# Recreational Dive Planner (USE FOR TRAINING PURPOSES ONLY)

NOT FOR ACTUAL DIVE USE

## Depth of dive in Feet

*Safety Stop required* ↘ 4 | *No-Decompression Limit* ↘ 13

| | 35 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 10 | 9 | 7 | 6 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | ▼ |
| B | 19 | 16 | 13 | 11 | 9 | 8 | 7 | 6 | 6 | 5 | 5 | 4 |
| C | 25 | 22 | 17 | 14 | 12 | 10 | 9 | 8 | 7 | 6 | 6 | 5 |
| D | 29 | 25 | 19 | 16 | 13 | 11 | 10 | 9 | 8 | 7 | 7 | 6 |
| E | 32 | 27 | 21 | 17 | 15 | 13 | 11 | 10 | 9 | 8 | ▼ | 7 |
| F | 36 | 31 | 24 | 19 | 16 | 14 | 12 | 11 | 10 | 9 | 8 | 8 |
| G | 40 | 34 | 26 | 21 | 18 | 15 | 13 | 12 | 11 | 10 | 9 | |
| H | 44 | 37 | 28 | 23 | 19 | 17 | 15 | 13 | 12 | 11 | 10 | |
| I | 48 | 40 | 31 | 25 | 21 | 18 | 16 | 14 | 13 | ▼ | | |
| J | 52 | 44 | 33 | 27 | 22 | 19 | 17 | 15 | ▼ | 12 | | |
| K | 57 | 48 | 36 | 29 | 24 | 21 | 18 | 16 | 14 | 13 | | |
| L | 62 | 51 | 39 | 31 | 26 | 22 | 19 | 17 | 15 | | | |
| M | 67 | 55 | 41 | 33 | 27 | 23 | 21 | 18 | 16 | | | |
| N | 73 | 60 | 44 | 35 | 29 | 25 | 22 | 19 | | | | |
| O | 79 | 64 | 47 | 37 | 31 | 26 | 23 | 20 | | | | |
| P | 85 | 69 | 50 | 39 | 33 | 28 | 24 | | | | | |
| Q | 92 | 74 | 53 | 42 | 35 | 29 | 25 | | | | | |
| R | 100 | 79 | 57 | 44 | 36 | 30 | | | | | | |
| S | 108 | 85 | 60 | 47 | 38 | | | | | | | |
| T | 117 | 91 | 63 | 49 | 40 | | | | | | | |
| U | 127 | 97 | 67 | 52 | | | | | | | | |
| V | 139 | 104 | 71 | 54 | | | | | | | | |
| W | 152 | 111 | 75 | 55 | | | | | | | | |
| X | 168 | 120 | 80 | | | | | | | | | |
| Y | 188 | 129 | | | | | | | | | | |
| Z | 205 | 140 | | | | | | | | | | |

## SURFACE INTERVAL TIMES

*GROUP AFTER SURFACE INTERVAL* ▼

| | Z | Y | X | W | V | U | T | S | R | Q | P | O | N | M | L | K | J | I | H | G | F | E | D | C | B | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A ➤ | | | | | | | | | | | | | | | | | | | | | | | | | | 0:00 3:00 |
| B ➤ | | | | | | | | | | | | | | | | | | | | | | | | | 0:00 0:47 | 0:48 3:48 |
| C ➤ | | | | | | | | | | | | | | | | | | | | | | | | 0:00 0:21 | 0:22 1:09 | 1:10 4:10 |
| D ➤ | | | | | | | | | | | | | | | | | | | | | | | 0:00 0:08 | 0:09 0:30 | 0:31 1:18 | 1:19 4:19 |
| E ➤ | | | | | | | | | | | | | | | | | | | | | | 0:00 0:07 | 0:08 0:16 | 0:17 0:38 | 0:39 1:27 | 1:28 4:28 |
| F ➤ | | | | | | | | | | | | | | | | | | | | | 0:00 0:07 | 0:08 0:15 | 0:16 0:24 | 0:25 0:46 | 0:47 1:34 | 1:35 4:35 |
| G ➤ | | | | | | | | | | | | | | | | | | | | 0:00 0:06 | 0:07 0:13 | 0:14 0:22 | 0:23 0:31 | 0:32 0:53 | 0:54 1:41 | 1:42 4:42 |
| H ➤ | | | | | | | | | | | | | | | | | | | 0:00 0:05 | 0:06 0:12 | 0:13 0:20 | 0:21 0:28 | 0:29 0:37 | 0:38 0:59 | 1:00 1:47 | 1:48 4:48 |
| I ➤ | | | | | | | | | | | | | | | | | | 0:00 0:05 | 0:06 0:11 | 0:12 0:18 | 0:19 0:26 | 0:27 0:34 | 0:35 0:43 | 0:44 1:05 | 1:06 1:53 | 1:54 4:54 |
| J ➤ | | | | | | | | | | | | | | | | | 0:00 0:05 | 0:06 0:11 | 0:12 0:17 | 0:18 0:24 | 0:25 0:31 | 0:32 0:40 | 0:41 0:49 | 0:50 1:11 | 1:12 1:59 | 2:00 5:00 |
| K ➤ | | | | | | | | | | | | | | | | 0:00 0:04 | 0:05 0:10 | 0:11 0:16 | 0:17 0:22 | 0:23 0:29 | 0:30 0:37 | 0:38 0:45 | 0:46 0:54 | 0:55 1:16 | 1:17 2:04 | 2:05 5:05 |
| L ➤ | | | | | | | | | | | | | | | 0:00 0:04 | 0:05 0:09 | 0:10 0:15 | 0:16 0:21 | 0:22 0:27 | 0:28 0:34 | 0:35 0:42 | 0:43 0:50 | 0:51 0:59 | 1:00 1:21 | 1:22 2:09 | 2:10 5:10 |
| M ➤ | | | | | | | | | | | | | | 0:00 0:04 | 0:05 0:09 | 0:10 0:14 | 0:15 0:19 | 0:20 0:25 | 0:26 0:32 | 0:33 0:39 | 0:40 0:46 | 0:47 0:55 | 0:56 1:04 | 1:05 1:25 | 1:26 2:14 | 2:15 5:15 |
| N ➤ | | | | | | | | | | | | | 0:00 0:03 | 0:04 0:08 | 0:09 0:13 | 0:14 0:18 | 0:19 0:24 | 0:25 0:30 | 0:31 0:36 | 0:37 0:43 | 0:44 0:51 | 0:52 0:59 | 1:00 1:08 | 1:09 1:30 | 1:31 2:18 | 2:19 5:19 |
| O ➤ | | | | | | | | | | | | 0:00 0:03 | 0:04 0:08 | 0:09 0:12 | 0:13 0:17 | 0:18 0:23 | 0:24 0:28 | 0:29 0:34 | 0:35 0:41 | 0:42 0:47 | 0:48 0:55 | 0:56 1:03 | 1:04 1:12 | 1:13 1:34 | 1:35 2:23 | 2:24 5:24 |
| P ➤ | | | | | | | | | | | 0:00 0:03 | 0:04 0:07 | 0:08 0:12 | 0:13 0:16 | 0:17 0:21 | 0:22 0:27 | 0:28 0:32 | 0:33 0:38 | 0:39 0:45 | 0:46 0:51 | 0:52 0:59 | 1:00 1:07 | 1:08 1:16 | 1:17 1:38 | 1:39 2:27 | 2:28 5:28 |
| Q ➤ | | | | | | | | | | 0:00 0:03 | 0:04 0:07 | 0:08 0:11 | 0:12 0:16 | 0:17 0:20 | 0:21 0:25 | 0:26 0:30 | 0:31 0:36 | 0:37 0:42 | 0:43 0:48 | 0:49 0:55 | 0:56 1:03 | 1:04 1:11 | 1:12 1:20 | 1:21 1:42 | 1:43 2:30 | 2:31 5:31 |
| R ➤ | | | | | | | | | 0:00 0:03 | 0:04 0:07 | 0:08 0:11 | 0:12 0:15 | 0:16 0:19 | 0:20 0:24 | 0:25 0:29 | 0:30 0:34 | 0:35 0:40 | 0:41 0:46 | 0:47 0:52 | 0:53 0:59 | 1:00 1:07 | 1:08 1:15 | 1:16 1:24 | 1:25 1:46 | 1:47 2:34 | 2:35 5:35 |
| S ➤ | | | | | | | | 0:00 0:03 | 0:04 0:06 | 0:07 0:10 | 0:11 0:14 | 0:15 0:18 | 0:19 0:23 | 0:24 0:27 | 0:28 0:32 | 0:33 0:38 | 0:39 0:43 | 0:44 0:49 | 0:50 0:56 | 0:57 1:03 | 1:04 1:10 | 1:11 1:18 | 1:19 1:27 | 1:28 1:49 | 1:50 2:38 | 2:39 5:39 |
| T ➤ | | | | | | | 0:00 0:02 | 0:03 0:06 | 0:07 0:10 | 0:11 0:13 | 0:14 0:17 | 0:18 0:22 | 0:23 0:26 | 0:27 0:31 | 0:32 0:36 | 0:37 0:41 | 0:42 0:47 | 0:48 0:53 | 0:54 0:59 | 1:00 1:06 | 1:07 1:13 | 1:14 1:22 | 1:23 1:31 | 1:32 1:53 | 1:54 2:41 | 2:42 5:42 |
| U ➤ | | | | | | 0:00 0:02 | 0:03 0:06 | 0:07 0:09 | 0:10 0:13 | 0:14 0:17 | 0:18 0:21 | 0:22 0:25 | 0:26 0:29 | 0:30 0:34 | 0:35 0:39 | 0:40 0:44 | 0:45 0:50 | 0:51 0:56 | 0:57 1:02 | 1:03 1:09 | 1:10 1:17 | 1:18 1:25 | 1:26 1:34 | 1:35 1:56 | 1:57 2:44 | 2:45 5:45 |
| V ➤ | | | | | 0:00 0:02 | 0:03 0:05 | 0:06 0:09 | 0:10 0:12 | 0:13 0:16 | 0:17 0:20 | 0:21 0:24 | 0:25 0:28 | 0:29 0:33 | 0:34 0:37 | 0:38 0:42 | 0:43 0:47 | 0:48 0:53 | 0:54 0:59 | 1:00 1:05 | 1:06 1:12 | 1:13 1:20 | 1:21 1:28 | 1:29 1:37 | 1:38 1:59 | 2:00 2:47 | 2:48 5:48 |
| W ➤ | | | | 0:00 0:02 | 0:03 0:05 | 0:06 0:08 | 0:09 0:12 | 0:13 0:15 | 0:16 0:19 | 0:20 0:23 | 0:24 0:27 | 0:28 0:31 | 0:32 0:36 | 0:37 0:40 | 0:41 0:45 | 0:46 0:50 | 0:51 0:56 | 0:57 1:02 | 1:03 1:08 | 1:09 1:15 | 1:16 1:23 | 1:24 1:31 | 1:32 1:40 | 1:41 2:02 | 2:03 2:50 | 2:51 5:51 |
| X ➤ | | | 0:00 0:02 | 0:03 0:05 | 0:06 0:08 | 0:09 0:11 | 0:12 0:15 | 0:16 0:18 | 0:19 0:22 | 0:23 0:26 | 0:27 0:30 | 0:31 0:34 | 0:35 0:39 | 0:40 0:43 | 0:44 0:48 | 0:49 0:53 | 0:54 0:59 | 1:00 1:05 | 1:06 1:11 | 1:12 1:18 | 1:19 1:26 | 1:27 1:34 | 1:35 1:43 | 1:44 2:05 | 2:06 2:53 | 2:54 5:54 |
| Y ➤ | | 0:00 0:02 | 0:03 0:05 | 0:06 0:08 | 0:09 0:11 | 0:12 0:14 | 0:150 :18 | 0:19 0:21 | 0:22 0:25 | 0:26 0:29 | 0:30 0:33 | 0:34 0:37 | 0:38 0:41 | 0:42 0:46 | 0:47 0:51 | 0:520 :56 | 0:57 1:02 | 1:03 1:08 | 1:09 1:14 | 1:15 1:21 | 1:22 1:29 | 1:30 1:37 | 1:38 1:46 | 1:47 2:08 | 2:092 :56 | 2:57 5:57 |
| Z | 0:00 0:02 | 0:03 0:05 | 0:06 0:08 | 0:09 0:11 | 0:12 0:14 | 0:15 0:17 | 0:18 0:20 | 0:21 0:24 | 0:25 0:28 | 0:29 0:31 | 0:32 0:35 | 0:36 0:40 | 0:41 0:44 | 0:45 0:49 | 0:50 0:54 | 0:55 0:59 | 1:00 1:05 | 1:06 1:11 | 1:12 1:17 | 1:18 1:24 | 1:25 1:31 | 1:32 1:40 | 1:41 1:49 | 1:50 2:11 | 2:12 2:59 | 3:00 6:00 |

| | Z | Y | X | W | V | U | T | S | R | Q | P | O | N | M | L | K | J | I | H | G | F | E | D | C | B | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ▲ ← ← 35 | 205 | 188 | 168 | 152 | 139 | 127 | 117 | 108 | 100 | 92 | 85 | 79 | 73 | 67 | 62 | 57 | 52 | 48 | 44 | 40 | 36 | 32 | 29 | 25 | 19 | 10 |
| ▲ | | 17 | 37 | 53 | 66 | 78 | 88 | 97 | 105 | 113 | 120 | 126 | 132 | 138 | 143 | 148 | 153 | 157 | 161 | 165 | 169 | 173 | 176 | 180 | 186 | 195 |
| ▲ ← ← 40 | 140 | 129 | 120 | 111 | 104 | 97 | 91 | 85 | 79 | 74 | 69 | 64 | 60 | 55 | 51 | 48 | 44 | 40 | 37 | 34 | 31 | 27 | 25 | 22 | 16 | 9 |
| ▲ | | 11 | 20 | 29 | 36 | 43 | 49 | 55 | 61 | 66 | 71 | 76 | 80 | 85 | 89 | 92 | 96 | 100 | 103 | 106 | 109 | 113 | 115 | 118 | 124 | 131 |
| ▲ ← ← 50 | | | 80 | 75 | 71 | 67 | 63 | 60 | 57 | 53 | 50 | 47 | 44 | 41 | 38 | 36 | 33 | 31 | 28 | 26 | 24 | 21 | 19 | 17 | 13 | 7 |
| ▲ | | | | 5 | 9 | 13 | 17 | 20 | 23 | 27 | 30 | 33 | 36 | 39 | 42 | 44 | 47 | 49 | 52 | 54 | 56 | 59 | 61 | 63 | 67 | 73 |
| ▲ ← ← 60 | | | | 55 | 54 | 52 | 49 | 47 | 44 | 42 | 39 | 37 | 35 | 33 | 31 | 29 | 27 | 25 | 23 | 21 | 19 | 17 | 16 | 14 | 11 | 6 |
| ▲ | | | | | 1 | 3 | 6 | 8 | 11 | 13 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 39 | 41 | 44 | 49 |
| ▲ ← ← 70 | | | | | | | 40 | 38 | 36 | 34 | 33 | 31 | 29 | 27 | 26 | 24 | 22 | 21 | 19 | 18 | 16 | 15 | 13 | 12 | 9 | 5 |
| ▲ | | | | | | | | 2 | 4 | 6 | 7 | 9 | 11 | 13 | 14 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 31 | 35 |
| ▲ ← ← 80 | | | | | | | | | 30 | 29 | 28 | 26 | 25 | 23 | 22 | 21 | 19 | 18 | 17 | 16 | 15 | 13 | 11 | 10 | 8 | 4 |
| ▲ | | | | | | | | | | | 2 | 4 | 5 | 7 | 8 | 9 | 11 | 12 | 13 | 15 | 16 | 17 | 19 | 20 | 22 | 26 |
| ▲ ← ← 90 | | | | | | | | | | 25 | 24 | 23 | 22 | 21 | 19 | 18 | 17 | 16 | 15 | 13 | 12 | 11 | 10 | 9 | 7 | 4 |
| ▲ | | | | | | | | | | | | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 18 | 21 |
| ▲ ← ← 100 | | | | | | | | | | | | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 6 | 3 |
| ▲ | | | | | | | | | | | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 17 |
| ▲ ← ← 110 | | | | | | | | | | | | | | 16 | 15 | 14 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 3 |
| ▲ | | | | | | | | | | | | | | | | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 13 |
| ▲ ← ← 120 | | | | | | | | | | | | | | | | 13 | 12 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 3 |
| ▲ | | | | | | | | | | | | | | | | | | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 |
| ▲ ← ← 130 | | | | | | | | | | | | | | | | | | | 10 | 9 | 8 | 8 | 7 | 6 | 5 | 3 |
| ▲ | | | | | | | | | | | | | | | | | | | | | | | 3 | 4 | 5 | 7 |

The Recreational Dive Planner is designed for planning recreational (No-Decompression) dives on air only. Don not attempt to use for planning decompression dives.

**Safety Stops -** A safety stop of 3 minutes at 15 feet is required any time the diver comes within 3 pressure groups of a No-Decompression limit and or for any dive greater than 100 feet.

**Emergency Decompression -** If a No-Decompression limit is exceeded by:

**No more than 5 minutes**, an 8 minute decompression stop is mandatory at 15 feet. Upon surfacing the diver must remain out of the water for at least 6 hours prior to making another dive.

**More than 5 minutes,** a 15 foot decompression stop of no less than 15 minutes is urged (Air supply permitting). After surfacing the diver must remain out of the water for at least 24 hours prior to making another dive

**Flying after diving procedures -**
1) Wait a minimum surface interval of 12 hours prior to ascent to altitude.
2) If you plan to make daily, multiple dives for several days or make dives that require decompression stops, take a special precaution - an extended surface interval beyond 12 hours before flight.

**Diving at altitude -** This planner is not designed for use when diving above 1,000feet above sea level. Special procedures can be implemented between 1,000 - and no more than 10,000 feet above sea level.
**Maximum ascent rate** at altitude is no more than 30 feet per minute.
**A 3 minute safety stop is required on all altitude dives** regardless of the depth or bottom time. The Safety stop or emergency decompression will be at the following depth when diving between:
1,000 = 14 feet
2,000 = 14 feet
3,000 = 13 feet
4,000 = 13 feet
5,000 = 12 feet
6,000 = 12 feet
7,000 = 12 feet
8,000 = 11 feet
9,000 = 11 feet
10,000 = 10 feet
2 dives a day maximum
All dives in the Swannanoa Fire District are considered Altitude Dives

**Special Rules for Multiple Dives -** If you are planning more than 3 dives in a day: Beginning with the first dive, if your ending pressure group after any dive is W or X, the minimum surface interval between all subsequent dives is 1 hour. If your ending pressure group after any dive is Y or Z, the minimum surface interval between all subsequent dives is 3 hours.
Note: Since little is presently known about the physiological effects of multiple dives over multiple days, divers are wise to make fewer and limit their exposure toward the end of multi-day dives.

**General Rules -**
➤Below 1,000 foot elev, ascent rate is 60 feet per minute, above 1,000 is 30
➤When planning a dive in cold water or under conditions which might be strenuous, plan the dive assuming the depth is 10 feet deeper than actual
➤Plan repetitive dives so each successive dive is to a shallowerdepth. Limit repetitive dives to 100foot or shallower
➤Never exceed the limits of this planner. The 140 foot isonly for calculations in the event of an emergency, DO NOT DIVE AT THIS DEPTH

① Select your depth at the top of the chart, round off to the higher depth
② Follow down the column under that depth to find how many minutes you plan to dive or have dove, if number is higher, go to next block down.
③ From that time block, follow the row to the right. The letter in that row is what the diver will be immediately after the dive. Example: you may become a type “L” diver after diving @ 60 feet for 31 minutes.
④ Next, stay on the same row and find the time range that fits your expected or present surface interval *( The time from when you exit the water from a dive till the time you will enter or have entered for the next dive ).* Example: The “L” Diver stays out of the water for :55 minutes. Out from the “L” row you will find a range from :51 - :59 minutes, :55 minute surface interval fits there. The diver is being credited for staying out of the water which means they are getting rid of Nitrogen during that time
⑤ From the :55 minute block, follow the column down to find the letter of the alphabet, In this case it is the letter D. The diver has reduced nitrogen levels from an “L” diver and is now a “D” Diver, which also means there still is some nitrogen in the system. If the diver begins another dive, they will start the dive with excess nitrogen already in their system so it must be added to the next dive.
⑥ In the bottom table, look to the left and find the depth that you want to go to on your next dive. If next dive will be @60 again, follow the “D” column down to the 60 foot row. The white row represents the “Residual Nitrogen Time” RNT. The blue row represents the adjusted No-Decompression limits. The Residual Nitrogen Time is added to the “Actual Bottom Time”. This total should not exceed the number in blue. If your next dive actually lasted for :23 minutes and the RNT was added to it, it would equal 39 which is the maximum allowed for in the blue. If you actually stayed at 60 Feet for longer than 23 minutes, you would exceed the tables safety for repetitive dives