

SURF-LIFEGUARD PREEMPLOYMENT TEST

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ABSTRACT

There is now a worldwide effort under way to find research-based physical-fitness standards for surf-lifeguards. The U.S. National Park Service Surf-Lifeguard Preemployment Test provides one example of the type of test sought. Two of the test's timed components—the endurance run and endurance swim—are based on extensive aerobic-fitness research conducted by Kenneth H. Cooper, M.D. The test's timed-swim standard served as the key basis for two national-consensus, timed-swim standards for surf-lifeguards in the United States of America—one of them adopted at the Galveston conference, in 1980; the other, by the United States Lifesaving Association, in 1984. The purpose of what follows is to show (a) why Gateway National Recreation Area used Dr. Cooper's research findings to set run and swim standards for surf-lifeguards, (b) how Gateway's timed-swim standard served as the basis for the above-cited two national-consensus standards, and (c) why, till now, the test has been favored over alternatives.

INTRODUCTION

Gateway National Recreation Area is one of 391 field units within the U.S. Department of the Interior/ National Park Service. Gateway's roughly 7 miles of Atlantic Ocean beachfront lie both north and south of the mouth of the harbor of New York City. Gateway first became operational in the summer of 1974. Gateway first developed and used the Surf-Lifeguard Preemployment Test in 1975.

TEST CONTENT

The test consists of five performance objectives designed to measure for factors directly related to surf-lifeguard work, such as strength, speed, and stamina; knowledge of basic swimming-rescue and rescue-breathing procedures; and skill in effectively applying such knowledge under stressful conditions. The test is required yearly of all those seeking to join or rejoin the Gateway surf-lifeguard corps. Gateway believes that performance on the test provides a fairly solid indicator of one's potential to handle the physical rigors of in-service training and on-the-job emergencies currently—that is, prior to employment within a given calendar year—without danger to oneself, nor to those relying on one's physical fitness. All parts of the test must be passed in order in one test session. The test content is summarized below:

1. Swim 600 yards continuously (in 25-yard or equivalent measured pool) in less than 10 minutes, using a swimming stroke performed on the front only.
2. Perform in less than 4 minutes (in 25-yard or equivalent measured pool) a simulated rescue that involves, without rescue equipment of any sort, swimming 50 yards to retrieve a dummy; towing the dummy 50 yards; getting out of the water; using a packstrap carry to transport a person weighing about 150 pounds 50 feet; and then performing mouth-to-mouth rescue breathing on a CPR training manikin for 50 seconds.
3. Swim underwater (in 25-yard or equivalent measured pool) a total distance of 125 feet, surfacing four times before reaching the 125-foot mark, then a fifth and final time once just past it.
4. Escape from the grip of another person who will grab hold with two arms around the applicant's head from the front and from the back, and who then will grab hold with two hands around one of the applicant's wrists.
5. Run 1½ miles (on ¼-mile or equivalent measured course) in less than 12 minutes.

ADDRESSING TWO BASIC CONCERNS

In developing the test, Gateway was particularly keen on addressing the following two basic concerns. This was true the very first year of the test (1975). And this remains just as true 32 years later (2007):

1. *Visitor safety.*—What should be the minimum acceptable performance level of running and swimming that would indicate its surf-lifeguard personnel currently—prior to employment within a given calendar year—possess sufficient endurance capacity to handle the physically taxing demands of in-service training and on-the-job emergencies?
2. *Equality of competitive opportunity.*—What key elements should a written standard contain to foster equality of competitive opportunity? That is, what key concerns should that standard satisfy to foster fully open, direct, and objective measurement of a surf-lifeguard-applicant's performance against an unchanging yardstick?

What follows below summarizes the approach that Gateway undertook to address the above-two concerns reasonably and responsibly.

NATURE OF SURF-LIFEGUARD WORK

Surf-lifeguard personnel must be physically and mentally able to respond promptly and appropriately in the performance of their duties both on land and in the water. Sometimes the work requires only a one-time response. Sometimes it requires a series of back-to-back responses. Sometimes it requires responses that are physically taxing in the extreme, such as running at great speed in soft sand to rescue a person reported to be submerged—and then being prepared quickly to enter water that is possibly quite cool and also turbulent. In short, surf-lifeguard work requires a minimum level of physical performance in running and swimming that is demonstrably above average.

COOPER'S 'AEROBIC POINTS'

Kenneth H. Cooper, M.D., developed yardstick units that permitted comparison between performance levels in running and swimming—both of which are truly job-related factors in surf-lifeguard work. He termed the yardstick units “aerobic points.”¹

YARDSTICK WAS RESEARCH-BASED

As of 1970, Cooper had supervised aerobic testing of more than 30,000 men and women.² Based on that, he claimed that the ability to run 1½ miles in under 12 minutes better indicated one's potential endurance capacity than the ability to run 1 mile in under 6 or 7 minutes.³ As a consequence, Gateway adopted the endurance-run standard of 1½ miles in under 12 minutes. Cooper also claimed that running 1½ miles in under 12 minutes netted one “7½ aerobic points,”⁴ as did swimming (overhand crawl) 600 yards in under 10 minutes.⁵ Given this reported endurance-capacity equivalence, as measured in “aerobic points,” Gateway thus adopted the endurance-swim standard of 600 yards (overhand crawl) in under 10 minutes.

EQUALITY OF COMPETITIVE OPPORTUNITY

In order to foster equality of competitive opportunity, Gateway made sure in 1975—and ever since then—that its written timed-run and timed-swim standards contained all three of the following elements:

1. *Task.*—Describe what is to be done? What is to be shown to, and seen by, the observer?
2. *Conditions.*—Describe under what particular conditions the task is to be executed?
3. *Criterion.*—Describe what the threshold is of acceptable versus unacceptable performance?

Gateway's inclusion of the above elements in its written timed-run and timed-swim standards increased the likelihood that a surf-lifeguard-applicant's performance could be directly and objectively observed

and measured by every person present at the test site—thereby providing a potential safeguard against arbitrary and capricious behavior on the part of an examiner in recording an applicant’s performance.

YES TO COOPER, NO TO RED CROSS

In 1975, in the United States of America, there existed no nationally recognized timed-swim standard for persons applying for surf-lifeguard jobs. Because this was so, Gateway gave very serious thought to using the next-best thing—the American Red Cross endurance-swim standard of 500 yards. In the mid-1970’s, this standard served as an entry requirement for the Red Cross’ then-Advanced Lifesaving Course. However, this Red Cross standard was not known to be well-grounded in research of any sort—if at all. Also, it was flawed as regards equality of competitive opportunity, as can be seen below:

1. *Task.*—The task was described well: Swim 500 yards continuously, using a variety of strokes.⁶
2. *Conditions.*—No objectively measurable conditions were described: In a 25-, 50-yard pool?
3. *Criterion.*—No objectively measurable threshold was described: Red Cross simply said “. . . strong swimming skills are necessary for adequate performance of lifesaving skills. . . . Therefore . . . skills must be performed in a comfortable, relaxed, and efficient manner.”⁷

As a consequence, Gateway did not adopt the above-cited American Red Cross endurance-swim standard. For adoption thereof could quite unwittingly open the door to arbitrary and capricious behavior on the examiner’s part in recording applicant performance. By contrast, use of Cooper’s performance measures appeared the more reasonable and responsible approach in setting endurance-run and endurance-swim standards for surf-lifeguard applicants.

GALVESTON CONFERENCE OF 1980

In 1980, a conference was convened in Galveston, Texas. Those in attendance represented the following organizations (listed in alphabetical order):

- American Camping Association
- American National Red Cross
- Boy Scouts of America
- Council for National Cooperation in Aquatics
- Girl Scouts of the United States of America
- National Center for Disease Control
- National Park Service
- National Safety Council
- National YMCA
- United States Coast Guard
- United States Lifesaving Association

The conferees adopted an endurance-swim standard that represented the consensus of the entire group. However, it should be noted that the consensus at which they arrived represented a midpoint compromise between two rather divergent points of view that were not only strongly held, but also strongly argued. One view was: Any minimum performance level should not water down existing high standards. This was the view of the surf-lifeguard agencies, such as the City of Huntington Beach, California. One view was: Any minimum performance level should not eliminate large numbers of people. This was the view of the non-surf-lifeguard organizations, such as the American National Red Cross.

COMPONENTS OF COMPROMISE

The following summarizes the main components of the compromise finally deemed acceptable—first, by all members of the specialist work group; then, by all attendees at the concluding plenum:

1. The new swim standard would simply set a minimum performance level. Surf-lifeguard agencies would be free to set higher performance levels.
2. The new swim standard would build on a national swim standard already widely accepted—specifically, Red Cross’ lifesaving-program swim standard of 500 yards.
3. The new swim standard would be expressed in meters. For, at the time, there was an expectation that the United States of America would relatively soon go metric.
4. The new swim standard would change Red Cross’ lifesaving-program swim standard of 500 yards—to 500 meters (roughly equal to 550 yards).
5. The new swim standard of 500 meters (≈550 yards) would lie midway between the Red Cross’ 500-yard swim standard and Gateway’s 600-yard swim standard.
6. The new swim standard would provide an objective and measurable cutoff time clearly defining acceptable versus unacceptable performance.
7. The new swim standard of 500 meters (≈550 yards) would use the Gateway’s cutoff-time requirement of “less than 10 minutes.”
8. The new swim standard would have at least some basis in research. For Gateway’s timed-swim standard had a basis in research.

It should be noted that one of the hoped-for outcomes of the cited 1980 Galveston Conference was that the above-cited national organizations would fold the recommendations stemming from the conference into their respective national programs.

U.S.L.A. ADOPTS TIMED–SWIM STANDARD

United States Lifesaving Association (U.S.L.A.) formally adopted the above-cited national-consensus, timed-swim standard by unanimous vote at a meeting of its national board of directors on May 3, 1984. This action merely endorsed officially U.S.L.A.’s commitment to having adequate minimum standards. U.S.L.A.-certified agencies had been meeting or exceeding the cited timed-swim standard before 1984.

TEST FAVORED OVER ALTERNATIVES

Gateway has, till now, favored the cited yearly test over alternatives that have been proposed in the past. These proposed alternatives have, in the main and in essence, been an attempt to water the test down—particularly, to accommodate age. The proposed alternatives to the test have consistently been rejected, basically for the following reasons:

1. *Work environment.*—Gateway is unaware of any objective and measurable data that demonstrate the surf-lifeguard work environment makes any accommodation for one’s age, gender, race, status as a nonsupervisor or supervisor, etc. In responding to a life-threatening emergency in the waters off an ocean beach, the distances the surf-lifeguard must first run and then swim remain constants that are unaffected by any of the various factors cited above.
2. *Level of Service.*—Gateway is unaware of any objective and measurable data that demonstrate use of the test has negatively affected the level of service Gateway delivers.
3. *Workforce diversity.*—Gateway is unaware of any objective and measurable data that demonstrate use of the test has negatively affected workforce diversity. Over the past 30-plus years, the test has not prevented the employment of one chief lifeguard in his sixties, two chief

lifeguards who were minority-group members, and three other chief lifeguards who were women.

4. *Meet and maintain standards.*—Gateway deems it prudent to subscribe to the principle that informs U.S.L.A.’s national-guidelines program—namely, job-related minimum standards should be met and maintained at all times by all open water lifeguards.⁸ The test’s timed-swim standard, which all must pass yearly prior to employment, exceeds U.S.L.A.’s timed-swim standard.⁹

ANNUAL REVIEW

For the past 30-plus years, Gateway has conducted an annual review of possible alternatives to the test. This has been accomplished more recently by attending U.S.L.A. meetings, as well as meetings of the International Life Saving Federation, but also by keeping abreast of current practices that are applicable, such as those regarding adult basic life support that resulted from the 2005 International Consensus on CPR and ECC Science With Treatment Recommendations. This has permitted Gateway to ensure the test is reflective of what leading surf-lifeguarding practitioners currently deem applicable and appropriate.

MERITING THE PUBLIC TRUST

What follows represents what might be called the take-home message of this paper. Briefly summarized, it is how Gateway approaches the matter of meriting the public trust:

1. Providing the best possible service to park visitors is the first guiding principle of the National Park Service mission. That means providing service that is not just good . . . or even better than just good . . . but better than better. The test serves to advance the pursuit of excellence.¹⁰
2. Gateway does not pretend it is dealing, nor does it represent itself as dealing, with an exact science in adhering to the test’s performance measures for two job-related factors clearly needed for successful outcomes in surf-lifeguard work—namely, running and swimming.
3. If Gateway can be said to err at all regarding the test, it purposely elects to err on the side of prudence in adhering to the test’s performance measures—and readily admits to great caution in assessing and attempting to manage operational risk involving the lives of visitors.
4. Gateway is fully, indeed painfully, aware that the consequences of error in this particular instance—surf-lifeguard work—can, unfortunately, result in unintended negative outcomes that are, in the very truest sense of the word, irrevocable. Therefore, better safe than sorry.

Millions of visitors come to enjoy the Atlantic Ocean waters at Gateway yearly. Gateway seeks to merit their trust by dint of its approach to safeguarding their lives. The test is a part of that approach.

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