighSchool 07) by clicking on “**Save As**” and changing the name of the file. You can then save the information you input to that file, leaving the original **Crew WCP V107** as a **starting template on the CD-ROM**.

Notice there are five “*sheets*” or ‘tabs’ in the workbook, three worksheets are specific to male rowers, two worksheets specific to female rowers. You will input information on MALE rowers only into the sheet entitled *Male Skinfold Worksheet* and FEMALE rowers info on *Female Skinfold Worksheet*. The preliminary info (school name, tester name and coaches name) **MUST** be placed in the highlighted cells in row one.

Entering Data in the Worksheet:

Enter the athletes name, date, urine specific gravity, actual weight, target weight, and each skinfold measurement; triceps, subscapular and abdominal, of each of the three trials. **NOTE: ALL THREE MEASUREMENTS MUST BE TAKEN THREE TIMES WHEN USING THIS COMPUTER PROGRAM.** Only two sites or measurements are taken for female rowers (Triceps and subscapular). Measurements are only to be taken by a VHSL Certified Measurer or Regional Master Tester.

All information is placed on this sheet only. The information is calculated and automatically transferred to the next sheet entitled “*Male Coach-Official Team Report*”. The sheet “*Male Coach-Official Team Report*” is the sheet that should be printed and provided to the coach, and school administration.

PLEASE NOTE: Female rowers results will be on a separate sheet (Female Coach-Official Report) and must be printed separately. Only males will be included on the Male Coach-Official Team Report.

The file must be emailed to the Crew Council at sportsmedicineman@fcps.edu.

ROWING WEIGHT CONTROL PROGRAM

How to Read the COACH-OFFICIAL TEAM REPORT

[Table of Contents](#)

Baseline Weight	Athletes weight used for calculations. Includes adjustment for hydration variance if appropriate
Actual Weight	Athletes actual weight (same as baseline weight if athlete is normally hydrated)
%BF	Athletes current percent body fat
7% Min Wt	Male athletes weight at 7% body fat (Lowest healthy weight at normal hydration)
12% Min Wt	Female athletes weight at 12% body fat (Lowest healthy weight at normal hydration)
Spec Gr	The urine specific gravity indicating the level of dehydration (must be no higher than 1.030 for testing to continue)
Target Weight	Weight athlete indicated they wish to compete in. While not essential to complete, it is strongly recommended the coach identify a realistic weight the athlete would be requested to compete in.
Lowest Wt	This indicates the lowest weight the athlete would be permitted to row. This is NOT always the most appropriate weight for a particular athlete.
Initials	The Certified Measurer should initial each athlete's record as it is discussed with the coach.
#lbs/wk loss	Indicates the number of pounds the athlete is able to lose each week (1.5 % of body weight). This number should be used by athletes, coaches and parents to monitor an athlete's weight loss per week.
Date of test	Date body fat measurement is taken; date that weight loss allowances should be calculated from when addressing weight class allowed at week 1, 2, 3, etc.
Wk 1 – Wk 8	The weight the athlete would be permitted to compete in for that week. The exact date would be determined by calculating the number of weeks from the DATE OF TEST. The week the test was conducted is considered Week 1. The athlete's exact weight should be consistent with a progression of weight loss based on the recommended number of pounds per week loss.
Weeks to target wt	Based on the amount of weight loss needed, and amount of weight loss per week recommended, this provides the number of weeks from date of test to the date the athlete is able to compete in their desired weight class for the first time, assuming that s/he has followed the steady, calculated weight loss on the Team Sheet.

ROWING WEIGHT CONTROL PROGRAM WEIGHT LOSS SCHEDULE VIOLATIONS

Procedures to follow to determine an athlete's eligibility to compete if weight loss from previous week (or weeks) exceeds the recommended 1.5% body weight loss per week value. There must be an official weight sheet from a competition for this rule to apply.

Five pound allowance

A five-pound allowance will be assigned to the maximum weight allowed beginning with the first regatta, and continue through the fifth week from the championship. The allowance will be reduced by one pound per week until the championship race.

Male	150.0 maximum
Female	130.0 maximum

Weigh-ins will begin with the first regular season regatta. The maximum weight allowed for each rower is as follows:

Weeks Prior to VSRC/NCC	Male Maximum Wt. (lbs)	Female Maximum Wt. (lbs)
5 or more	155.0	135.0
4	154.0	134.0
3	153.0	133.0
2	152.0	132.0
1	151.0	131.0
Championship	150.0	130.0

Buffer Zone

The buffer is an added allowance to the weight loss possible to compensate for minor fluctuations in scale accuracy and to prevent penalizing the athlete for minor body weight fluctuations. The buffer applies only to the minimum allowable weigh-in weight.

Example:

If an athlete weighs in at a competition at a weight that exceeds the amount of weight loss per week allowed from a previous weight recorded at an official weigh-in, the following "BUFFER ZONE" has been established to offer some flexibility for minor infractions without penalizing the athlete. A "BUFFER ZONE" was created that allows between a minimum of 0.5 pounds and a maximum of 0.9 pounds buffer for that weigh-in. Therefore, a rower who is permitted to lose 1.3 pounds per week as indicated on the Coach-Official Team Report which results in a target weight of 135.2 for that week, the athlete would still be eligible to compete in a lightweight boat weighing in as low as 134.8 (.5 minimal buffer). The WCP allows 1.3 pound loss for the next week which would limit the weight for the next weeks weigh-in at 133.5, but the buffer would allow the rower to be eligible if the weight in as low as 133.0.

If the athlete weighs in at a weight LESS THAN their minimum allowed (previous week weight minus allowable weight determined by the Coach-Official Team Report), AND the Buffer Zone, the athlete is not permitted to compete on that day. No competition at any weight class for that day.

ROWING WEIGHT CONTROL PROGRAM

STRATEGIES TO PREVENT FALSIFIED URINE TESTS

Athletes who present with a urine sample that has been altered in any way will be subject to a one-year suspension of participation.

- Athletes being tested should wear typical practice attire – spandex or lightweight shorts, no shirts (males) and no shoes.
- Bathroom facilities should be arranged such that a sink is not accessible.
- Place food coloring in the toilet (blue or green), refrain from flushing between samples.
- Check for athlete's carrying any container.
- Usg test should be completed first, with weight immediately after.

When in question, request a repeat sample

ROWING WEIGHT CONTROL PROGRAM

CREW COACHES QUICK GUIDE

- Identify the rowers that you believe could potentially row in a lightweight boat
- Contact a VHSL certified measurer to discuss an appropriate time to meet and test
- Educate the lightweight rowers and parents about how to prepare for the test and staying hydrated at least 3 days prior to testing (use forms in packet)
- Set a date and time for body fat testing (within 3 week period from Feb 12th to March 3rd)
- Help certified measurer with testing procedure (keep line moving, monitoring athletes, etc.)
- Look over results with certified measurer and clarify any questions or need for hydration re-testing or an appeal
- Keep the Coach-Official Team Report in a safe place and make copies for assistants and extras to bring to races
- Monitor athletes weight, weight loss, and weight loss practices at least once a week and refer to the Coach-Official Team Report to make sure they are at an appropriate weight
- Bring the Coach-Official Team Report and Weigh-in sheets to all races!!!!!!!!!!
(if there is no COTR the athletes cannot compete in a lightweight event on that day)
- Crew WCP Coach-Official Team Report, Official Weigh-in sheet and all previous weight in sheets will be required at each competition and weigh-in for reference and validation of a rower's allowable competitive weight

Refer any athletes who show signs of excessive weight loss, unhealthy weight loss practices or difficulty achieving their target weight to the athletic training staff or other health care professional

ROWING WEIGHT CONTROL PROGRAM

CREW COUNCIL WEIGHT CONTROL PROGRAM FORMS

ROWING WEIGHT CONTROL PROGRAM

Hydration Tip Sheet

[Table of Contents](#)

Rowers:

The following are tips that will help rowers report to body fat testing properly hydrated. Please do not take nutritional supplements for one week prior to testing date (unless under specific direction from physician).

Two days prior to test day:

- **Drink plenty of fluids throughout the day, (Water has no calories). Athletes should be drinking at least 8-10 glasses of water during the day**
- **Increase intake of foods high in fiber- this will help with removal of excess GI content from body. (salad, cereal with skim milk, vegetables, fruits, etc are examples of foods high in fiber)**
- **Eat smaller, more frequent meals**
- **AVOID foods high in fat (fried foods, meat, french fries, pizza, nuts, salad dressings, etc.)**
- **AVOID salty foods (potato chips, pretzels, pizza, tuna, crackers, soft drinks, sports drinks)**
- **Be sure that you eat and drink. Do not dehydrate! Do not starve!**

One day before test:

- **Continue drinking fluids, you should be urinating on a frequent basis. Urine should be clear if you are fully hydrated**
- **Eat smaller, but more frequent meals. Continue eating fibrous foods, to minimize GI content from body**
- **Fatty foods / snacks will stay in your body – STAY AWAY**
- **Drink 16 ounces of fluid replacement beverage (Gatorade, Powerade)**

Day of test:

- **Eat small portions, eat a very light lunch (if afternoon testing)**
- **Eat lighter foods such as fruit, grains, etc.**
- **Continue to drink water**
- **Do not drink salty drinks such as Sodas**
- **Urinate as frequently as possible throughout the day until one-two hours prior to test time**
- **Use the bathroom (defecate) before the test**
- **Please be ready to urinate for hydration testing**

ROWING WEIGHT CONTROL PROGRAM

[Table of Contents](#)

PHYSICIAN CERTIFICATION OF ROWER'S NATURAL WEIGHT BELOW 7% (MALE) OR 12% (FEMALE)

Dear Physician:

In an attempt to minimize unsafe weight loss practices practiced by lightweight rower's, the Crew Council has instituted a program establishing a MINIMUM weight based on 7% body fat for males and 12% body fat for females. We recognize that a few individuals may have a body composition and weight that naturally occurs below that amount and we do not want to penalize that athlete.

Your patient, _____ has been evaluated and their current body fat is under 7% (male) or 12% (female).

The minimum competitive weight based on the current body fat and weight for your patient is _____.

We ask that you certify this weight is this athlete's natural body fat composition. Please evaluate your patient and sign below if you feel appropriate. Our program would allow for this athlete to row at no lower than the present weight noted below as "Actual weight".

This athlete was body fat tested using the Crew Council Weight Control Program protocols assessing urine specific gravity to determine status of hydration. The results are as follows:

Date of assessment: _____ USG at time of test: _____

Actual weight: _____ Current percent body fat: _____

Physician to complete:

I have examined this student athlete, based on my records and examination, I certify that the above weight and percent body fat a natural weight and would be safe for lightweight rowing competition at this weight.

Physician Signature

Print name

Name of Practice

Address

Date

ROWING WEIGHT CONTROL PROGRAM

DATA COLLECTION WORKSHEET Male.....[APPENDIX E](#)

DATA COLLECTION WORKSHEET Female.....[APPENDIX I](#)

EXCEL SPREADSHEET TIPS.....[APPENDIX H](#)