

# ***Teaching Surf/SUP Instructors to Teach***



**National Surf Schools and Instructors Association  
Instructors and Coaches Training Manual**



**SUP Flatwater Instructional Techniques  
Part 5C**

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## **Basic Guide for SUP Flatwater Instruction**

This section assumes the instructor has already read the basic SUP instruction section of this manual. As a fundamental premise, when teaching flatwater SUP, it cannot be assumed that students will have any previous experience with standing on a board. Further, both flatwater SUP and ocean SUP require specific equipment that is best suited for the immediate conditions of the lesson and the specific needs of each student. Board size plus height and shape of the paddle is crucial to the success for their paddling proficiency. Note also that for students 7 years and younger, instructors need to stay very close or even consider using a larger board for tandem paddling with the student.

### **Flatwater SUP**

Flatwater SUP is Stand-Up Paddling performed on lakes, rivers, reservoirs, or any other inland body of water. Flatwater is the term normally use, because flat water is not detailed enough to describe all of the different environments where you can inland SUP, or all of the subsequent skills and knowledge one needs to navigate these varying waters. There is indeed crossover knowledge between ocean SUP (and prone ocean surfing) and flatwater SUP, but even an experienced ocean waterman must learn about the nuances of flatwater environments just as an experienced inland SUP waterman must learn about the ocean.

### **Physical Indications/Limitations**

Once the instructor can address their students by name, it's time to address their safety needs. Safety is much more than just being able to identify when they become tired or frustrated, it's about a whole range of issues that can impact a lesson.

The instructor must first understand the physical limitations of their students, as well as knowing "instinctively" when the student doesn't have the potential to fully learn the sport. Another important physical limitation that must be considered is that most flatwater SUP instruction takes place on calm water, therefore the student must provide all the propulsion to move on the water (there is no current or surf to help push). It is important to remind the students not to paddle too far because they must be able to return without becoming physically exhausted. If the student is seriously out of shape or had poor natural balance, don't push them beyond their limits. Putting a student on a smaller board where balancing is difficult is the quickest way for a student to give up and quit. Provide confidence building exercises on the shore if necessary to get the student ready for the water.

### **Wetsuits and Body Warming Outerwear**

With flatwater SUP, you may be giving the initial instructions in an environment where it is unlikely you'll actually be in the water. When the water or air is cold, providing body warming gear is a must for lessons.

What is the correct type of a body warming outerwear to choose for your students? This is a difficult question with a great many variables. Some people stay warmer than others at the same temperature. You want to provide your students with the right kind and fit of

body warming gear to keep them warm while standing, gear that will keep them warm if they fall in cold water, but will also give them the freedom of movement needed for success in learning. SUP types of body warming gear are covered in the General chapter.

### **Choosing the Equipment - Board and Paddle**

Choosing a board and paddle to compliment your student's ability, skill, and experience level is crucial to learning in flatwater environments. Much like the relationship between the rider and the board in ocean SUP conditions dictating how swiftly they will paddle, how well they will be able catch and potentially maneuver while on the water, and control and retrieve the board when they fall - equipment selection and compatibility in flatwater SUP is no less important. The board you choose for your student will have the greatest impact on their ability to thrive immediately. The importance of board selection does not decrease as one's SUP prowess grows, the intermediate and expert flatwater SUP waterman needs pays just as much attention, or more, to his or her gear.

#### **Boards**

Providing boards that are large and have high volume in comparison to the student's size ensure a more stable experience. While a student is first learning, the subtle nuances of the board are less evident, but falling in the water is a striking moment. Therefore, by providing large and stable boards for students to learn on, they can feel the success of standing immediately. When a student is confident and stable on the board they are able to relax and respond to instructions. Body position on the board, paddling techniques, body relaxation, vision points in the distance - all of these subtle instructional opportunities can be capitalized on, improved on, when the student is confident and stable. In short, begin with a large board, in relation to the student, and start strong with success.

While a large board can provide the chance to build a strong foundation for a SUP student, a smaller board can give them a chance to hone and build their skills. By having a quiver of boards, from extremely large to jibber small, your students can gradually move down in size while they increase their skill. A smaller board will be more squirrelly; will bring out the flaws in a student's balance points, paddling inefficiencies, and body rigidity. As an instructor, you will be presented with more complex opportunities to help the student refine their skills.

Flatwater paddling environments are giving rise to new pursuits. The board one chooses can help with these new pursuits. For example, glide (how long a board glides after a paddle stroke) is essential in long distance flatwater paddling. Moving flatwater, rivers and streams, are another story and we will discuss them in a later section.

#### **Flatwater SUP Paddles**

Flatwater paddle recommendations:

Paddles roughly 10" taller than paddler's height.

Larger paddle blades = more propulsion per paddle stroke.

#### **Flatwater Hazards – Flatwater**

Many environmental hazards exist in flatwater SUP areas and the hazards can be found

above and below the water. Because these hazards are multiplied when you attempt river SUP we will address them specifically later in this manual. Even in apparently calm flatwater, you must be aware of the hazards as an instructor and take them very seriously. You must also communicate this environmental awareness to your students as a fundamental cornerstone of flatwater SUP.

At the edge of any body of flatwater, there is a potential for sharp objects, such as bottles, cans, rocks, and more. This is especially true for heavily used public lakes, ponds, or reservoirs where littering is unfortunately commonplace. Safety in the shallows must be emphasized to SUP students. Algae and other underwater plant growth is another concern in calm waters. It is highly unlikely that a student would get seriously entangled in algae, however students may panic if they are surprised by plants touching them underwater. Students should always be alerted to the presence of underwater plant hazards.

Submerged logs and other hard debris can also potentially be a major concern. Many reservoirs are fed by dammed rivers which can easily deposit debris during changes in water flow. Another hazard that is commonly underestimated in flatwater SUP is wind. Understanding prevailing winds is essential, even if it very calm when the lesson begins, wind direction and velocity may change and it could adversely affect your students. Also remember that winds contribute to chilling students.

### **Flatwater Safety Precautions**

The NSSIA recommends the following safety precautions when teaching flatwater SUP.

1. Use bright colored buoys to mark a "designated area" and confirm all students understand they must remain in the area until authorized by their instructor that they can paddle elsewhere. Massive bodies of water can be used (sounds, huge lakes) in flatwater instruction and designating this safe instructional area greatly reduces the chance of having to chase down a wayward student.



2. Use more buoys to designate a "knee paddling" area near the shore where the water is shallow. We recommend students remain on their knees until the water is approximately 3-4 feet deep. Students are instructed to paddle on their knees in this area when leaving from, or returning to, shore. This is a basic safety fundamental in flatwater SUP instruction which can prevent a multitude of injuries in the shallow water near shore.

3. Instruct students to maintain a 7-8 foot space from other students. For these reasons:

-Bumping: If you bump someone else's board, or get bumped, both of you may lose balance and fall in the water.

-Paddle Problems: You want to avoid being within paddle swinging distance of

anyone else because accidental paddle contact may cause you to fall in the water.

### **Flatwater Instruction Basics**

The basic steps for flatwater instruction are as follows:

1. Begin with a dry on-land lesson, familiarizing the student with all the equipment that will be used.
2. The instructor then proceeds to show the correct balance positions on the board, and the correct paddle stroke necessary to move the board.
3. The next step is showing the student how to launch the board into the water and mount it while holding the paddle.
4. Once in the water, the student is again showed how to paddle the board and maintain correct posture and balance on the board.
5. After all this has been accomplished, the next step is to show the student how to control the board by turning in both directions and also stopping it.
6. The final step in the lesson is practicing exiting the water and dismounting the board with the paddle.



### **Dry-Land SUP Basic Lesson**

This section is written from the point of view of an instructor presenting to a student. Remember that this format is a suggested guideline and does not necessarily mean you must follow it exactly. Before you start the lesson you should also mention about permits if permits are required to paddle in the area you live in.

Begin the lesson: Now that we've talked about the safety precautions related to falling in, let's talk about the proper techniques that will keep you on the board. Use an instructor to

demonstrate on shore with the board facing the group of students at a 45 degree angle.

1. Let's first discuss paddling technique since we all have our paddles now. Let's all put our left hands on the top of the paddle on the "T".
2. Next, we want the blade to be facing like this. We are not scooping water, but pushing water to propel ourselves around.

You can have the student determine their proper hand position by having the student hold the paddle over their head with their elbows at a 90 degree angle. If necessary, mark the paddle hand position with tape or a small wax mark.

3. When standing, we will want our hands positioned like this:

- Top hand wrapped over the "T" with your knuckles facing forward.
- Bottom hand nice and low on the paddle at about hip height.

You should help students position their feet at shoulder width apart with one foot a couple of inches in front of the other to keep them stable front-to-back. This is much different than riding on ocean waves.

4. Now for your arms. This is where proper technique can make a big difference with how comfortable and powerful you are.

The Catch is when the student puts the paddle in the water and before starting to pull it back. Have them fully extend their arms to about a foot or so beyond where the paddle would enter the water if kept in a vertical position with the paddle blade fully into the water.

- Your bottom arm should be at about a 45 degree angle, and you want to try to keep that angle through your whole stroke.

The Stroke generates the power.

- Your top arm will be gently compressing and extending in a "pushing" motion in conjunction with your torso.

The bottom arm should be almost straight while twisting the shoulders for good positioning. This will also ensure that you put maximum power into the stroke. Have students try to develop a smooth consistent stroke.

5. For your torso, you want your torso to be upright as the paddle goes in the water and then tip forward and twist a bit you move the paddle alongside the board with that gentle "pushing" of your arms.

- The most common paddling mistake is to not use your torso and try to muscle the water with your biceps.

When the blade is level with their feet they should begin pulling the paddle out of the water. When it's completely out it should be about two feet behind their body. Have them try to lift the blade out quickly and at an angle so that their arms aren't too high. A comfortable return is a swinging blade motion away from their body out of the water with a return by turning the blade through 90 degrees. For a little more power, you can also bend a bit at the hips on the downstroke and put a little more body weight on the blade.

6. Let's have everyone try some nice slow paddle strokes with the torso tipping and the top arm gently pushing.

7. Next is steering. Because we can only paddle on one side of the board at a time, it does not travel in a perfectly straight line.

Longer, narrower SUP designs and boards with larger fins travel in a straighter line while shorter, wider board (such as those designed for surfing SUP), are more maneuverable. These shorter boards require the paddler to change paddle sides more often to keep going in the right direction.

- To help you go straight, place your paddle in the water about 6 inches - 1 foot outside of your board and about 2 feet in front of your toes.

- Once in the water, move the paddle towards your toes, and then arc it alongside the board. The paddle will naturally come out of the water at the end of your stroke.

- Take as many strokes on each side as you need and change sides whenever you feel it is appropriate.

8. To paddle while kneeling, do everything the same except bring your top hand down the paddle to the appropriate height.

- We are going to be in 2 positions today. Knees & Standing. We are going to go over the proper movements for getting started and maintaining balance.

- To start, the board will be right next to shore in shallow water.

- To get on, you want to hold the paddle in one hand and set it across the board like this.

- Place both hands on the board like this about 2 feet in front of the centerline of the board.

- Place far knee on board at the centerline. Other foot still touching bottom.

- Slowly place other leg on board nice and wide and remain on all 4's until stable

- Slowly remove hands and sit your rear end between your legs. Sitting low like this is very stable but a little difficult to paddle.

- As you feel stable rise up on your knees and begin to paddle, remembering to move your upper hand off the top of the paddle and slide it down a ways.

TO STAND – Once you have cleared the first buoys you can stand up when you feel comfortable. The first step is to find the centerline on your board. This is roughly where you will be standing. Your instructor will fine tune your stance once you are up.

1. The first step is to paddle a few times to gain momentum.

2. Second, return to all 4's with your hands on the board

3. Next, you want to bring knee up so one foot is touching around the centerline.

- Bring the other leg up so you are now in the "frog stance"

- In one smooth motion, release both hands and stand up and go into a paddle stroke. This is very important for your balance that you begin a paddle stroke.

4. To maintain balance while standing, you want to do 3 things.

- Keep paddling; your paddle in the water serves as a third leg of a tripod and helps with stability. Additionally, your forward momentum builds stability. Paddling is your friend.

- Look out ahead of you 30 feet or so. Don't look down at the tip of your board, or your paddle or your feet. Even as the instructor asks you to make adjustments, try to do so while still looking out ahead of you.
- Keep your hips and legs loose. Knees slightly bent and hips loose like you are dancing.



IF YOU FALL – Usually you have a moment of realization that you are not going to remain standing. We call this an “involuntary dismount”.

1. If you feel the dismount coming, try to simply drop back to the all 4's position. If you are still unstable when you get to all 4's, you can flop onto your belly and hug the board.
  - If the fall comes more suddenly, and you know you are going in, remember these things.
    - o You are only 3 inches above the water. It's not a long fall.
    - o Try to go in feet first or land on your rear end. Both are made for absorbing falls.
    - o There is no need for the dramatic dive or belly flop
    - o Don't try to grab the board as you go down. You are more likely to hurt yourself if you attempt to grab the board. Just go into the water.
2. Now you've fallen in, what next. Thankfully, you are wearing a life jacket and you are attached by a leash to a 10 foot long flotation device so floating is going to be the easy part.
  - Try to climb back on the board by putting you upper body on first and then kicking and swinging your legs.
  - If that does not work, our safety boater will be there to assist you back onto your board or direct you to go grab the safety boat and he/she will take you back to shore.

### **River Knowledge - First Priority**

SUP continues to grow in popularity among river paddlers. While this is exciting, there is an additional respect that needs to be paid to rivers. The danger multiplies when practicing SUP on moving water and an additional dedication to educating oneself on river knowledge and river navigating is a must.

The essential core elements of flatwater and ocean SUP instruction generally translate to river SUP. The complexity of river SUP comes mostly from the river itself. Introducing students to a river environment is amazingly rewarding for both the student and instructor and is ripe for success. However, it is not recommended as a "first-time" event for a



student. Some flatwater instruction to familiarize the student with the basic elements of SUP is the key to river success.

This manual cannot exhaustively detail all of the complex details that must be absorbed before navigating whitewater rivers. If you are inclined to SUP whitewater river environments, and are unfamiliar or inexperienced you **MUST** get additional schooling by taking a whitewater safety and whitewater river navigation course. There is too great a safety concern and too long a list of practical dangers, for us to detail them all adequately here in this SUP instruction manual.

There is an International Scale of River Difficulty as defined by American Whitewater. This scale clearly details the hazards and ability levels needed to navigate rivers. Any trip down a river requires pre-planning and research. You must know the class of the river and plan accordingly. If you are new to river navigation, or have little river knowledge, we do not recommend traveling down any river beyond a Class II. The descriptions and hazards of Class I and II rivers are detailed below. Essentially, competency on a SUP will allow a beginner river navigator to maneuver around potentially dangerous obstacles. Beyond Class II, the difficulty and danger is significantly multiplied and without extensive river navigation training and safety techniques it is too dangerous to recommend in this manual. We have included the description of Class III rivers so the reader can see for themselves the clear dangers to unprepared and unskilled river navigators.

- *Class I (easy)*: Fast moving water with riffles and small waves. The river has few obstructions which are all obvious and easily missed with little training. The risk to swimmers is slight and self-rescue is easy.

- *Class II (novice)*: Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful, are seldom needed. Rapids that are at the upper end of this difficulty range are designated "Class II+."



- *Class III (intermediate)*: Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required. Large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on larger volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare and self-rescue is usually easy but group assistance may be required to

avoid long swims. Rapids that are at the lower or upper end of this difficulty range are designated "Class III-" or "Class III+" respectively.

## **River Pre-Planning**

River SUP is different from ocean or flatwater SUP in many respects and requires pre-planning in two areas: Logistical and Safety.

- **Logistical:** Unlike the beach or lake, paddlers will not end their paddle where they began it. The moving water will carry you downriver and this means you will have to plan ahead logistically. Moving water means a put-in and take-out. You will need to organize a method to either get the vehicle you left at the put-in to the take-out. You can accomplish this by taking two vehicles on your river excursion. In some areas, for-hire shuttle companies can assist you in accomplishing this goal.
- **Safety:** Getting a map or a guidebook of the river you are about to run is a must. You must know the class of the specific run you are considering before doing anything else. Safety is first. Consulting a local outdoor store or whitewater store is a great choice. You can talk to locals about whatever location you are considering and purchase maps of that area. Also, you can inquire about shuttle companies.



## **River Board Selection**

Choosing the right board for river travel is essential. Many traditionally constructed SUP boards will be extremely vulnerable to suffering severe damage, even on the most gentle river stretches. Additionally, large fins can be potentially dangerous because they are more prone to hit obstacles beneath the water surface. There are so many different board choices available right now, and so many different board manufacturers, we cannot accurately detail all of them here. However, we can recommend some main points of interest and suggest possible solutions in those areas.

## **Board Durability and Performance**

River travel can destroy a board so durability is a top priority. There are some great inflatable board options on the market and this is an excellent option. These typically come with rubber fins in a quad-thruster setup, which provides good tracking while not going too deep in the water. Also, because of the softer nature of inflatable boards, there is less risk of hurting oneself on the board during a fall. Inflatables do not track and glide like a traditional surfboard.

Soft-top and plastic boards are also available and are generally more durable than classic fiberglass boards. Soft-tops and certain plastics often have a fin setup that can be tailored to river travel. They generally track well and have good glide.

Traditional fiberglass and epoxy surfboards are vulnerable to getting beat up more than soft top and inflatable boards. If you are running a deep, high volume river, this may not be a concern. If you are running a lower volume river, this could be a concern. Essentially, it is each individual's own choice, but traditional boards are more vulnerable.

## **River Features**

Class I and II rivers, while safe for beginner and intermediate SUP watermen, require navigating river features. We will begin with obstacles.

### **River Obstacles**

*Strainers:* A strainer is any river feature that allows water to flow freely through it but will capture a boat or person. Imagine the strainer you use to drain a pot of pasta, the water drains and the pasta stays - this is like a strainer in a river. The extreme danger of a strainer is in how a person or watercraft can be trapped by the flowing water and unable to escape. Strainers can be trees, scrubs, submerged fences, garbage, old cars, storm grates, logs - anything near the bank or anywhere in the river - that allows water to flow. These must be treated with extreme caution and navigated around fully. In an emergency, if avoiding the strainer is impossible, you should climb as high as possible and get as much of your body out of the water as you can.

*Sweepers:* Sweepers are trees that have fallen, or are leaning heavily, over the river, still rooted on the shore and not fully submerged. Its trunk and branches may form an obstruction in the river like strainers. Since it is an obstruction from above, it often does not contribute to whitewater features but may create turbulence. In fast water sweepers can pose a serious hazard to paddlers.

*Holes:* Holes or "hydraulics", (also known as "stoppers" or "souse-holes"), are formed when water pours over the top of a submerged object, causing the surface water to flow back upstream toward the object. Holes can be particularly dangerous. Some of the most dangerous types of holes are formed by lowhead dams, underwater ledges, and similar types of obstruction. In lowhead dams, the hole has a very symmetrical character - there's no weak point - and where the sides of the hydraulic are often blocked by a man-made wall, making it impossible to slip off the side of the hydraulic. Lowhead dams are insidiously dangerous because their danger cannot be easily recognized by people who have not studied whitewater.

*Submerged Objects:* A danger in river SUP is anything that lies beneath the surface of the water. Because a river, by nature, moves you along, the underwater features are ever changing. Where below you right now is deep, a few feet downriver could hold a rock, obstacle, or shallow water. Being continually aware of what lies just beneath the surface is essential to river SUP for several reasons. First of all, you risk striking the object if you fall off the board. You do not want to strike a rock or obstacle with any part of your body, and especially your head, when you fall off. Second of all, an underwater obstacle can stop your board while you continue forward. Your fin setup is crucial in this regard. Shorter fins will strike objects less and allow for safe travel in more shallow water.

## **River SUP Paddles**

River SUP paddle recommendations:

Paddles roughly 7-8" taller than paddler height.

Smaller paddle blades = more maneuverability

## **River Features**

*Waves:* Waves are formed in a similar nature to hydraulics and are sometimes also considered hydraulics as well. Waves are noted by the large smooth face on the water rushing down. Sometimes a particularly large wave will also be followed by a "wave train", a long series of waves. These standing waves can be smooth or, particularly the larger ones, can be breaking waves (also called "whitecaps" or "haystacks"). Because of the rough and random pattern of a riverbed, waves are often not perpendicular to the river's current. This makes them challenging for boaters since a strong sideways or diagonal (also called "a lateral") wave can throw the craft off. In fluid mechanics, waves are classified as laminar, but the whitewater world has also included waves with turbulence ("breaking waves") under the general heading of waves.

*Pillows:* Pillows are formed when a large flow of water runs into a large obstruction, causing water to "pile up" or "boil" against the face of the obstruction. Pillows can be dangerous because sometimes the object that forms the pillow is undercut and so paddlers can be swept underwater - possibly to be entrapped. Pillows are also known as "pressure waves".

*Eddies:* Eddies are formed, like hydraulics, on the downstream face of an obstruction. Unlike hydraulics, eddies swirl on the horizontal surface of the water. Typically, they are calm spots where the downward movement of water is partially or fully arrested - a nice place to rest or to make one's way upstream. However, in very powerful water, eddies can have powerful, swirling currents which can flip boats and from which escape can be very difficult.

*Undercut rocks:* Undercut rocks are rocks that have been worn down underneath the surface by the river. They can be extremely dangerous features of a rapid because a person can get trapped underneath them underwater. This is especially true of rocks that are undercut on the upstream side. Here, a boater may become pinned against the rock underwater. Many whitewater deaths have occurred in this fashion. Undercuts sometimes have pillows, but other times the water just flows smoothly under them, which can indicate that the rock is undercut. Undercuts are most common in rivers where the riverbed cuts through sedimentary rocks.

## **On-Land Drawings: River Features Recognition**

Similar to ocean instruction, a common instructor technique before putting onto rivers is the On-Land Drawing. Drawings are simple and easily show how and what your students should be looking for in a river environment. Students of all ability levels will benefit from seeing a mock river before they embark on a real river.

Another important point to cover with on-land drawing is how you expect the students to arrange themselves for safety when they do enter the river. Entering the river almost always, especially in an instructional scenario, happens in slack water or an eddy. The drawing helps explain how students should enter and then distribute themselves with appropriate spacing down the river.

One of the final suggestions an instructor might provide as the lesson ends is advice to each student on the size and type of board they should buy for a first SUP board if they decide to purchase one. Many times a beginner will go into a shop with no idea about what they need and end up getting something that they may never be able to ride successfully. A few words of advice will go a long way in a student's mind when they recommend you to other beginners.

### **NSSIA Guidance for Instructors and Students**

NSSIA instructors and schools offer basic rules, safety tips, and other instructional guidance for students as they learn to surf in a safe and healthy manner. The NSSIA's suggested guidelines are provided below and can be given to students separately as handouts. Instructors need to practice these rules as well as instill them in the students they teach. Students should read them to ensure they remain safe in the surf. They are in no order of importance but all are relevant. Remember - surf safely and respect your fellow water babes.