

# Drowning: The Exit Problem

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“The Exit Problem” proposes that an unknown percentage of swimmers who die by drowning do so because they swam to where they think they are safe and they find themselves unable to exit the water, as opposed to drowning because they are unable to swim to safety. Forced to remain in the water, they eventually are swept away by currents as they become fatigued, trapped by underwater objects, bashed against rocks, trapped in mud, or they eventually succumb to cold shock and lose their grip as they are holding on to something. We suggest a number of solutions such as use of lights at ladders and other exit places and placement of hanging knotted ropes or grab chains at locations with steep sides.

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It is generally accepted that more than a half of drowning deaths occur close to safety (Home Office UK, 1977) and that the majority of casualties can swim (Home Office UK, 1977; Lifesaving Society, 2004). Both of these conclusions raise the possibility that some swimmers drown because after having swum to where they believe themselves safe, they cannot exit the water and eventually succumb to cold or fatigue.

In this paper, I use sample extracts from Irish police drowning reports, rescue reports, award citations, and news reports to illustrate different aspects of what I call “The Exit Problem.” The body of the paper contains short excerpts with more complete reports available in appendices. I deliberately excluded two categories of drownings from this study: suicide by drowning incidents to avoid the possibility of a casualty not wanting to exit the water and drownings in rip currents since a great deal of research has been devoted to this major cause of drownings. Both categories could skew the outcomes and conclusions.

I do not offer this paper as a comprehensive and inferential study since there is an Irish bias in the documents. Although over 3,000 reports were examined (1,000 official reports and 2,000 news reports), they are a very small sample of those available worldwide. News reports examined were mostly from small local papers in Ireland and the United States. Local Irish newspapers devote much space to reporting local drowning and rescue incidents, including Coroners Court reports and can provide both an initial account of an incident shortly after it occurs and a comprehensive account following an inquest some time later. To meet confidentiality conditions entered to obtain access to police reports, all names and other identifiable details have been removed from all reports. There are no duplications (i.e.,

no report is used more than once) to allow for the inclusion of a larger number of excerpts in a short document. Upon reading the appendices, it should be clear that some casualties had to deal with more than one exit problem. It is my hope that in outlining the possibility that an “Exit Problem” actually exists, others will follow up and search drowning and rescue reports in their home countries for evidence to support or refute my hypothesis.

Lifesaving organizations have devoted little space in their manuals to exiting the water. They give advice to swimmers on how to stay afloat in fast and powerful water, such as to swim into a river current at 45° or to scull feet first. But, once the swimmers reach the riverbank, there has been little written on how to exit the water.

## Rivers

When water moves in one direction between banks or walls, such as in a river, the strength of the flow is strongest in the middle and weakest at the sides, where friction between the water and riverbank slows it down. This friction results in a spiral of water close to the bank called helical flow which pushes objects away from the river side into the main current in the middle of the river. When a person falls into a river with fast flowing water, they are quickly moved away from the safety of the bank into the main current. The following are several excerpts from reports that refer to this helical flow:

- A nonswimmer fell into the river . . . (and) was carried into the middle of the river by a strong current.
- The elderly man slipped and fell into the water at the beauty spot and was swept out into the river. (Appendix 1.1)

Away from the river’s edge, casualties are quickly swept downstream by the main current in the middle of the river:

- Both men were swept downstream toward the bridge.
- Due to fatigue and a strong current they were swept along toward the city bridge. (Appendix 1.2)

Having recovered from the initial shock of being in the river, a casualty may swim toward the perceived safety of the riverbank and find him- or herself struggling against helical flow:

- The rescuer reached the child and was heading back to shore when they encountered a strong current. He pushed the child across the current but was unable to cross himself and went under.
- The youth managed to get the girl to shore where two older sisters were standing, but he was swept downriver. (Appendix 1.1)

If a river is in flood, this adds to the exit problems as a doubling of water speed results in a quadrupling of water force (Ray, 1997, p. 14):

- A search resumed for the body of a teenage boy who drowned in a flooded river . . . Locals say that the river is extremely fast flowing.

- Even the strongest of swimmers would have difficulty in whitewater conditions after heavy rain. (Appendix 1.3)

An added feature of rivers in flood is that the fast flowing water can undercut the riverbank.

- Police said: “The water was very cold and moving violently. It erodes the riverbanks turning once-solid surfaces into danger zones.” (Appendix 1.3)

## Trapped

Sometimes casualties can find themselves trapped by the force of the water against or under a fixed object. Ray (1997) stated that “Bridges are somewhat of a paradox for rescuers . . . they are infamous for having boats pinned against them. This characteristic makes them prone to collect debris against the pilings, causing strainers that can entrap boats or swimmers” (p. 199).

### Trapped by Water Force

- Due to the strong current the man was quickly carried several hundred yards to a bridge where he was trapped by the force of the water. (Appendix 1.4)

### Trapped by In-Water Object

- A young man drowned in the river after apparently becoming trapped beneath a rock.
- One of the women told rescuers she “thought she was going to die” as she was trapped by tree roots underwater. (Appendix 1.4)



**Figure 1** – Floating debris at a river wall.

## Trapped by Steep Sides

Rivers flowing through urban areas, canals, quarries, harbors, and piers can have high steep sides. Persons swimming or floating in such bodies of water, having reached the water's edge, may find themselves trapped by the steep sides and have to deal with this factor.

- Someone had thrown a lifebuoy to her which she held close to the river wall but she was struggling as the water moved her along.
- Two officers jumped into the river fully clothed and brought the man to the bank. Because of the steep incline, they could not remove him from the water. (Appendix 1.5)



**Figure 2** – High, steep stone walls used to contain the River Liffey, Dublin.

## Ocean

### Ocean Currents

The United States Lifesaving Association estimates that rip currents “. . . are the primary source of distress in over 80% of swimmer rescues at surf beaches” (Brewster, 1995, p. 40). In the incidents referred to in this paper, I have chosen to exclude rip currents as a primary cause of the drowning. A swimmer may stay in the water for a long time and move from medium or weak outward currents to

strong ones. Alternatively, having safely swum earlier at a location a swimmer may return to the water during an unsafe period of the tide wrongly assuming that the conditions have not changed.

- The husband and wife were swimming off the beach when they got caught in a treacherous current and found it impossible to swim ashore.
- A woman drowned after being swept out to sea while swimming at a beach. (Appendix 2.1)

## Surf

When ocean water comes into contact with land it frequently does so as surf, and the water “. . . calm at one moment can quickly become rough and dangerous” (Brewster, 1995, p. 35).

- The second man jumped in to try and save his friend, but both drowned when they were unable to climb out due to the rough surf.
- The daughter made it to shore after the pair became weary battling 1.5 m waves, but when she looked back her father was gone. (Appendix 2.2)

## Waves and Rocks

The ocean does not only come in contact with land at beaches, but often does so at cliffs and other rocky places.

- We saw both the father and son close to the cliff. Their bodies were being tumbled around like a washing machine, hitting them into the rocks.”
- One managed to clamber on to some rocks but the heavy swell, which at times hit heights of 3 m (10 ft), prevented the other from getting on to the rocks. (Appendix 2.3)

## Silt and Mud

Mud and silt are found at still water sites and river banks where water flows slowly. Soil carried in suspension by fast moving water is deposited over many years and can be quite deep, trapping objects and individuals.

- I tried to get him out but kept getting stuck in the mud. One local man said that the silt close to the shore was very deep and “like quicksand.”
- While the water is usually calm, the lake bed close to shore is thought to be treacherous with deep quick sand like texture. (Appendix 3)

## Entangled

Swimmers can become trapped or entangled in water plants. Often the plants themselves do not pose a direct danger once a swimmer moves slowly through them. Tired swimmers or persons close to panic may be tipped over into actual panic on feeling hidden plants touch them (YMCA, 2001, p. 239).



**Figure 3** – Mud and debris in the River Liffey, Dublin, visible at low tide.

- Authorities say that they believe that he became entangled in weeds.
- His uncle said that the youth was a strong swimmer and seemed to get caught up in some reeds in the far side of the river and got dragged down straight away with the turbulence of the water. (Appendix 4)

## **Holding On**

Sometimes the best that a casualty can do to save themselves is to try to hold on to something that allows them to breathe long enough to be rescued. One of the early effects of cold shock injury is a loss of dexterity in the hands and a loss of grip strength (Tipton 2003). Comments from Irish police officers such as “it was extremely difficult to hold on to him due to the cold and strong currents” and “I was frozen to the bone and had convulsions of shivers” in rescue reports support this hypothesis (Avramidis, Stallman, & Moran, 2011).

### **Just Holding On**

In these rescue reports, the casualty successfully held on and was rescued.

- The teenagers managed to hold on to rocks until the emergency services arrived.
- The terrified boys were up to their waists in water and being moved downstream when they managed to cling on to a riverside wall. (Appendix 5)

## Unable to Hold On

Sometimes the casualty was unable to hold on and drowned;

- Tragically, he lost his grip on the slippery rocks and was swept away by the fast flowing water.
- He had climbed out of the water onto rocks. For a short time he held onto the rocks but another big wave came and knocked him into the water. (Appendix 5)

## Darkness

Between one fifth and one quarter of drownings occur at night or in low light situations (Eaton, 1990). Disorientation can be a problem for casualty and rescuer.

- People nearby heard the man calling and had to use their car headlights to locate and rescue him.
- They couldn't see him due to the dark and the distance between the riverbank and water and had great difficulty getting any response from him. (Appendix 6)

## Alcohol

The CDC (2012) says, "Among adolescents and adults, alcohol use is involved in up to 70% of deaths associated with water recreation." In these extracts, alcohol consumption adds to the disorientation from low light.

- At around 4 am, after a night out, he and a group of friends made their way back to their accommodation. He asked if they wanted to go swimming and all declined except one.
- He had been socializing and drinking in a local pub before he and a friend went for a swim at 3 am. (Appendix 7)

## Panic

Leach (2004) discussing how people respond in emergency situations says that "Approximately 75% of the population will be stunned and bewildered, showing impaired reasoning and sluggish thinking." In situations where no clear exit point is available or no clear survival strategy exists, swimmers in distress may drown before they figure out how to save themselves. Golden and Tipton (2002) state that panic occurs when individuals perceive themselves as trapped with no viable survival options (p.238).

- She came towards me and wrapped her arms around my shoulders. My arms were trapped, and we both sank to the bottom of the river.
- She was thrashing around. If she wasn't panicking, he thought he could have pulled her in. (Appendix 8)

## Swimmer

Between one half and two thirds of those aged over 4 years who drown accidentally are reported by police, family, or friends to be able to swim with over one half drowning within 3 m (10 feet) of safety (Home Office UK, 1977; Royal Life Saving Society UK, 2004). The majority of teen and adult drownings occur when individuals unexpectedly fall into open water (Royal Life Saving Australia, 2004; Royal Life Saving Society UK, 2011; CDC, 2012). In these extracts, two strong swimmers died and a third would have done so had she not been removed from the river by bystanders.

- A strong swimmer, the student was a member of the local water polo club . . . There was a strong current running at the time and when 80 yards from the pier he got into difficulty and disappeared.
- He went over and saw the woman who was swimming, but struggling to prevent the strong current sweeping her downstream.
- Having rescued two of the youths he himself got into difficulty and drowned. Spectators watched in horror as the father frantically attempted to return to shore. (Appendix 9)

## Solutions

“The Exit Problem” has long been recognized by our ancestors. Solutions or aids have been put in place to assist drowning casualties to exit the water. This extract from the Royal Life Saving Society (1947) illustrates one such action.

“On the night of 9th November 1946, a drowning took place in the heart of the City of Dublin when a gallant would-be rescuer lost his life in the presence of hundreds of citizens while attempting to save a woman . . . Fortunately a double drowning was averted by Nicholas O’Brien who arrived on the scene and without hesitation dived into the icy water . . . It should be mentioned that when O’Brien was bringing the woman to the side walls of the river he was greatly relieved to see on the nearest ladder a flickering light coming from a cycle lamp which an onlooker had suspended by aid of a piece of string. Only for this guide both of them might have been carried down the river and would have certainly been longer in the cold water. Subsequent to this drowning and as a result of O’Brien’s report to this Society representations were made to Dublin Corporation and Dublin Port and Docks and the walls were painted white in close proximity to each ladder so they can be discerned on even the darkest night.”

The practice of painting walls white behind ladders and steps continues to this day in Dublin and other Irish cities.

Port authorities in the City of Liverpool (United Kingdom) in Victorian times placed long heavy chains hanging down the steep dock walls with large rings every meter along a chain so that nonswimmer dock workers who fell into the water had something to hold on to initially and then to climb up and out onto the dock.



**Figure 4** –Wall behind a ladder in the River Liffey, Dublin, painted white to highlight an exit place.

Although the main docks were relocated many years ago, the chains still perform their lifesaving function for tourists visiting the historic site.

“The water in the docks can be up to 8 metres [ $\sim$ 26 ft] deep. Dock steps, grab chains, and ladders are located in the Central and South Docks and lifebuoys are located around the South Docks. Skippers should make themselves aware of the location of the safety equipment whilst sailing through the docks.” (Canal & River Trust 2012)

Some sound swimming solutions may appear to the public to go against common sense. One such solution is the Royal Life Saving Australia advice about swimming in a fast flowing river.

To get out of the current, angle ( $45^\circ$ ) into the current and swim so that you are pushed across to the edge . . . It must be stressed that the swimmer is not trying to swim against the current, but merely angling their body in that direction as the swimmer crosses the current (Royal Life Saving Australia, 2004, p.22).

Individuals need to learn how to scull feet first because in a fast flowing river they may need to avoid the nearest land point (e.g., steep side or the outside of a



**Figure 5** – Victorian grab chains in Liverpool Docks (UK) to enable persons to climb out of the water.

bend where current moves rapidly) and allow the water to take them further down-river where they can maneuver themselves across the water to a better exit place.

Modern technology permits the placing of solar-powered lights at certain locations to illuminate exit points, thereby giving swimmers a target to aim for. Research into police swimming rescues in Ireland established that, at night, flash lights held on land by police officers were crucial to the safe exit of officers in the water as officers swimming in the dark knew where they could exit the water (Connolly, 2007).

## Conclusion

The majority of those who die by drowning are reported by family members or friends to be able to swim. It is difficult to establish what is understood by terms such as ‘being able to swim’ or a ‘good swimmer.’ In the excerpts used in this paper, I assumed that casualties were not nonswimmers with one exception (the nonswimmer reported at the beginning showing that the casualty could not have maneuvered herself away from the riverbank and into the main current). What is clear is that casualties should exit the water as soon as possible as the longer they remain immersed the more susceptible they are to fatigue and cold shock injury, both which likely reduce grip strength. This goal of getting out of the water as quickly as possible holds true for rescuers as well as casualties as in many of the quoted reports rescuers also drowned.

Waterford City Fire Service regularly removes persons trapped in the mud along the banks of the tidal River Suir (Avramidis, Stallman, & Moran, 2011). Likewise

Dublin Fire Brigade removes over 100 persons annually from the tidal River Liffey (Avramidis & Stallman, 2010). In many cases, the person removed had managed to reach the river edge but was then unable to exit the water. Police reports contain statements such as “they had to wade waist deep in mud for a considerable distance before reaching the harbour wall” and “although his police colleagues were at the scene there was not a lot that could be done until the fire brigade arrived and lowered a ladder and rope” (Avramidis, Stallman, & Moran, 2011).

Leach (2004) and Golden and Tipton (2002) stress the need for casualties and rescuers to have some sort of action strategy or plan because a strategy or plan reduces the likelihood of panic or at least delays its onset. I believe awareness by lifesaving organizations that there could be an “Exit Problem” is a good starting place. Awareness should be followed by the allocation of more space to “The Exit Problem” in water safety and lifesaving training manuals. The painting of walls white, the illumination of river exit points at night to identify exit points, and the provision of exit aids such as ladders and knotted rope or grab chains at known drowning places could save lives that are otherwise lost.

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## Appendices

(R) = An official report

(N) = A newspaper report

### 1. River Currents

#### 1.1 Helical Flow

##### May 1999 Ireland (R)

The 17 year old girl, a nonswimmer, fell into the river when the bank gave way while she was walking along the riverbank. She was carried into the middle of the river by a strong current. It is assumed that air trapped inside her clothing kept her up because she managed to stay afloat for a while shouting for help.

##### August 2012 Ireland (N)

The elderly man slipped and fell into the water at the beauty spot and was swept out into the river. The water was cold and flowing strongly due to unseasonably heavy rain in the nearby mountains. The man's daughter dived into the river in a desperate attempt to save him and was swept away by the torrent also. Somehow she managed to reach her father and grab hold of him but the current was so strong that she was unable to bring him to the riverbank. The man's grandchildren watched the horrifying scene until the river moved father and daughter around a bend and out of sight. Despite her valiant efforts the daughter was unable to hold on to her father and he was swept downstream away from her. She managed to swim to the bank and hold on to a branch until some tourists, who had seen them in the river, reached her and helped her out of the water. Others ran along the riverbank hoping the man would be brought close to the shore where he could be rescued. He was swept five miles downstream where he was removed from the water by rescue services. Paramedics attempted to resuscitate him but he was declared dead on arrival at the local hospital.

##### June 1984 Ireland (N)

The man was enjoying a lunchtime walk by the river when he was struck by a trailer being towed by a car and knocked over the low wall and into the river. Immediately he was carried into the middle of the river by the fast flowing water. The car driver dived into the river fully clothed and swam to the man. The driver managed to tow the man to the grassy riverbank but could not leave the water. Passers-by and workers on the bridge saw the incident and used a rope to pull both men out of the river.

### **July 2012 USA (N)**

Authorities say a man drowned while trying to help a child. The man jumped into the river to help a man and two children who were in difficulty. The man and one child got out but the other child didn't. The rescuer reached the child and was heading back to shore when they encountered a strong current. He pushed the child across the current to safety but was unable to cross himself and went under. His body was recovered by firefighters.

### **June 2013 USA (N)**

Local media outlets report that the youth jumped into the river as his younger sister was being carried away by the swift current off an island in the river. The youth managed to get the girl to shore where two older sisters were standing, but he was swept downriver.

## **1.2 Main current**

### **September 2002 Ireland (N)**

Two young men had to be rescued from the river when they both got into difficulty after one of them attempted to save his friend, who had fallen in. Both men were swept downstream toward the bridge but a passer-by spotted them and notified the police who removed both men from the river with the assistance of two units of the fire brigade.

### **February 2008 Ireland (R)**

On arriving at the scene the police officer said that he observed two males struggling to stay afloat. He said he threw in a lifebuoy and urged them to stay afloat. The officer said it appeared as though they were trapped in a mud bank and had decided to swim to the pontoon but due to fatigue and a strong current they were swept along toward the city bridge.

At 2.20am two youths, both of whom had consumed a lot of alcohol, jumped into the river which was in flood and running a strong current. One youth was pulled out of the river quickly by a visitor but the other young man was in great difficulty. He had been holding on to ivy but let go and drifted into the center of the river. Attempts to reach him using a ladder failed and eventually he drifted down the river and under a bridge heading toward the bay. (He was rescued later by a garda swimming out to him.)

## 1.3 Rivers in flood and erosion of riverbanks

### August 2009 Ireland (N)

A search resumed for the body of a teenage boy who drowned in a flooded river when he was swept away by the water as he tried to rescue a dog. His father and another youth jumped into the river to save him and were rescued after they got into trouble in the water. Locals said that the river is extremely fast flowing at the entry point.

### October 2011 USA (N)

The man was hiking with family when he slipped on rocks and fell into the river and was swept away. His body was found the next day 7 miles from his entry point. Authorities said that “At the time it was white water conditions from heavy rain. Even the strongest of swimmers would have difficulty in the whitewater conditions after heavy rain.”

### June 2011 USA (N)

The boy was with his parents and younger brother at a holiday site just below the reservoir when he fell into the river. Police said: “The water was very cold and moving violently. It erodes the riverbanks turning once-solid surfaces into danger zones.” His mother jumped in to save him but had to be rescued about 100 yards away. “She got banged up pretty badly,” according to police who recovered the boy’s body 2 miles downriver.

## 1.4 Trapped

### December 2007 Ireland (N)

The river rescue service battled a strong current to rescue a man in the river. A spokesperson said that due to the strong current the man was quickly carried several hundred yards to a bridge where he was trapped by the force of the water. He was spotted by foot patrols and it was necessary for two crew members on lines to enter the water and support the man in the water until the rescue boat arrived. The man was removed from the river alive and immediately taken to hospital.

### September 2012 USA (N)

A young man drowned in the river after apparently becoming trapped beneath a rock. The death occurred not far from a 14 mile stretch of river that has been particularly deadly. He apparently entered the water and waded to the middle of the river where he became trapped.

**June 2011 USA**

Two women were knocked off their inner tubes and swept under a log in the river. They tried to avoid the log but could not because of the fast-moving river. One of the women told rescuers she “thought she was going to die” as she was trapped by the tree roots underwater. The other said she was trapped and swallowing water and frantically trying to grab the tree or branches until she finally popped out on the other side of the tree.

**1.5 Steep sides****August 2002 Ireland (R)**

The two men entered the river to rescue the woman once they realized that she could not help herself. Someone had thrown a lifebuoy to her which she had hold of close to the river wall but she was struggling as the water moved her along. Then she let go of the buoy and rolled face-down. One man jumped into the water and swam to her while the other climbed down a ladder and followed him. One held her across the chest with her face out of the water and the second her legs and together managed to remove her from the river. The woman survived the incident and was taken to hospital along with both rescuers who were given tetanus shots.

**September 2007 Ireland (R)**

It all happened in daylight when a lady noticed a man lying face downward in the river. She alerted the police and three officers responded. Two officers jumped into the river fully clothed and brought the man to the bank. Because of the steep incline they could not remove him from the water. The third officer had collected three men who were in the area at the time and all six managed to raise the unconscious man out of the river and onto the grass bank. The third officer checked for a pulse and finding none she performed CPR until the man showed signs of life. An ambulance removed the man to hospital where after medical treatment he was discharged. The man called into the police station to thank the officers saying that he had been walking along the river bank when he slipped on the grass and fell down the bank and into the water.

**June 2013 Ireland (N)**

The tragedy unfolded when the teenager got into trouble while swimming in the steep sided quarry. A friend ran to raise the alarm. The male rescuer responded and jumped into the quarry in a failed rescue attempt. Both bodies were recovered later that night.

## 2. Oceans

### 2.1 Strong ocean currents

#### August 2012 Ireland (R)

The husband and wife were swimming off the beach when they got caught in a treacherous current and found it impossible to swim ashore. Two young men saw what was happening and swam through the waves to the couple, helping them to stay on top of the water until the current dropped them at a safer cove further along the coast.

#### January 2007 UK (R)

The police officer dived into the freezing cold water of the harbor early in the morning to rescue the woman. He had to fight the current to swim to the woman, who was barely conscious, sinking beneath the surface and drifting out to sea. He said: "By the time I went into the sea she seemed to have been caught in a tidal flow and had been swept further away." He was able to bring her to shore and she made a full recovery after being treated for hypothermia.

#### August 2011 Ireland (R)

A woman drowned after being swept out to sea while swimming at a beach. The incident occurred at about 3pm. It is understood that a number of people tried to save the woman but the current was too strong and she was washed away. The woman's body was recovered by a navy inflatable boat some time later.

### 2.2 Surf

#### January 2013 Australia (N)

A woman hailed her husband as a hero after he died rescuing her from drowning while on holiday in Australia. They were fishing on some rocks when she slipped and fell into the ocean. At first he tried to use the fishing rod to reach her but she could not hold on so he jumped in to save her. After battling for an hour in the water the ocean calmed and she was washed to safety. She found her husband floating beside her. Rescuers spend an hour trying to resuscitate him and she was hospitalized for 3 days due to water in her lungs. She said: "The ocean just changed. A wave came and picked me up. There was nothing to grip on to. The waves were crashing. When it calmed I looked down and saw him. It was awful."

### **January 2013 USA**

Officials said that the two men were exploring a rocky coastal area when a wave slammed into one and pulled him into the water. The second man jumped in to try and save his friend but both drowned when they were unable to climb out due to the rough surf.

### **August 2010 Canada (N)**

A man drowned and his 15 year old daughter nearly drowned while swimming in the sea. The daughter made it to shore after the pair became weary battling 1.5 m waves but when she looked back her father was gone. A short time earlier that day a teenage girl overcome by waves and strong undertow was rescued by people on the beach when she was caught in an undertow.

## **2.3 Waves & Rocks**

### **April 2012 UK (N)**

A father died as he tried to save his son from drowning after waves washed them into the sea. A rescue boat arrived in time to save only the son. A crewman said “It was a high spring tide and the water was going right up to the rocks. We saw both the father and son close to the cliff. Their bodies were being tumbled around like a washing machine, hitting them into the rocks. The son was holding his father and both were in a lifebuoy. He had to make the hard decision to let go of him and swim to us. Just as he got to the boat, he went limp. I think another 30 seconds in the water and he may have died.

### **April 2013 Cayman Islands (R)**

The young man had jumped off the cliffs into the water after saying to friends that the jump looked like fun. Then they could hear him calling for help. He had climbed out of the water onto rocks. “For a short time, he held onto the rocks, but another big wave came and knocked him into the water. We told him to swim but he said he couldn’t because he was tired. We were shouting to him not to give up but on the fourth time he went down and he did not come back up,” she said. Another witness said that he was calm in the beginning but then began to shout until he started going under the water and didn’t come up.

### **September 2006 Ireland (R)**

The Marine Casualty Investigation Board investigated the death by drowning of a man who drowned off the coast after almost making it ashore following the sinking of his inshore fishing boat. His boat was swamped about 4 miles off the coast around 8am. Two men, wearing lifejackets, were thrown into the water and managed to cling to a lifebuoy for over an hour when they

decided to swim to shore. One managed to clamber on to some rocks but the heavy swell, which at times hit heights of three meters, prevented the other from getting on to the rocks. While attempting to do so he was hit by a strong wave which pulled him back out to sea. His companion was unable to help him and climbed a steep cliff to raise the alarm. Both the local lifeboat and cliff rescue service responded immediately and a body was found at 11.15am.

### **3. Silt & Mud**

#### **August 2009 Ireland (N)**

Two young men drowned when they went to rescue a party of five people whose boat overturned on the lake. The friend of one rescuer said that they were driving by when his friend told him to stop quickly. When they pulled up they saw six people floundering in the water. "They were all struggling to get in. My friend went to out to the guy who was struggling the most," he said. His friend went out two or three times to rescue others but the effort had taken its toll. "He had to let go of his lad because he was being pulled down. He was coming back in and you could see that he was just losing energy. I couldn't get out to him. It was silty water. You couldn't swim in it. I couldn't get out to him. He went down then and was down about five minutes, along with the other lad under the water. Five minutes, that's how long it took him to go down." His friend appeared to have become stuck in the reeds near the bank of the lake. "I tried to get out to him but kept getting stuck in the mud." One local man said that the silt close to the shore was very deep and "like quicksand," making it impossible to stand or swim through it. His father said that his son was a strong swimmer and had swum in the lake as a teenager." The boat overturned at the wrong end of the lake where there is thick treacherous mud." It was established later that in his final rescue attempt he was with the young man who had entered the lake to help with the rescue and gotten into difficulty himself. All five who were in the boat survived while the two rescuers drowned just 6 feet from safety.

#### **August 2007 Ireland (N)**

The middle-aged woman, known to be a strong swimmer, died after she got into difficulty while swimming in a lake. Local fishermen, on the lake at the time, saw her in difficulty attempting to get to shore. They hurried to her assistance but did not get to her in time. Fishermen said that the lake was popular with anglers but should not be considered a bathing lake as while the water is usually calm the lake bed close to shore is thought to be treacherous with deep quick sand like texture. Her body was recovered later that day.

## **December 2007 Ireland (N)**

A man had to be pulled from the mucky silt of the river last night after he toppled from a railing. Three fire units went to his rescue when he fell into the river at 6pm near the bridge. The man was sitting with a friend on the railing at the boardwalk when he fell in. He had some luck on his side because the tide was out and he did not end up in fast moving water. Instead he landed in 4 foot of muck and slime. He made a failed attempt to get out by climbing an old ladder on the river wall and grabbing onto supports under the boardwalk. When the fire units arrived they found him standing at the river wall with his feet embedded in silt. A safety rope was tossed to him. A ladder was lowered into the river and tied to the wall. One firefighter in a harness went down the ladder and guided the cold and shaken man to safety.

## **4. Entangled**

### **August 2010 USA (N)**

Weeds are being blamed for the young man's death. Authorities say that they believe that he became entangled in weeds as where his body was recovered there are lake weeds in water which is 8 feet deep. Some weeds are visible on the surface of the lake but most are underwater. The weeds are rooted in the lake bottom.

### **July 2007 Ireland (N)**

The teenager met with three friends at the bridge at around 1am when he decided to go for a swim alone. When he failed to emerge after a short while his friends called the police. The young man had just finished school and was about to begin an apprenticeship. His uncle said that the youth was a strong swimmer and "seemed to get caught up in some reeds in the far side of the river and got dragged down straight away with the turbulence of the water."

## **5. Holding On**

### **5.1 Casualty just holding on**

#### **December 2012 USA (N)**

A police officer jumped into the frigid waters of the harbor to rescue a woman. The officer said he barely had time to think before taking off his jacket, shoes and gun belt and jumping into the water as the woman screamed and clung to a floating dock. The woman said she fell off a bridge.

**June 2009 Ireland (N)**

Two teenagers had a lucky escape when they were unexpectedly washed downstream in strong currents while swimming in a river. The alarm was raised by friends and a rescue operation was launched by the police and fire brigade. The teenagers managed to hold on to rocks until the emergency services arrived. It is understood that they had been in the water for over an hour before they were taken to safety.

**April 2005 Ireland (R)**

Firemen rescued two young boys from a swollen river at the weekend. The boys were fishing and stood on an upturned supermarket trolley which sank under them and they were flung into the river. The terrified boys were up to their waists in water and being moved downstream when they managed to cling onto a riverside wall. They were spotted by passersby who phoned for help and encouraged the boys to hold on until help arrived. Police and the fire service arrived and with great difficulty a 35 foot ladder was used to reach the boys. Two fire fighters wearing lifejackets crawled down the ladder to the boys and managed to haul them to safety one at a time. The fire chief said that the boys were lucky that they had not been swept downstream as in the conditions it would have been much more difficult to rescue them.

**5.2 Unable to hold on****November 2006 Ireland (R)**

The young man was playing football with his teenage brother when the ball went into the river. The young man looked into the river when, according to his father, "He just slipped on the grass, slid down the bank, and fell into the raging river." His younger brother could only watch in horror as the young man shifted position to try and get a better grip and pull himself from the depth of about five feet of water. Tragically he lost his grip on the slippery rocks and was swept away by the fast flowing water. A search was made for his body.

**January 2013 Australia (N)**

A woman hailed her husband as a hero after he died rescuing her from drowning while on holiday in Australia. They were fishing on some rocks when she slipped and fell into the ocean. At first he tried to use the fishing rod to reach her but she could not hold on so he jumped in to save her. After battling for an hour in the water the ocean calmed and she was washed to safety. She found her husband floating beside her. Rescuers spend an hour trying to resuscitate him and she was hospitalized for 3 days due to water in her lungs. She said: "The ocean just changed. A wave came and picked me up. There was nothing to grip

on to. The waves were crashing. When it calmed I looked down and saw him. It was awful.”

### **April 2013 Cayman Islands (R)**

The young man had jumped off the cliffs into the water after saying to friends that the jump looked like fun. Then they could hear him calling for help. He had climbed out of the water onto rocks. “For a short time, he held onto the rocks, but another big wave came and knocked him into the water. We told him to swim but he said he couldn’t because he was tired. We were shouting to him not to give up but on the fourth time he went down and he did not come back up,” she said. Another witness said that he was calm in the beginning but then began to shout until he started going under the water and didn’t come up.

## **6. Darkness**

### **August 2007 Ireland (N)**

Concern has been raised about the lack of public lighting at the harbor after a tourist fell into the lake there Sunday night. The elderly tourist was walking along the pier where boats are moored when he slipped and fell into the lake. People nearby heard the man calling and had to use their car headlights to locate and rescue him.

### **August 2007 Ireland (N)**

Two firemen performed a brave rescue of a student who had fallen into the river at 10pm. It is understood that a group of students were drinking in the area when the girl fell into the water. She was drifting out into the estuary and while the flow was not great at the time the darkness made conditions very difficult for the firemen. Two firemen in full water rescue gear entered the river in harnesses and swam to the girl who was removed and taken to hospital. A second student had begun to enter the water in a rescue attempt and was stopped by the firemen.

## **7. Alcohol**

### **August 2007 Ireland (R)**

The coroner described the death of the 19 year old man as “A very sad and tragic ending to a week-end away.” A friend gave evidence at the inquest that at around 4am, after a night out, he and a group of friends made their way back to their accommodation. His friend asked if they wanted to go swimming and all declined except for one. “He started running on the beach and taking off his clothes as he ran. I decided to join the two of them and stripped off. He

was getting into the water as we were getting our clothes off. We tried to catch up with him. When we were in the water and it reached waist high we started calling him back as it was very dark but we lost sight of him. We were worried about him and kept calling his name.” They left the water and met a girl who called the lifeguards. A search was launched and the young man’s body was found at 7:15pm by a man walking the shore. A pathologist stated that death was due to asphyxia secondary to drowning. The verdict was death by misadventure.

### **August 2007 Ireland (R)**

A verdict of death by misadventure was recorded at the inquest of a teenager who drowned in the sea after taking a cocktail of drink and drugs while out drinking with some friends. Friends said that he had been unable to walk and they had left him resting on some steps near the quayside. Two tourists found his body face down in mud the following morning and called the police. An autopsy revealed that he had drowned.

### **August 2007 Ireland (N)**

The man, who is not native Irish, has been missing for 3 days since he and a friend went for a night swim in the river. He had been socialising and drinking in a local pub before he and a friend went for a swim at 3am. They became separated in the water and when the missing man did not emerge from the river his friend assumed that he had already returned home. The man’s clothes were found on the riverbank the next morning and a search was launched. A police spokesman said that the river was known to be “treacherous with strong currents.”

## **8. Panic**

### **May 1999 Ireland (R)**

The man (who was not a trained lifesaver) seeing no rescue aids nearby, decided to make a swimming rescue so he removed some of his clothing and swam toward the girl. He “found it difficult to swim against the (river) current”. The girl was now quiet in the middle of the river. Reaching her he caught her by the foot and found that “she came towards me and wrapped her arms around my shoulders. My arms were trapped and we both sank to the bottom of the river.” Unable to free his arms he pushed off the bottom with his feet toward the surface where he managed to take a breath of air before they sank down to the bottom again. Six or seven times with his arms still trapped he managed to push both of them off the bottom and move toward the riverbank. Eventually he was able to stand up, break her grip and pull her toward the bank. He managed to get her out of the water on to the riverbank before climbing out himself.

### **October 2011 Ireland (R)**

The inquest concluded that the woman had died as the result of accidental drowning when she slipped into the canal. Her husband stated that he and his wife were chatting as they walked along the canal bank. His wife bent down, lost her footing and slipped into the canal. He grabbed her coat and was pulled into the water with her. Both of them were nonswimmers. He found that he was standing in chest high water and his wife was a few feet further out. "She was thrashing around," he said, adding that if she wasn't panicking he thought he could have pulled her in. His wife "seemed to twist" in the water he said and he lost hold of her jacket. "I just couldn't reach her," he said. He climbed out of the water and looked for rope in his van unsuccessfully before running to a nearby house for help. The woman who answered the door called her husband and both men ran back to the canal where the man jumped into the water, swam to the woman and brought her to the side. The man was a police officer and he performed CPR on her while awaiting the arrival of an ambulance. The woman was pronounced dead in the hospital.

## **9. Swimmer**

### **August 2007 Ireland (N)**

A strong swimmer, the student was a member of the local water polo club. He went for a midmorning bathe in the sea. He entered the water and swam across to the other side of the bay where he rested before making the return journey. There was a strong current running at the time and when 80 yards from the pier he got into difficulty and disappeared. His body was recovered about 3 hr later.

### **November 2002 Ireland (N)**

The young man had just arrived at the disco to collect his brother when he noticed people looking into the river which was in flood due to heavy rainfall. He went over and saw the woman who was swimming but struggling to prevent the strong current sweeping her downstream. He ran across the bridge and running downstream jumped over the railing onto the bank which was covered with several inches of water. He saw that the woman had lost her struggle and was now face down in the water. Just as he was about to enter the river the water moved her body close to him and he managed to grab her clothing and pull her to the side. He dragged her onto the water logged riverbank and saw that she was still breathing although unconscious. Others assisted to lift her over the railing where police had organized an ambulance which took her to hospital. She was released later unharmed.

**May 2013 Ireland (N)**

A brave father drowned while rescuing his son and two other youths who got into difficulty while swimming in a harbor. The father dived into the water when strong currents started to sweep one of the three teenagers out to sea. Having rescued two of the youths he himself got into difficulty and drowned. Spectators watched in horror as the father frantically attempted to return to shore.