Crate Stacking And Flying Squirrel Facilitation





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TABLE OF CONTENTS

Introduction	4
General Safety Regulations	4
Element Physical Description	7
Goals of the Element	8
Posted Rules of the High Ropes Course	8
Element Setup (Start Of Season)	9
Element Take-Down (End Of Season)	10
Element Setup (General Use)	10
Element Setup (Crate Stacking)	11
Element Facilitation (Crate Stacking: Seat Belay)	13
Element Facilitation (Crate Stacking: Team Belay)	15
Element Facilitation (Double Stack Variation)	16
Element Setup (Flying Squirrel)	17

INTRODUCTION

The following are general guidelines for facilitation of Crate Stacking and the Flying Squirrel. (This is a two-in-one, stand-alone element, with minor changes needed to switch from one to the other. Because of that, hereafter it will be referred to as "Crate Stacking" or simply "element", unless specifically describing its use as a "Flying Squirrel".) This manual is NOT meant to replace on-site, personal training.

Also, this manual is meant to be an add-on to both the High Ropes Facilitation and Climbing Tower Facilitation manuals. Because those manual covers things like "Challenge By Choice", harnessing, belaying, etc., those topics will not be covered here. If you need additional information, you are encouraged to review the information in those resources.

Please note that this manual is subject to change.



GENERAL SAFETY REGULATIONS

These safety regulations will be enforced year-round to maintain our high standards. They are:

- 1. Before opening the element, a working radio / cellphone must be present for emergency situations.
- 2. All Ropes Courses fall under the supervision of the Ropes Course Administrator. The Ropes Course Administrator must be someone at least 21-years-old and have previous training and experience on all facets of Ropes Course operation.
- 3. Any changes either to the structure of this element, the programs in operation, or to the steps described herein must be preapproved by the Ropes Course Administrator and documented before being implemented.
- 4. Pursuant to ACCT C.3.2.1, all groups must provide, in writing, a "needs assessment". This can include, but is not limited to: age of participants, group goals, number of

participants, and medical conditions (including nutrition, accessibility, or health concerns.) This information may be requested in advance or filled out upon arrival. (Note: Summer Camp and Camp-sponsored Retreats are exempt from this requirement, provided we have Health Forms on all participating campers and the High Ropes Course is operated as part of our preapproved, structured programming.)

- 5. A Pre-Use Inspection Form (digital) and a Rope Log (paper) MUST be filled out for each group.
- 6. Only trained and approved Staff may use this element. The standards for facilitation will be:
 - Crate Stacking. Facilitator MUST be a Primary on Tower, have successfully completed training on the Crate Stacking element, and be approved by a Ropes Course Trainer / Manager. (Rationale: Crate Stacking is inherently no different than Tower belay and a properly trained Tower Primary Facilitator should have no difficulty leading the Crate Stacking event.)
 - Flying Squirrel. Facilitator MUST be a Primary on the High Ropes Course, have successfully completed training on the Flying Squirrel element, and be approved by a Ropes Course Trainer / Manager. (Rationale: Since there are different forces at work and a non-traditional "belay", Facilitators must be competent in use of full-body harnesses, inspection of the element, inspection of the gear, etc.)
- 7. Primary Facilitators must be at least 18-years-old. No minor, regardless of skill, will be allowed to facilitate this element no matter who is available.
- 8. Staff who are ill and unable to do their jobs safely and effectively will NOT be allowed to facilitate. (Preferably they will report this, but they may be removed, if a Ropes Course Administrator or Trainer deems it necessary.)
- 9. Only gear rated for the High Ropes Course will be used. Staff will NEVER use any of the gear from the "Real Rock" bin, the training bins (black with skull-and-crossbones), etc. under ANY circumstances!
- 10. Personal gear will NOT be used without approval from a Ropes Course Trainer or above. Personal gear of a Ropes Course Trainer must be approved by the Ropes Course Administrator prior to use. If personal gear is approved, a contract will be drafted stating what is allowed to be used and under what conditions.
- 11. Personal and/or external gear may NOT be used on or by participants. (Rationale: Camp will be unable to ascertain how outside gear may have been used.)
- 12. Camp gear may not be taken off-camp for use with outside groups. (Rationale: Camp would incur liability if Camp Staff used Camp gear in an unapproved fashion.)

- 13. During annual setup and inspection, Primary Facilitators MUST wear a full-body harness (waist or sternal clipped) and a helmet while in the trees. They must use lobster claws (safety) and daisy chains (positioning) to ensure that they cannot fall more than two feet when standing or while moving. If using screw-gate carabiners, Facilitators MUST lock down the carabiners when they are not moving.
- *Facilitator's Note:* As we transition to full-body harnesses, an approved seat harness that is attached to an approved chest harness may be used in lieu of a full-body harness. Facilitators who are required to use a seat/chest harness setup for physical reasons will also be allowed this variance.
 - 14. Only steel carabiners, pulleys, rapid links, etc. may be used on this element for all purposes. No aluminum is allowed.
 - 15. All gear on the High Ropes Course, with the exception of ATCs, Prusik Cord, p-cord, daisy chains, or webbings, shall be rated at a minimum of 5,000 pounds breaking strength, unless allowed for by ACCT standards. (See "Gear" manual if there are any questions.)
 - 16. If it looks unsafe, it probably is. Always inspect the element, the belay cables, ropes, harnesses, carabiners, knots, etc. When in doubt, throw it out....
 - 17. At the first sound of thunder, the element must be cleared area and participants must seek shelter. If the thunder stops for a period of thirty minutes, you may resume the activity. (Before resuming activities, a Primary Facilitator should check local radar to make sure that more storms are not on the way.)
 - 18. Upon completion of the activity time, the element must be taken down (e.g. rope replaced by P-cord) to prevent unauthorized use. Under no circumstances can gear be left out, unattended, overnight.
 - 19. If you must leave the element unattended for ANY reason and for ANY length of time, the element must be secured and NO gear left sitting out.
 - 20. Any piece of equipment dropped from a height of over six feet is immediately retired and may not be used again, unless approved by the Ropes Course Administrator. Any questionable equipment must be removed immediately and brought to the Ropes Course Administrator for inspection before it may be used again.
 - 21. All Crate Stacking / Flying Squirrel participants must go through a "ground school" that includes: strength of gear, encouragement of positive behaviors, "Challenge by Choice", basic climbing techniques, description of a verbal contract, etc. (Note: Any Camp program which offers this as a Free Time activity may skip portions of the ground school; however Facilitators are still required to explain "Challenge by Choice" and the verbal

contract.)

22. Any participant who states that they hope someone "falls", "dies", etc. – even as a joke – is to be removed IMMEDIATELY from participation. This is a policy on all of our Ropes Courses. ("Drop" and "Fall" are four-letter words on a Ropes Course!) Making fun of someone who did not climb as high as others is also unacceptable.

ELEMENT PHYSICAL DESCRIPTION

The Crate Stacking Element is a stand-alone event, not connected with any other ropes course. It consists of a steel belay cable secured between two trees approximately 25 feet in the air. An RCU Pulley (hereafter referred to as "pulley") is attached to the cable, between two cable clamps, by means of two rapid links.

The belay rope passes through the pulley, with a double-bowline on a bight secured on the climber end; while the other end attaches to a LEAP anchor on a tree across the path. The LEAP anchor serves as either a ballast point (seat belay) or a connection point for a second pulley and rapid links (team belay)

For Crate Stacking, participants place two crates on a wooden square and then stand on them. They are then handed a third crate which they must put in place WITHOUT any part of their body touching the ground. The goal is to simply see how many crates they can stack without falling off.

For Flying Squirrel, participants wear a full-body harness which is attached to the climbing rope. (Typically this is done on a dorsal connection, but other options may be used, depending on the setup and goals.) The belay team takes hold of the rope and then begins to run, pulling the rope with them; this, in turn, causes the participant to fly up into the air. (There are variations that include the participant running, lying down, etc. which will be discussed later.)



GOALS OF THE ELEMENT

The goals of this new element are:

- 1. To help participants set and achieve goals. They need to determine what their personal goal is and we will encourage them to achieve it.
- 2. To help campers to stretch their comfort zones. We will NEVER stress completion of the course as a goal or even a priority. Our goal is that they push themselves.
- 3. To provide positive encouragement. We will cheer as loudly for the climber who only stands on two crates as we do for people who reach the cable. Each person has different abilities and we will celebrate their accomplishments.
- 4. To provide meaningful ways for those who do not wish to climb to participate. This can include handing crates, organizing the team belay, etc.
- 5. To be safe in all things we do.

While the fifth goal is the most critical – everybody must survive intact! – that should be fundamental to any of our programs. The others goals deal with the personal issues at stake for our program participants.

POSTED RULES OF THE HIGH ROPES COURSE

While there are no post rules for this element, the rules that govern the High Ropes Course will, for the most part, still be applicable. These specifically include:

Do Not Enter Unless NLP Staff are Present

The Goal of this element is NOT to "complete" it. It is simply that you try and push yourself. (If you need an additional challenge, please talk to your Facilitator.)

"Challenge By Choice" will be enforced for our climbers.

The "Forward Progress Rule" will be enforced for our climbers.

Age Restrictions: None. (If they can fit into a harness safely, they can play.)

- 1. A liability waiver must be signed and present for all participants of non-camp sponsored groups (e.g. rental groups).
- 2. Please follow all instructions from NLP staff members.
- 3. Please stay focused on your group and positive in your comments.
- 4. Please keep appropriate gear on at all times this includes shoes.
- 5. Please be aware that participants may be asked to assist, as needed.
- 6. Only approved Facilitators may belay unless part of an NLP training program.

- 7. Please leave the course as you found it (or cleaner).
- 8. Failure to follow these guidelines will result in removal from the area.
- 9. No refunds are given for participants removed from the activity for inappropriate behavior.

Climbing "After Hours" will result in removal of the individual and/or the group from Camp premises. No refunds are given to individuals/groups removed for disobeying Camp rules.

Notes:

"Challenge By Choice" means that the climber determines how far they will go and when they will come down! We DO NOT force participants to complete either aspect of this element; regardless of what teachers, parents, or other adult leaders may desire! (The exception to this is At-Risk / Adjudicated Youth programs where the choice may be left to the discretion of the Facilitator per program guidelines.) Forcing a camper to continue is grounds for dismissal.

"Forward Progress" simply means that the participant needs to keep moving forward or attempting to move forward. If they remain in one place without making forward progress, it is at the discretion of the Facilitator to end the climb and either lower them, as needed.

The maximum weight for participants allowed on this element, per Mike Barker, Vice President of PRCA and former OSHA Inspector, is 300 pounds. This is conditional upon two things:

- 1. There is a full-body harness that will properly fit the participant.
- 2. The team is sufficient to offset their weight. For example, a teacher who weighs 300 pounds may not participate in Crate Stacking if the Team Belay is made up of their First Grade students. In cases where there is a significant difference, Facilitator (seat) belay will be the only option. This means that the Flying Squirrel element MAY NOT be used under these conditions!
- *Facilitator's Note:* We do NOT ask a participant their weight! After discussing this situation with Mike Barker, our policy will be that if we can fit them into a harness, they are within the weight limits. If someone mentions their weight, then you may use that information; however it would be embarrassing for them to have to discuss that in front of a group!

ELEMENT SETUP (START OF SEASON)

Prior to use for the season, the element will need to be set up. To do this, the following steps will be performed by a Competent Person under the direction and/or supervision of the Ropes Course Manager:

1. Installation of the pulleys and P-cord at the start of the season may only be done by a High Ropes (Primary) Facilitator who has been trained to do so and who is known to be

on the course.

- 2. If another Facilitator is not available to be at the course during setup, another Staff member MUST be on Camp and the Primary should make contact with them via radio / text / phone both before and after setting up to ensure their safety.
- 3. The Primary Facilitator is required to use two Daisy Chains, along with their claws. The first Daisy Chain will be used to secure the ladder to the tree, once they reach the top. The second Daisy Chain will serve as normal positioning.
- 4. To set up the element on top, other than tools, you will need:
 - a. Two rapid links.
 - b. One (RCU) pulley.
 - c. P-Cord.
- 5. At the time of preseason setup, a visual and tactile inspection of the element must be completed. This is to include:
 - a. Checking that the fist grips are tightened to 45 foot-pounds of torque.
 - b. Tightening the clamps on either side of the pulley to prevent movement. Do NOT over-tighten these as it can damage the cable!
 - c. Visual and tactile inspection of the entire cable.
 - d. Ensuring that the cable is not in contact with the trees.
 - e. Ensuring that the cable is not sitting on a screw that is connecting the boards to the tree.
 - f. Checking the pulley and rapid links (2) for signs of wear.
 - g. Checking the P-cord to ensure it is not damaged.
 - h. Checking the site for potential environmental hazards (e.g. dead trees, snags, etc.)

ELEMENT TAKE-DOWN (END OF SEASON)

The procedures for removing the element at the end of the season are identical to the Set-Up. This ensures that the gear is in good shape at the end of its use and makes it safer for the Facilitator setting it up at the start of season the next year.

ELEMENT SETUP (GENERAL USE)

Setup should be accomplished prior to the arrival of the participants. The general process for setting up the element, regardless of which activity is used, will include:

- 1. Set-up for this element is dependent upon the activity being used:
 - For Crate Stacking, this will be done by a Primary Tower Facilitator who has been appropriately trained.

- For Flying Squirrel, this will be done by a Primary High Ropes Facilitator who has been appropriately trained.
- 2. The first step in setting up this element requires a comprehensive inspection of the environment. This will include looking up (snags, broken and/or dead tree branches, etc.), looking down (fallen tree branches, roots, etc.), and looking at (cable terminations, pulley condition, rapid links, trees, etc.). If anything looks wrong, the element is NOT to be used. (When in doubt, throw it out!)
- 3. Take cones and use them to mark the trail on both sides as off-limits. Also, define an area where no participants are allowed to enter unless they are the participant. (More cones is better!) If doing Team Belay, set up one cone to indicate the direction the team is to travel.
- *Facilitator's Note:* During Crate Stacking, the person handing crates to the climber on Crate Stacking may enter this area if they are wearing a properly fitting and secured helmet. Otherwise, participants, spectators, parents, etc. are to remain outside of this area for their own safety.
 - 4. If time allows, put a tarp on the ground and lay out the harnesses and helmets that are needed for the participants.
 - 5. Attach the climbing rope to the P-cord and pull it through. Untie the P-cord from the rope and tie / lay it carefully off to the side, ensuring that it's out of the way of the participants.

ELEMENT SETUP (CRATE STACKING)

Setup specific to Crate Stacking will include:

- 1. Tie a double-bowline on a bight on the participant side of the climbing rope and clip the auto-lock into the knot.
- 2. Tie a "stopper knot" in the end of the climbing rope if doing seat belay. If doing team belay, tie a double bowline on a bight in the end of the climbing rope.
- 3. Move the stack of crates close to the element, but outside of the borders marked out by cones.
- 4. Get the extension pole used to lift crates up when the climber has moved beyond the ability to simply hand it to them and place it next to the pile of crates.
- 5. Get the square plywood base and put it down directly under the element.
- 6. Place two crates on the wooden base as a "start".

- *Facilitator's Note:* The reason we start with two is because it means that we can remove more slack prior to their climb. This means that if a heavier participant falls, they will not contact the ground with their torso / head.
 - A. If doing seat belay:
 - 1. Clip the Daisy Chain into the LEAP anchor on the belay tree using a screwgate carabiner and lock it down. Clip another screw-gate through the Daisy Chain and use it to secure the Facilitator to the tree. Do this in such a way as to minimize "slack" in the system!
 - 2. Set up your ATC and clip it to the rope using a screw-gate. (This description should sound identical to setting up the Climbing Tower, with the exception of using the Daisy Chain to secure the Facilitator to a tree.)
- Facilitator's Note: The Daisy Chain MUST clip into something "structural" on the harness.
 This can be a back belay loop, dorsal clip, etc. Facilitators may NEVER
 attach the Daisy Chain to a gear loop, as these are NOT rated for safety
 purposes! When in doubt, they must wrap the Daisy Chain around the belt of their harness.
 - B. *If doing team belay:*
 - 1. Attach a pulley to the LEAP Anchor (orange) in the tree by means of two rapid links. (This allows the pulley to swivel into the best position as the participant climbs.)
 - 2. Thread the climbing rope through the pulley.
 - 3. Place a cone on the ground approximately three feet away from the belay tree. No participant should ever get closer to the tree than that cone!
 - 4. With the triple, auto-lock carabineer touching the ground, tie a doublebowline into the climbing rope approximately five-feet from the pulley on the team-belay side. This will be used as the "starting point" for the team and will prevent them from getting close enough to get their hands stuck in the pulley!
 - 5. Tie multiple double-bowline knots along the remaining length of the rope. These can serve as places for the team to grip; or, for added safety, you can clip participants into the rope using screw-gate carabiners.
- *Facilitator's Note:* Under NO CIRCUMSTANCES will a participant be allowed to put their hand through one of these knots!

ELEMENT FACILITATION (CRATE STACKING: SEAT BELAY)

To facilitate the Crate Stacking activity:

- 1. Participants must be old enough to handle the crates and to follow instructions. (There is no other age limit for participation, provided the participant can fit securely in a harness and helmet.)
- 2. Make sure the participant is correctly wearing a seat harness and helmet. (Please see the High Ropes Course and/or Climbing Tower Manuals for more information.) If the participant does not fit safely into a seat harness, use a chest harness in addition or a full-body harness. *When in doubt, put the participant in the more secure harness!*
- 3. Clip the participant onto the end of the double-bowline using the triple, auto-lock carabiner.
- 4. Stack two crates on the wooden square, if you haven't already done so, and then instruct the participant to remain on the ground until you are ready. (For smaller children, have an adult monitor them so that you can clip yourself in correctly.)
- 5. Go to the belay tree and clip yourself to the Daisy Chain using the MINIMUM amount of loops. By keeping yourself tight to the tree, you minimize the amount a participant can fall! *All Facilitators will anchor EVERY time, regardless of the size of the participant!*
- 6. When you have taken out the slack and are ready, instruct the participant that they must ALWAYS keep the climbing rope going over their shoulder. They can request slack to enable them to bend, but it will always remain snug as they move.
- *Facilitator's Note:* If the rope moves behind them, they can invert as they fall. Over their shoulder means that the participant remains in an upright position, which is far safer.
 - 7. Warn the participant that if they feel like they're going to fall, they should call out "falling", step off the tower of crates, and grab their climbing rope. If they DO fall in the first 2-3 crates (or more, if they are larger), they are likely going to touch the ground, so it's safer for them to step off.
- *Facilitator's Note:* I make participants acknowledge this instruction before giving them permission to climb. That way I'm sure they understood. (I had one person "practice" grabbing their rope as I was concerned that they didn't fully understand what I meant.)
 - 8. When they are ready, they may begin climbing. To do this, they simply stand on top of the first two crates. (If they need help, the person handing them crates and who is also wearing a properly-fastened helmet can assist them.)

Facilitator's Note: To "claim" the crates they've stacked, participants MUST stand on top of

them and extend their arms. If a participant NEVER steps on top of the pile of crates, they NEVER get credit for how far they climbed! (And this HAS happened, by the way!)



- 9. The first couple of crates may be handed to the climber. When the climber gets too high, the reaching pole must be used to reach the next crate up. This person MUST step outside of the cones after the climber has received the next crate! (Again, this person is required to be wearing a properly sized and fitted helmet.)
- 10. If the participant gets a significant way up, have people move further back to avoid being hit by flying milk crates!
- 11. The participant's climb ends if they fall off OR if they can tag the belay cable outside of the rapid links and away from the pulley with their hand.

Facilitator's Note: NEVER allow a climber to "over-climb" their safety line/gear! Also, be sure to warn them repeatedly as they approach the belay cable to keep their hands away from the pulley!

- 12. When a participant is done, lower them to the ground.
- 13. While you're checking and clipping in the next participant, the rest of the team can assist in picking up and restacking the crates in preparation for the next climb.
- *Facilitator's Note:* Milk crates within the field of play are as dangerous to participants as broken tree branches! No one climbs until the crates are safely stacked out of the area marked off by cones!
- *Barry's Note:* Depending on your group, you get a lot of competition that builds up. (This is especially true with families!) While you can allow that, if it seems to be done in a friendly way, it's not the ideal situation. Instead, challenge them to climb more than once, with the goal of beating THEIR

previous height! It's not about what anyone else can do; it's about what they can do!

ELEMENT FACILITATION (CRATE STACKING: TEAM BELAY)

To modify the element for Team Belay, use the setup described on Page 12 and then make the following modifications:

- 1. The Facilitator places themselves between the belay tree and the first knot in the climbing rope. This allows them to see the climber, direct the belay team, remove slack as needed, and grab the rope is required.
- *Facilitator's Note:* Do NOT get your hands too close to the pulley or you may get your hands pulled in!
 - 2. Instead of a Facilitator taking out the slack, have a belay team grab the end of the belay rope coming through the pulley. Do NOT let participants get anywhere near the pulley or they may get their hands pulled in!
- *Facilitator's Note:* To ensure that the team doesn't let go of the belay rope, feel free to tie double-bowlines along the length of the rope can clip the team to the rope using carabiners. (I usually ALWAYS clip the person at the end of the rope into the climbing rope.)
 - 3. Have the team walk backwards SLOWLY while taking up the slack as the participant climbs.
- *Facilitator's Note:* Don't let them "pass" the rope back. It's far safer if they walk with the rope to prevent them from accidentally letting go! Also, make sure they're listening to their climber, just in case they need to provide slack.
 - 4. When it comes time to lower the climber, have the belay team walk back toward the tree in a controlled pace.
- *Facilitator's Note:* With your position at the tree, it becomes very easy to control the pace of the belay team.
 - 5. When the climber is on the ground, rotate the belay team. It's my recommendation not required, that the previous climber takes their place at the front of the belay team, closest to the Facilitator, that all other team members shift down, and the person at the end becomes the new climber. That way all team members get to experience the difference points on the team.

ELEMENT FACILITATION (DOUBLE STACK VARIATION)

A modification to the Facilitation of Crate Stacking can take place, as follows:

- 1. Instead of using the small plywood square, use the bigger wooden base.
- 2. Instead place one crate on one side of the wooden base and place two, stacked on top of each other, on the other side.
- 3. When the climber is ready, they climb up on the first crate and then climb to the stack of two crates. Then, they place the next crate down on the stack of one and stand on top of both piles of two.
- 4. They take the second crate and place it on top of either pile and stand on that. Then they take the third crate and place it on top of the other pile. This continues until they reach the top cable or run out of crates.
- 5. As with regular Crate Stacking, this can be done as Seat Belay or Team Belay.
- *Facilitator's Note:* The Double-Stack Variation makes this activity EXTREMELY easy! Ironically, it's best for older people who struggle with the single stack. (Little kids usually have no difficulty with the single stack.)
- *Barry's Note:* I would NOT recommend using the variation of the Crate Stacking activity unless I was dealing with special needs populations. The stability, the lack of perceived risk, the ease of climbing, the near-100% "success" rate, etc. all combine to make this relatively...non-useful.

It's the equivalent of building solid bridges from platform to platform in the High Ropes Course or wrapping an eight-foot-wide railed staircase around the Climbing Tower. It means more people "reach the top", but most people will get nothing out of the experience due to the lack of challenge.



ELEMENT SETUP (FLYING SQUIRREL)

This is a continuation of the setup instruction found starting on Page 10. To specifically set up the Flying Squirrel:

This section is left intentionally blank.

We are in the process of drafting the policies for the Setup and Facilitation of the Flying Squirrel activity. At this time, we are not ready to publish this information for review and/or implementation. This manual will be amended when the new procedures have been approved.