Explanation of Terms and Workout Paces

- **Current Fitness:** This is your current fitness level based on your most recent race or time trial. Workouts based on your current fitness level will help you improve over time without the risk of injury. Your workout paces change as your fitness improves.
- **VO_2 Max:** The amount (volume) of oxygen your body uses while exercising as hard as you can. Because maximum velocity at VO_2 Max for most athletes corresponds very closely with race ability, we use your best recent race time (also known as **current fitness**) to determine your various training paces.
- **Aerobic Base Training:** This training pace is 70% of your VO_2 Max pace at your current fitness level. Continuous running at this pace for a long run is essential for increasing red blood cell count, developing mitochondria, improving recovery, and training the body to burn fat as its primary fuel source during running. Running faster than the given pace decreases the rate at which your body's aerobic system will adapt and improve and will also hinder recovery after workouts.
- **Lactate Threshold Development (Tempo):** This training pace is 88% of your current VO_2 Max pace, above which lactic acid and other wastes build up in the muscles faster than the aerobic system can remove them. Training at Lactate Threshold improves the body's ability to remove muscle waste that develops during intense exercise which allows you to run aerobically at faster speeds by delaying the onset of anaerobic-only energy production. Continuous lactate threshold / tempo runs should be 20 to 40 minutes in duration, and cruise intervals should be followed by 1 minute jog rests to allow for physiological and psychological breaks.
- **VO_2 Max Development:** Intervals are run at 98% of your current VO_2 Max pace. A major physiological benefit of this training is the enlargement and strengthening of the heart, improving its ability to transport blood and oxygen to the muscles (your aerobic capacity). Another benefit of this training is improved lactate tolerance – the ability to withstand lactic acid buildup – which increases your maximum endurance velocity.
- **Running Economy and Speed:** Intervals run at >100% and >110% of your current VO_2 Max are designed to improve biomechanical efficiency and muscle memory for fast running. Rest between reps should be no shorter than equal the time of the repetition but no longer than four times the time of the repetition. Too little rest can lead to and reinforce poor running form.
- **Strides:** Also known as striders, stride outs, or accelerations. They are about 100 meter accelerations where you start at a jog, focus on, and even overemphasize, proper running form as you build to about 95% of your max speed, and then gradually slow to a stop. One stride should take you about 20-30 seconds depending on your ability.