

# Smart Beach Project

Summer 2025 Visitor Engagement Survey (September, 2025)

Report Prepared by:



In collaboration with:



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# Executive Summary

The Smart Beach survey was designed with two complementary goals: to understand beachgoer behaviour in Saugeen Shores and to guide the development of a potential beach safety application. Specific goals included identifying the factors that influence trip planning and water-entry decisions, documenting swimming ability and hazard awareness, and capturing public preferences for digital safety tools and features.

## Community and Visitor Profile

- A **strong local base** supports beach activity year-round. About two-thirds of respondents live in Saugeen Shores or neighbouring Bruce and Grey County communities, showing that the beaches are a core amenity for residents.
- A **regional visitor stream** adds to demand. Roughly one-third of participants provided postal codes from the wider Southwestern Ontario corridor, including Waterloo Region, the GTHA, and the London-Windsor area. This confirms the importance of Saugeen Shores as both a local asset and a regional summer destination.
- **Age and household diversity** shape beach use. The survey captured responses across all adult age groups, with a majority of middle-aged and older adults but a meaningful presence of families with children and younger adults.

## Patterns of Beach Use

- **Frequent visits** are the norm. Most respondents visit the beach more than four times per year and almost two thirds visit ten times a year or more, indicating that beach recreation is a routine activity rather than an occasional outing.
- **Short-notice planning** dominates. Nearly two-thirds decide to visit the beach either the night before or on the same day, which underscores the value of real-time weather and lake updates.
- **Day trips prevail but overnight stays remain significant.** Just over half rarely stay overnight, usually because they live nearby, yet more than one-third usually or always spend at least one night.

## Influence of Environmental Conditions

- **Weather and lake conditions drive decisions.** Rain and air temperature are the most important factors for both deciding to go to the beach and entering the water. Water temperature, wave height, and wind speed followed closely.
- **Onsite observations matter.** Many respondents decide whether to swim after arriving, basing their choice on real-time conditions such as wind shifts, wave action, or posted warnings.

- **Onsite conditions are most important.** Respondents rely twice as heavily on personal assessments of onsite conditions over forecasts when deciding to enter the water.

## Safety and Risk Awareness

- **Regular water entry with varied swimming ability.** Most respondents enter the water on nearly every visit, but swimming skills range from non-swimmer to expert. Nearly half identify as intermediate swimmers and a quarter as advanced or expert.
- **Exposure to hazards is common.** Large waves, strong currents, rip currents, and underwater debris are frequently observed. More than one-quarter of respondents reported personal or second-hand near-drowning experiences, highlighting the importance of hazard alerts and rescue equipment.
- **Limited safety infrastructure visibility.** Safety infrastructure was reported at rates of 50 percent or less; while these features are known to exist, the gap between actual and perceived availability suggests a need for further investigation and improved visibility.

## Digital Habits and App Interest

- **Heavy use of mainstream weather apps.** Two-thirds of respondents check marine or beach forecasts on mobile applications, with The Weather Network the clear favourite. In contrast, more than half never check lake-specific forecasts, and those who do rely on a patchwork of specialized sites.
- **Moderate but meaningful demand for a beach-safety app.** About half of respondents said they are likely or very likely to download a dedicated application.
- **Desired features are consistent and practical.** Top requests include real-time hazard warnings, detailed water-quality updates, one-week forecasts, parking and access information, indicators of crowding, and facility maps.

## Next Steps

These insights directly guide the next phase of the Smart Beach program. Application development should focus on real-time weather, lake, and water-quality data, integrate hazard alerts, and present clear regulatory and accessibility information. Features should align with current digital habits and, where possible, integrate with popular services such as The Weather Network to encourage adoption. Continued engagement with residents and regional visitors will help refine the design and ensure that the application reflects actual beachgoer behaviour and safety needs, strengthening the overall Smart Beach initiative along the Lake Huron shoreline.

# Introduction

## Background and Purpose of the Smart Beach Survey

The Smart Beach project is a three-year initiative originally administered by the Municipal Innovation Council (MIC) to improve public safety on Lake Huron beaches through advanced environmental monitoring and predictive analytics. MIC has since ceased operations, and the project is now managed as a collaboration between the University of Waterloo, Georgian College, and municipal partners.

In 2024 the research team deployed a Real-time Aquatic Ecosystem Observation Network (RAEON) buoy off Kincardine's Station Beach to capture continuous data on wave conditions, currents, and other offshore metrics. In 2025 the buoy was repositioned off the Saugeen Shores coastline to expand data collection and assess conditions at a second high-traffic location.

This survey, conducted on Saugeen Shores beaches and within the wider Saugeen Shores community during the summer of 2025, is a key component of the larger Smart Beach project. The overall study integrates offshore buoy measurements with publicly available Environment Canada and NOAA datasets to determine whether inshore water movement such as wave height, direction, and rip current formation and drowning incidents can be predicted from offshore buoy and weather data. Machine learning models built from these datasets will support a real-time beach safety information system designed to provide timely warnings and decision support for beachgoers.

By collecting detailed information on public beach use patterns, trip planning habits, and perceptions of water safety, the Smart Beach Survey provides the human behaviour context needed to complement the physical buoy and weather data. These combined findings will guide the creation of an accessible, evidence-based beach safety application aimed at reducing risk and improving visitor safety along the Lake Huron shoreline.

## Intended Use of Findings

The results of the Smart Beach Survey will be used to inform the development of a comprehensive beach safety application that delivers real-time information to the public. Insights from the survey will help the research team:

- Guide app features and design by identifying the most valuable safety information and decision-support tools for beachgoers.

- Understand visitor motivations and planning behaviours including when people plan their beach trips, the factors that influence their decisions to enter the water, and the conditions they consider important.
- Identify differences across demographic segments so the final application can address the specific needs of varied age groups, genders, and cultural backgrounds.

These findings provide the human-behaviour context needed to complement buoy and weather data, ensuring that the beach safety application is evidence-based, user-focused, and effective in reducing risk for all visitors to the Saugeen Shores area and beyond.

## Methodology

### Survey Design and Question Themes

The Smart Beach Survey was designed to capture both behavioural and perceptual data relevant to beach safety in Saugeen Shores. It was administered online through SurveyMonkey and included a mix of multiple-choice, Likert-scale, and open-ended questions. The structure ensured full anonymity while allowing analysis of patterns across key demographic groups. The survey took approximately 10-15 minutes to complete and covered the following major themes:

- **Beach Visitation Patterns:** Questions addressed how often participants visit beaches, which specific Saugeen Shores and other Southwestern Ontario beaches they frequent, whether they stay overnight, and how far in advance they plan their trips.
- **Trip Planning and Decision Factors:** Respondents rated the importance of forecast variables such as air and water temperature, wind speed and direction, wave height and direction, and UV index when deciding whether to visit the beach.
- **Water Entry and Safety Behaviour:** Items examined how often participants or their companions enter the water, what influences their decision to swim (for example weather forecasts, onsite conditions, posted warnings, and presence of lifeguards), and which hazards or safety measures they have observed.
- **Weather and Lake Forecast Practices:** Questions explored how and where beachgoers check weather and lake conditions, including preferred mobile applications, websites, and other information sources.
- **Interest in a Beach Safety Application:** Participants indicated their likelihood of downloading a dedicated beach safety app, identified preferred features, and stated whether they would favour an integrated or standalone format.

- **Demographic Information:** To enable analysis by population segment, the survey collected the first three digits of the postal code, age group, gender identity, country of birth, and length of time in Canada.

This design provided a comprehensive dataset linking beach use behaviours, safety perceptions, and environmental awareness to demographic factors, supporting the project's goal of developing a user-informed beach safety application. The full survey instrument can be found in the Appendix.

## Sampling Approach and Participant Recruitment

The Smart Beach Survey used a mixed random and convenience sampling strategy to reach beachgoers and community members across Saugeen Shores during the summer of 2025. Because participation was voluntary and open to all residents and visitors, the approach combined targeted outreach with opportunities for any interested individual to respond.

### Recruitment Methods

- **Onsite Posters:** Posters were placed at beach facilities, including community boards and bathrooms, inviting beach users to complete the survey by scanning a QR code or following the printed web link.
- **Social Media Promotion:** The Town of Saugeen Shores promoted the survey on its official social media channels, encouraging residents and visitors to participate.
- **FlashVote Pulse Survey:** A short 48-hour FlashVote poll was distributed to members of the existing Saugeen Shores FlashVote panel, which consists of community members who have pre-registered to complete local surveys. Respondents who wished to provide more detailed input were directed to the full Smart Beach Survey. (Results of the FlashVote poll are provided in a separate document attached to this report.)
- **Beach Canvassing:** A University of Waterloo student canvassed Saugeen Shores beaches and handed out business cards with the survey link. The original plan was to canvass on both Saturday and Sunday of every July and August weekend; however, this schedule was not fully implemented.
- **Business Card Distribution:** Business cards containing the survey link were handed out directly by the student canvasser and, on request, by beach maintenance staff to interested beachgoers.

The blend of random and convenience sampling methods provided broad community coverage while acknowledging that participation ultimately depended on self-selection.

## Data Collection Period and Platform

### Collection Period

The Smart Beach Survey was open from June 16, 2025 through September 21, 2025, covering the full 2025 summer season.

### Survey Platform and Data Handling

The survey was hosted on SurveyMonkey, a secure third-party platform that complies with recognized privacy and data protection standards, including encryption in transit and at rest. Access to the live survey and collected responses was restricted through role-based permissions and secure logins.

All responses were anonymous and analyzed in aggregate form only. No personally identifying information was collected beyond optional postal code prefixes and demographic categories.

When data analysis is complete, the raw dataset will be securely deleted from SurveyMonkey servers, consistent with the platform's data retention policies and the University of Waterloo and Georgian College research ethics requirements.

Throughout the project, only the Georgian College and University of Waterloo research teams had direct access to the raw data stored on SurveyMonkey. This ensured that all handling of survey responses met institutional research ethics standards and maintained strict confidentiality.

## Response Rate and Confidence

### Response Rate and Population Context

The Smart Beach Survey received 279 responses. According to the 2021 Census, the permanent population of Saugeen Shores was 15,908 (Statistics Canada, 2022). This figure provides the baseline population for calculating response rates and confidence levels in this report.

It is important to note that the population of Saugeen Shores increases significantly in the summer months due to seasonal residents and visitors. Municipal planning documents estimate an additional 7,500 seasonal residents, which brings the total population over 20,000 during peak periods (Town of Saugeen Shores, 2016). However, this seasonal swell figure is uncertain and varies from year to year. For that reason, all confidence and margin of error calculations in this report are based on the 2021 Census permanent population of 15,908.

## Confidence Level and Margin of Error

Using standard survey-sampling formulas and assuming the most conservative variability (a 50/50 split in opinions), this produces a margin of error of about  $\pm 5.7$  percentage points at a 95 percent confidence level. Full calculations can be found in the Appendix.

In practical terms, this means that if the survey were repeated many times using the same method, we would expect the true result for the entire Saugeen Shores population to fall within roughly five to six percentage points of our reported percentages in 95 out of 100 cases. For example, if 60 percent of respondents said they usually check the lake forecast, the actual proportion across all residents is likely between about 54 and 66 percent.

Response rates were somewhat lower than expected, resulting in an effective confidence that is slightly below the ideal 95 percent. The results are still valuable for identifying trends and guiding the beach safety application, provided that readers keep the  $\pm 5.7$  percent margin in mind when interpreting percentages. It is also important to consider that not every question was answered by all respondents; the n count is displayed on each graph, and lower n values reduce how confidently the findings for that specific question can be generalized to the broader population.

## Limitations

- **Response rate and confidence level:** The survey achieved 279 completed responses, short of the roughly 375 responses needed to reach a 95 % confidence level with a  $\pm 5$  % margin of error. This lower sample size results in a slightly wider margin of error (about  $\pm 5.7$  %) and a confidence level below the ideal benchmark. The original plan to canvass beaches every Saturday and Sunday throughout July and August was not fully carried out, which likely contributed to the shortfall. Full calculations can be found in the Appendix.
- **Response quality:** A total of 68 responses were flagged as poor quality because they were largely incomplete or showed signs of “speeding,” where participants moved through the survey unusually quickly. These responses were retained because the partial data they provided were still valuable.
- **Voluntary participation and lack of incentives:** Because the survey was voluntary and offered no financial or material incentive, participation depended on personal interest. This can introduce self-selection bias and lower overall response rates.
- **Potential duplicate responses:** The open, anonymous format meant there was no technical barrier to someone submitting multiple responses. While duplicates are unlikely given the absence of incentives, the possibility cannot be entirely ruled out.

## Data Cleaning and Analysis Methods

Survey responses were exported directly from SurveyMonkey into Microsoft Excel for cleaning and preliminary analysis. Data cleaning steps included:

- Removal of system artifacts such as empty rows created by aborted sessions.
- Standardization of response formats to ensure consistent coding of multiple-choice and open-text fields.
- Identification of partial and poor-quality responses, including those flagged for speeding or containing large sections of missing data. These records were retained so that any completed sections could still contribute to the analysis.

Once cleaned, the dataset was analyzed in Excel using descriptive statistics, pivot tables, and cross-tabulations to identify patterns in beach visitation, safety behaviour, and demographic differences. Open-ended responses were reviewed and grouped into broad thematic categories to capture recurring ideas and concerns.

All analysis was conducted on anonymized data only; no individual-level identifiers were collected or used at any stage.

## Metrics and Graph Conventions

This report uses a consistent set of calculated metrics and standardized graph labels to help readers interpret the data.

### Importance Score

An importance score was developed to show how strongly respondents collectively rated the significance of different factors. Participants ranked each item using four categories: Very important, Somewhat important, Somewhat unimportant, or Very unimportant. Each category was assigned a numerical weight (Very important = 4, Somewhat important = 3, Somewhat unimportant = 2, Very unimportant = 1). For each factor, the number of responses in each category was multiplied by its weight and summed to create a raw score. This raw score was then divided by the maximum possible score (4 multiplied by the total number of responses for that factor) to produce an importance score between 0 and 1. Higher values indicate a stronger collective sense of importance. The same calculation method is used throughout this report whenever importance scores are presented, and the full data tables are included in the Appendix.

### n and r Values in Graphs

Graphs that display results from “select all that apply” questions show both n and r values.

- n represents the number of respondents who answered the question.
- r represents the total number of individual responses selected across all options.

Because respondents could choose more than one answer, r is often larger than n. All percentages shown are calculated using n (the number of respondents) as the denominator. For example, if 20 percent is reported for a particular option, it means that 20 percent of respondents selected that option, not 20 percent of the total responses. This approach ensures that percentages reflect the share of people who chose each option, even when multiple selections were possible.

## Respondent Profile

The survey attracted a broad and varied group of participants whose backgrounds help to frame the findings that follow. Respondents represent a strong local presence from Saugeen Shores and neighbouring communities, complemented by visitors from across Southwestern Ontario and beyond. Age and gender data show that most participants are middle-aged or older and that women make up nearly two-thirds of the sample. While the vast majority were born in Canada, a small but diverse group of international respondents contributed perspectives from multiple world regions, and most of these individuals have lived in Canada for many years. Together, these characteristics provide important context for understanding the beach-use patterns, safety perceptions, and planning behaviours described in the sections that follow.

## Geographic Distribution

Respondents were asked to provide the first three digits of their postal code. A total of 179 usable postal code entries were reported. The distribution shows that the vast majority of respondents live in or near Bruce County and neighbouring areas of Southwestern Ontario, with a small number from other parts of Ontario and a few from farther afield.

### Key regional patterns

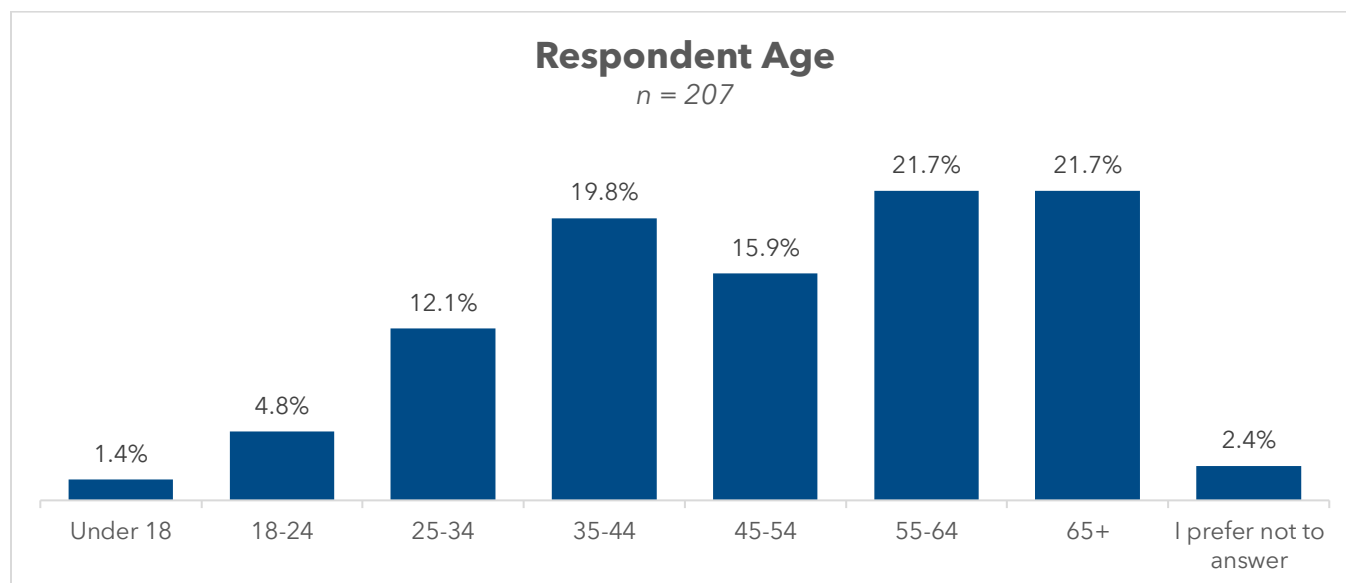
- **Bruce Peninsula and Lake Huron coast:** The single largest cluster is N0H, with 110 respondents. This code covers Saugeen Shores, Kincardine, and nearby communities along the Lake Huron shoreline, confirming that most participants are local residents or seasonal visitors to the immediate Smart Beach study area.
- **Nearby Grey, Huron, and Perth Counties:** Additional concentrations appear in N0G (9), N2Z (5), and smaller counts in surrounding Grey and Huron codes (e.g., N4K, N7A). These represent neighbouring inland towns that regularly access Saugeen Shores beaches.

- **Waterloo Region and Guelph:** Several respondents come from the N2 series (N2L, N2V, N2G, etc.) and Guelph area codes (N1G, N1H), reflecting visitors from the Kitchener-Waterloo-Cambridge corridor.
- **Greater Toronto and Hamilton Area (GTHA):** Scattered responses originate from the L-series (e.g., L0R, L6R, L7M) and M-series Toronto codes (M4C, M5T, M6R).
- **Other Ontario Locations:** Smaller numbers appear from Windsor/Essex (N8A, N9J), Sarnia (N7S), London/Stratford (N5A, N5R, N5W), and a few Eastern Ontario or Ottawa area codes (K1M).

## Age

The survey captured input from a broad range of age groups, providing a well-rounded view of beach use and safety perceptions across generations. A total of 207 participants reported their age. Representation spans from youth to older adults, with only a small proportion of respondents under 25 and a steadily increasing share in each older bracket.

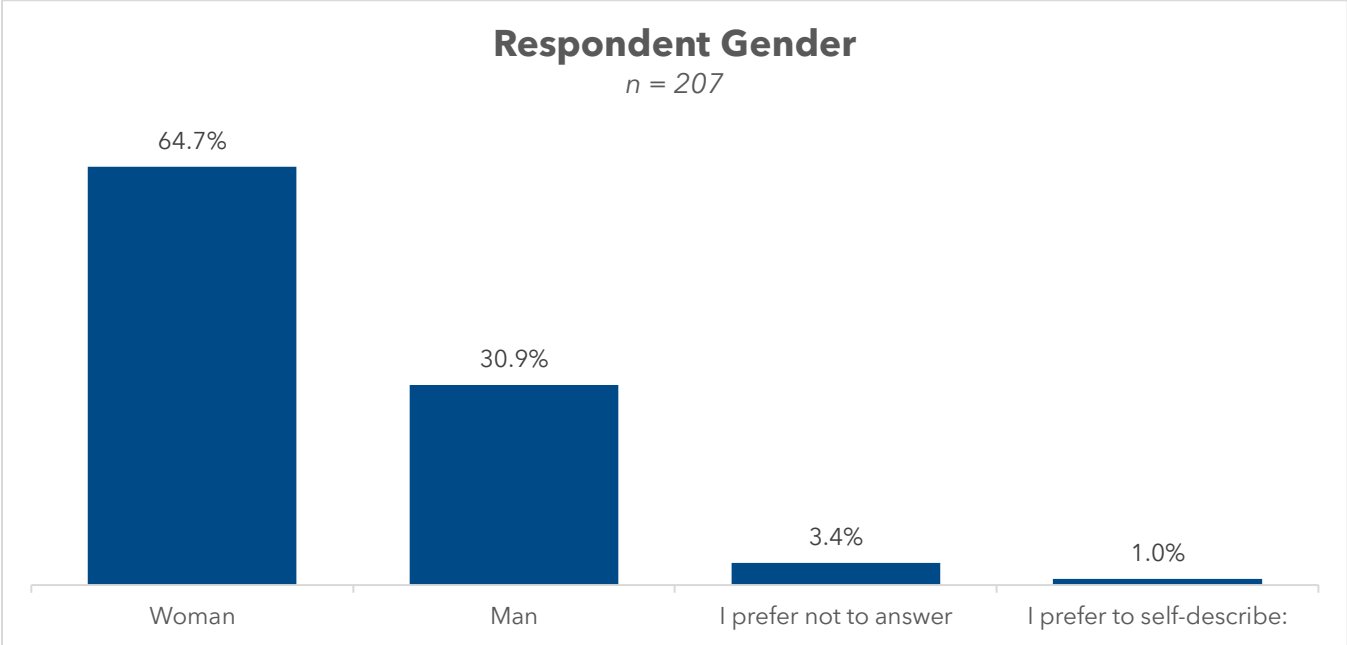
The majority of participants are middle-aged or older, reflecting the demographic profile of Saugeen Shores residents and the area’s popularity among retirees and long-term homeowners. While younger adults and teenagers are present in the data, their numbers are comparatively lower.



## Gender

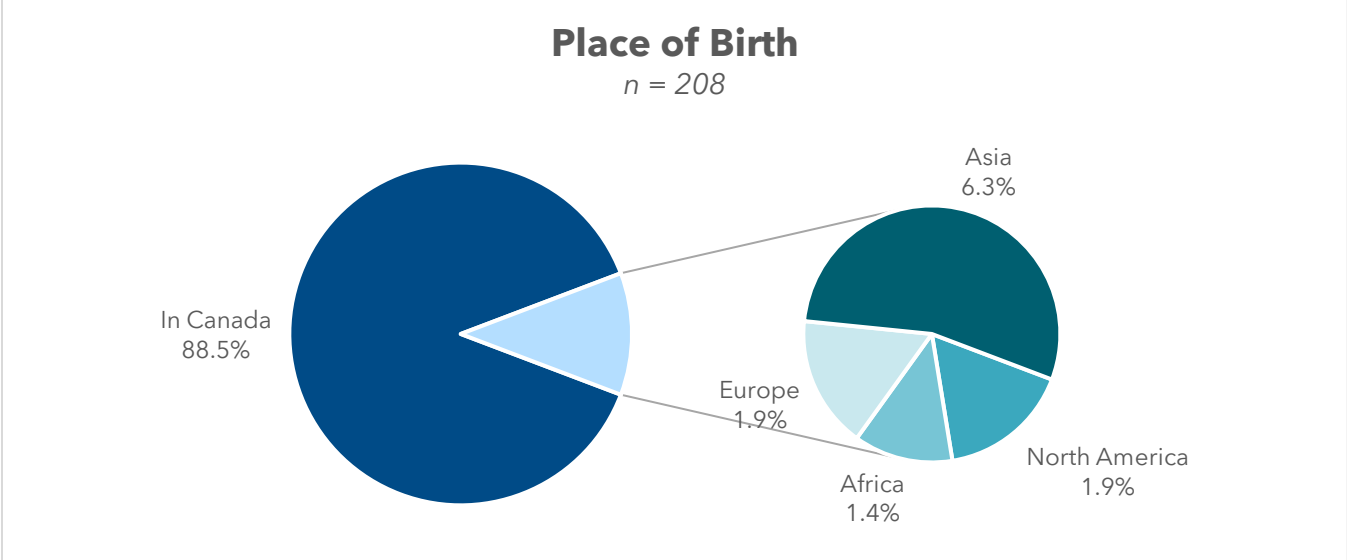
A total of 207 participants reported their gender. The majority identified as women (64.7 %), while 30.9 % identified as men. Smaller proportions selected “I prefer not to answer” (3.4 %) or “I prefer to self-describe” (1.0 %).

No respondents selected the available options for Non-binary, Two-Spirit, Transgender, or Genderqueer, so those categories are not represented in the chart.

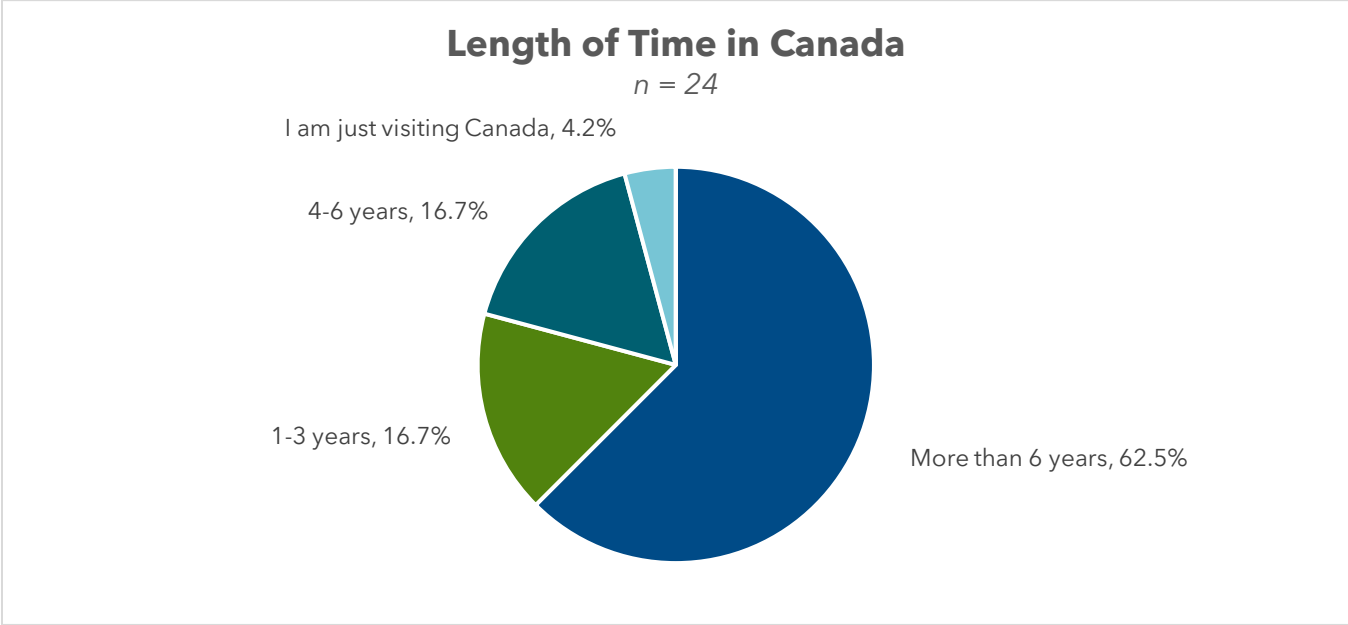


### Place of Birth and Time in Canada

Survey participants were overwhelmingly Canadian-born, with 88.5 percent indicating that they were born in Canada. Among those born outside the country, responses were spread across several regions: Asia (6.3 percent) accounted for the largest share, followed by Europe (1.9 percent), North America outside Canada (1.9 percent), and Africa (1.4 percent).



Respondents who were not born in Canada were asked how long they had been in Canada. Among the 24 individuals who answered, nearly two-thirds (62.5 percent) reported living in Canada for more than six years, indicating a well-established group of long-term residents. Smaller proportions have been in Canada for one to three years (16.7 percent) or four to six years (16.7 percent), while 4.2 percent indicated that they were just visiting.



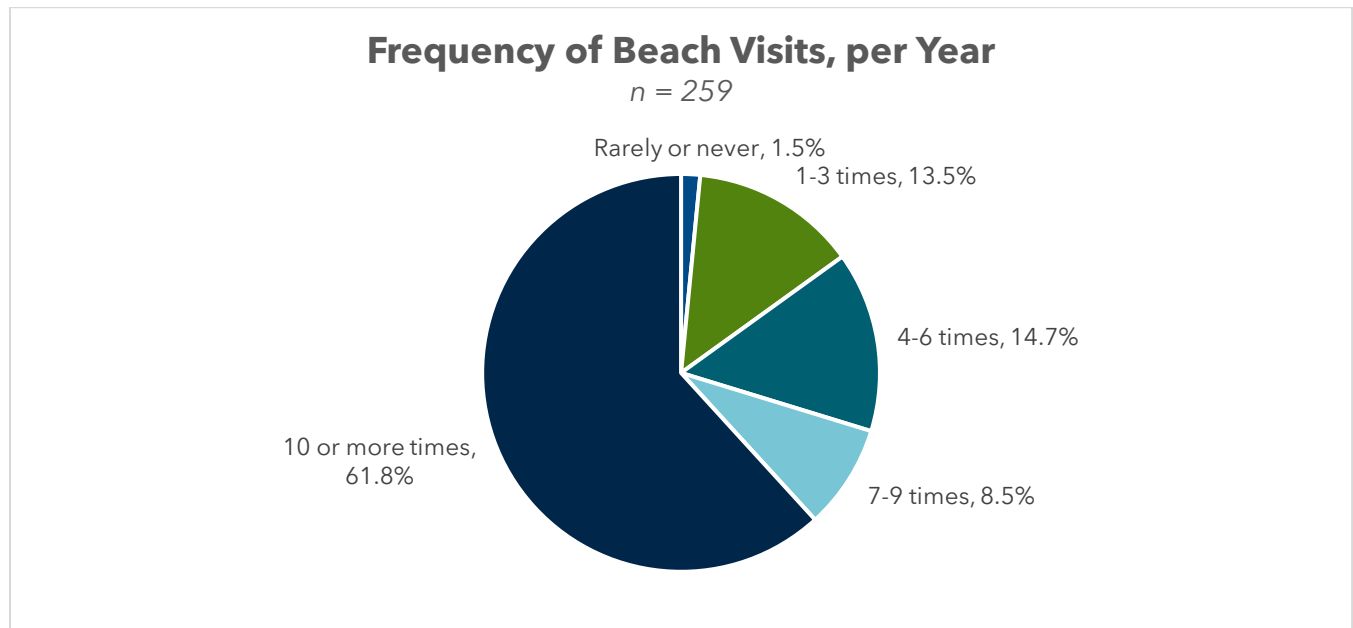
## Beach Visitation Patterns

The survey results provide a detailed look at how often people visit local beaches, where they travel from, and whether they stay overnight or return home the same day. Together these findings show that beach use is both frequent and wide-ranging, with many respondents visiting multiple sites each year and a mix of day-trippers and overnight guests shaping demand for services. The following sections describe how often participants visit, which beaches they choose across southwestern Ontario, and the different approaches they take to planning and length of stay.

### Frequency of Beach Visits

Survey results show that beachgoing is a regular activity for many respondents. More than half of respondents reported visiting the beach at least four times per year, with 14.7 percent going 4-6 times and another 8.5 percent visiting 7-9 times. A significant proportion are even more frequent visitors, indicating that beach use is a routine part of life for many residents and repeat visitors to Saugeen Shores. Less frequent attendance is also represented, with 13.5 percent visiting only 1-3 times annually and a very small group (1.5 percent) saying they rarely

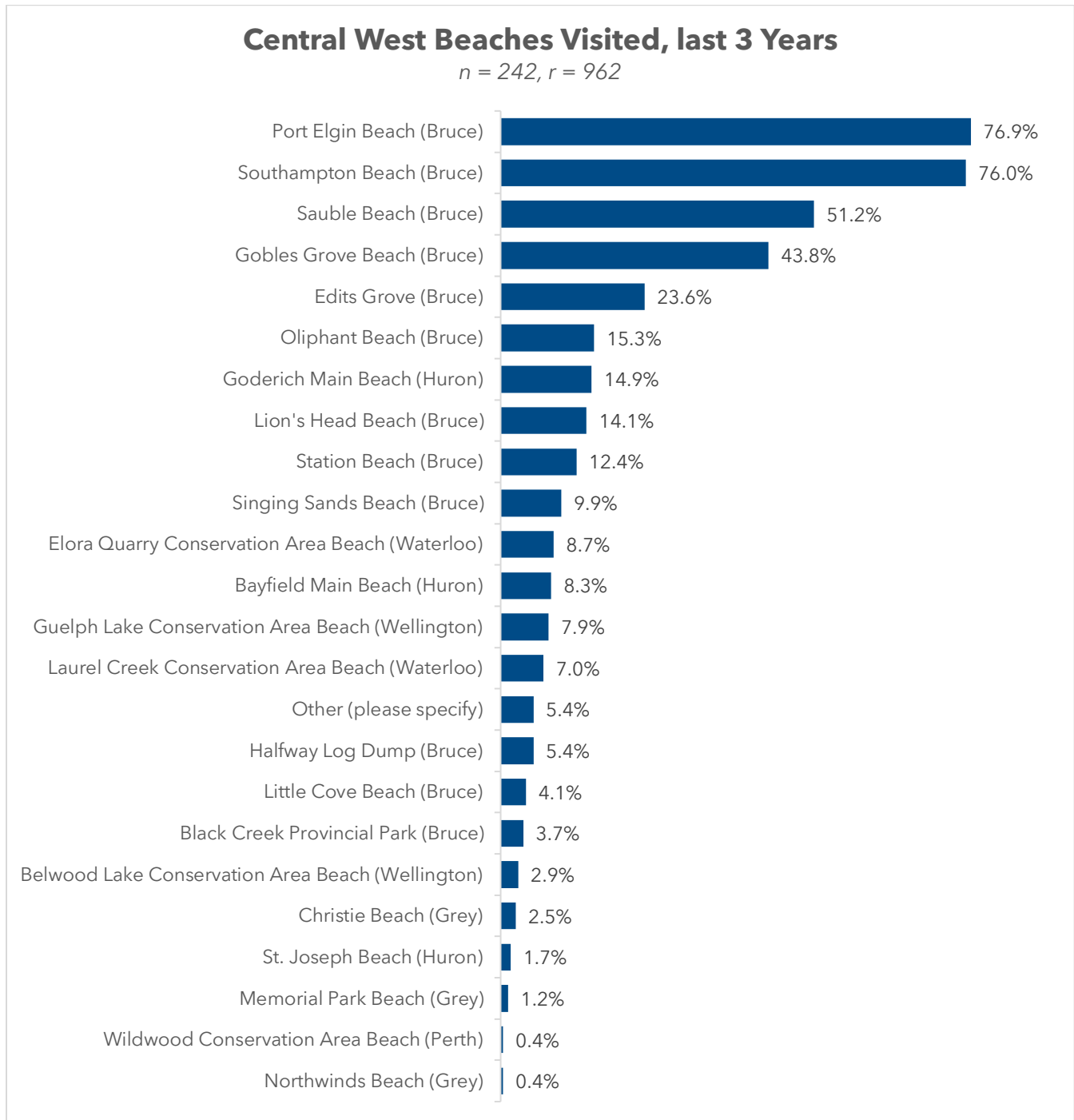
or never go. These patterns highlight the importance of providing accurate safety information throughout the summer season, as many respondents engage with local beaches multiple times each year.



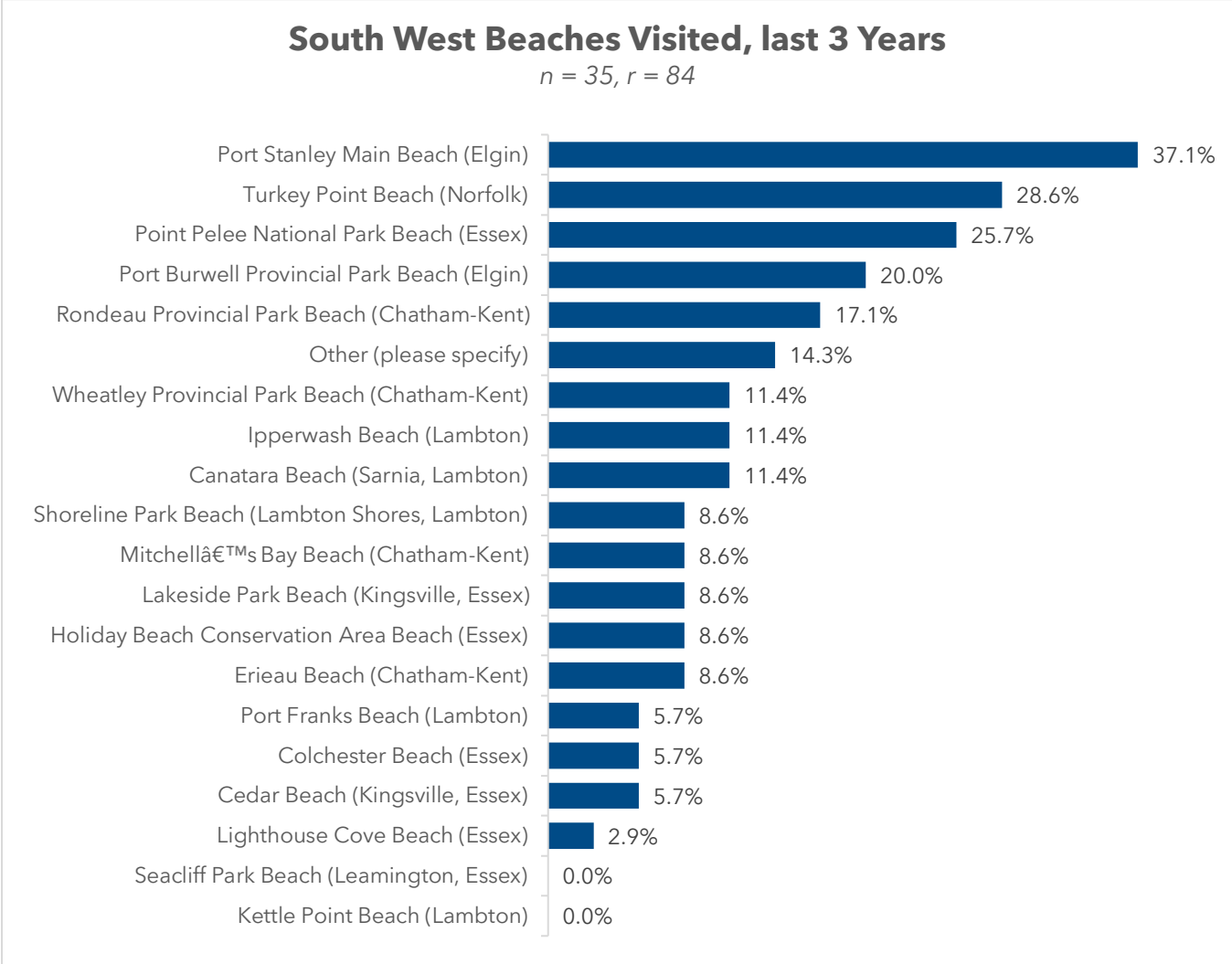
## Regional and Specific Beach Locations Visited

Respondents were asked to identify all of the southwestern Ontario beaches they had visited in the past three years, and they could select as many locations as applied. Nearly all participants (97.3 percent) reported visiting Central West beaches located in Bruce, Grey, Huron, Perth, Waterloo, and Wellington counties, while a smaller share (15.8 percent) reported visiting South West beaches farther south and west.

Those who indicated visiting the Central West area were then asked to choose the specific beaches they had attended within that region, again with the option to select multiple sites.



As with the previous graph, respondents who reported visiting the South West area were asked to identify the specific beaches they had attended, selecting as many locations as applied.

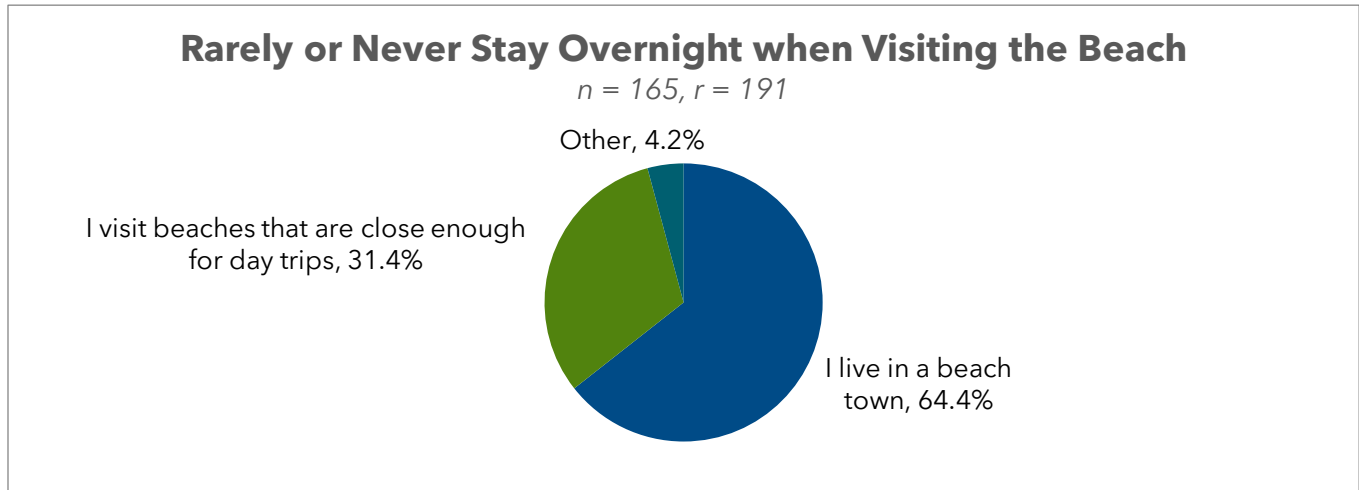


### Overnight vs. Day-Trip Behaviour

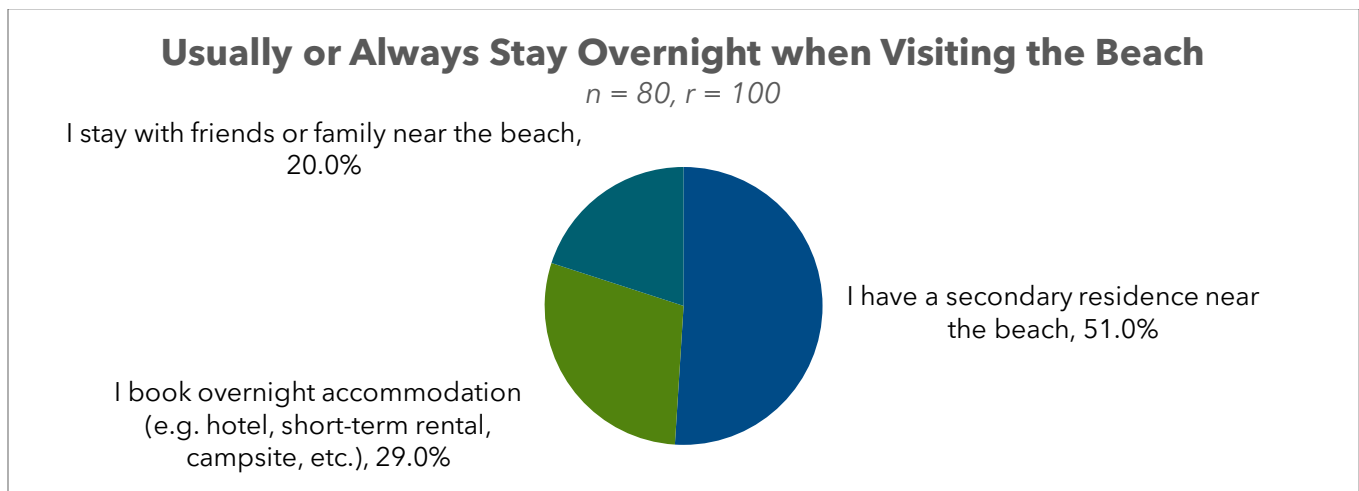
When asked about their typical beach visit patterns, just over half of respondents (51.4 percent) said they rarely or never stay overnight, indicating that day trips are the most common way people enjoy the beach. A smaller group (13.0 percent) reported that they sometimes stay overnight, while more than a third (35.6 percent) said they usually or always spend at least one night. These results show that although day visits dominate, a significant portion of beachgoers plan for extended stays.

Among respondents who said they rarely or never stay overnight when visiting the beach, most explained that they simply live in a beach town (64.4 percent), eliminating the need for

overnight accommodation. Another 31.4 percent indicated that the beaches they visit are close enough for day trips, while a small group (4.2 percent) selected "Other" and provided individual reasons. These findings confirm that proximity to the shoreline is the main reason many visitors choose day trips over overnight stays.



Among respondents who reported that they sometimes or usually stay overnight when visiting the beach, just over half (51.0 percent) said they do so because they have a secondary residence near the beach. Another 29.0 percent typically book overnight accommodation, such as a hotel, short-term rental, or campsite, while 20.0 percent stay with friends or family who live nearby.

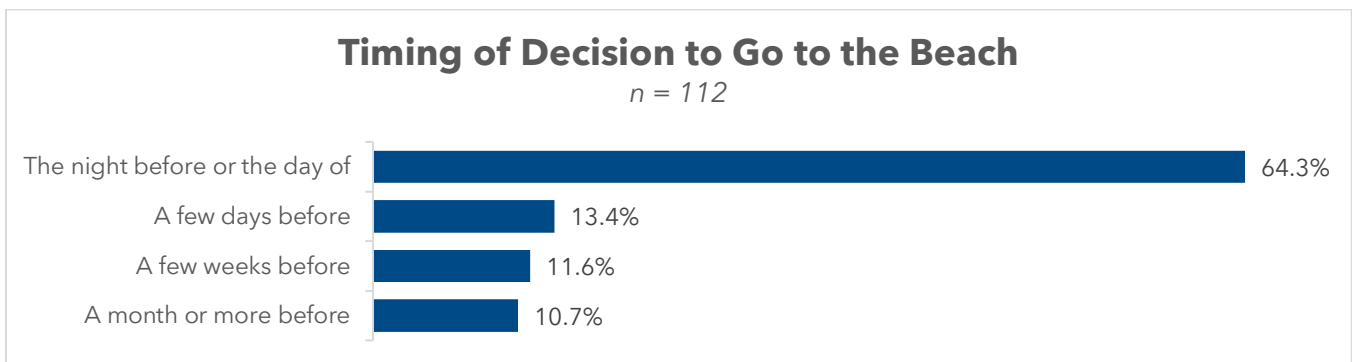


## Decision Factors and Participants for Beach Trips

This section explores how respondents plan their beach outings and who typically joins them. It looks at when decisions are made, the forecast conditions that influence those choices using the Importance Score metric described in the Methodology, and the companions who most often share the trip. Together, these findings highlight the role of real-time weather information, the importance of environmental conditions, and the social nature of beach visits in shaping how people experience Saugeen Shores beaches.

### Timing of Decision

Survey responses show that most beach trips are planned on short notice. Among the 112 participants who answered this question, nearly two-thirds (64.3 percent) said they decide to visit the night before or on the day of the trip. Smaller groups plan only slightly further ahead, with 13.4 percent deciding a few days in advance, 11.6 percent a few weeks in advance, and 10.7 percent making plans a month or more ahead of time. These results suggest that real-time weather and water conditions play an important role in trip planning and reinforce the need for up-to-date forecast information for potential beachgoers.



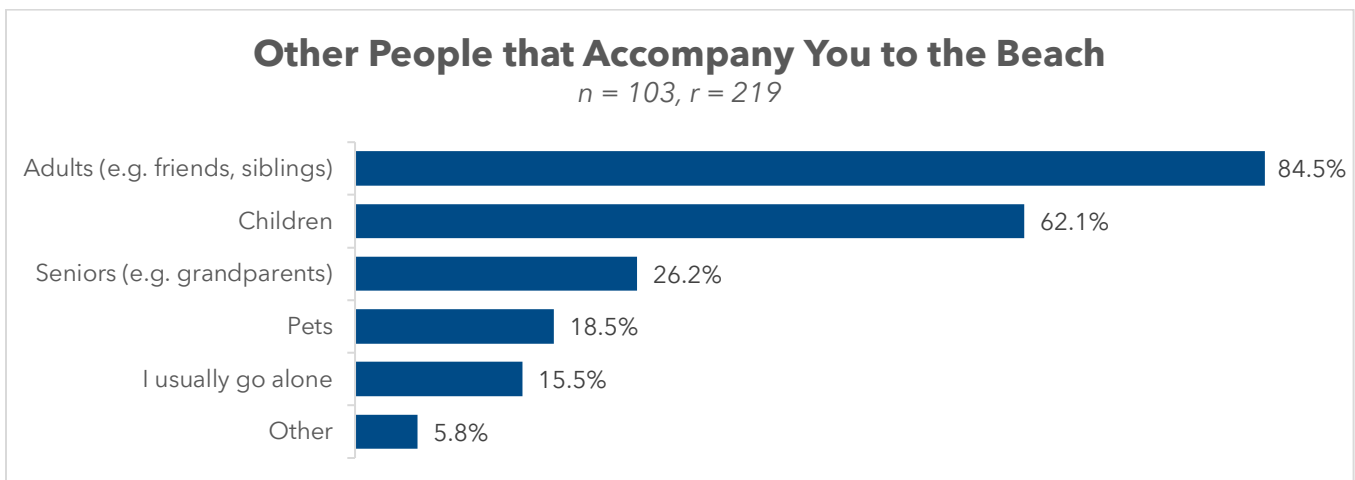
### Forecast Factors

Survey participants were asked to rate how important various forecast conditions were in their decision to visit the beach. These ratings were converted into the Importance Score described in the Methodology section, which ranges from 0 to 1 and reflects the collective importance respondents assigned to each factor. Higher scores indicate a stronger overall influence on the decision to go. The table below summarizes the results, showing which forecast elements beachgoers consider most critical when planning a trip. Full values for the calculation of the importance score can be found in the Appendix.

Forecast Factor	Importance Score
Rain	0.88
Air temperature	0.80
Wind speed	0.68
Cloud cover	0.67
Water temperature	0.64
UV Index	0.63
Wave height	0.62
Wind direction	0.53
Wave direction	0.50

## Companions on Beach Visits

Respondents were asked who typically accompanies them when they go to the beach, with the option to select all categories that apply. The results show that beach outings are most often social occasions, with adults such as friends or siblings named by the large majority of participants. Children are also common companions, while seniors and pets appear less frequently. A smaller share reported usually going alone, and only a few selected other companions. These patterns highlight that beach visits in the Saugeen Shores area are generally group activities that span multiple generations.



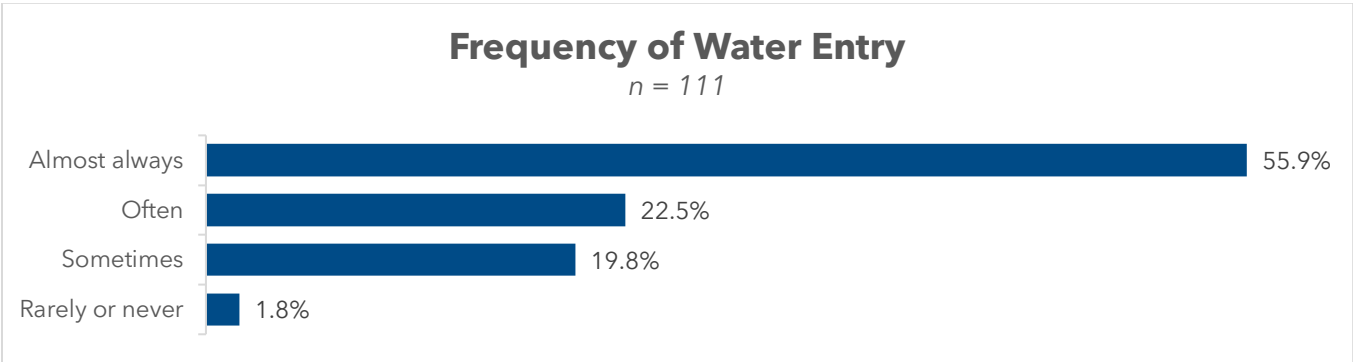
## Water Entry and Safety Behaviour

This section explores how visitors interact with the water once they arrive at the beach and the precautions they consider before swimming. It examines how frequently respondents enter the water, the environmental cues and forecast information that guide their decisions, and the relative importance of specific forecast and onsite conditions using the Importance Score. The section also highlights the self-reported swimming ability of both respondents and their

companions, experiences with drowning or near-drowning, and the types of safety equipment observed at beaches. Together, these findings provide a detailed picture of swimming habits, risk awareness, and the availability of safety measures across the beaches that participants frequent.

### Frequency of Water Entry

To better understand how visitors interact with the lake, respondents were asked how often they enter the water during a typical beach trip. Among the 111 people who answered, the majority reported entering the water almost always, with smaller groups indicating that they do so often or sometimes. Only a very small share said they rarely or never go into the water. These results show that swimming or wading is a regular part of most beach visits, underscoring the importance of safety messaging and real-time information on water conditions.

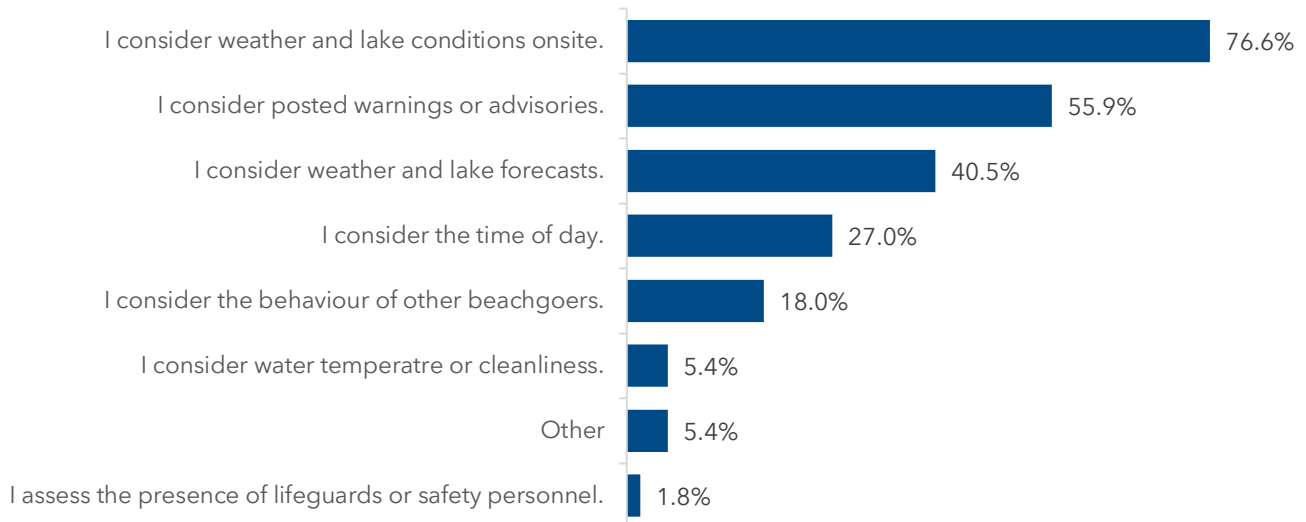


### Factors Influencing the Decision to Enter the Water

Respondents who reported entering the water were asked which considerations guide their decision each time they swim, with the option to select all that apply. Onsite conditions were the most frequently cited factor, followed by posted warnings, weather and lake forecasts, and the time of day. Smaller groups mentioned the behaviour of other beachgoers, water temperature or cleanliness, or the presence of lifeguards or safety personnel.

## Factors that Impact the Decision to Enter the Water

*n = 111, r = 256*



### Importance of Forecast Factors for Water Entry

Respondents who indicated that weather and lake forecasts influence their decision to enter the water ( $n = 38$ ) were asked to rate the importance of individual forecast elements. Their ratings were converted into the Importance Score. The table below presents these scores, and the full data table used to calculate them is provided in the Appendix.

Forecast Factors impacting Water Entry Decision	Importance Score
Rain	0.90
Air temperature	0.87
Water temperature	0.77
Wave height	0.75
Wind speed	0.72
UV Index	0.66
Cloud cover	0.65
Wave direction	0.57
Wind direction	0.57

### Importance of Onsite Conditions for Water Entry

Among the 114 respondents who said that current weather and lake conditions at the beach influence their decision to enter the water, each onsite factor was rated for importance using the Importance Score. The table below shows the resulting scores, and the full data table used in these calculations is available in the Appendix.

Onsite Condition impacting Water Entry Decision	Importance Score
Air temperature	0.86
Rain	0.86
Water temperature	0.80
Wave height	0.78
Wind speed	0.72
Cloud cover	0.61
UV Index	0.60
Wave direction	0.55
Wind direction	0.55

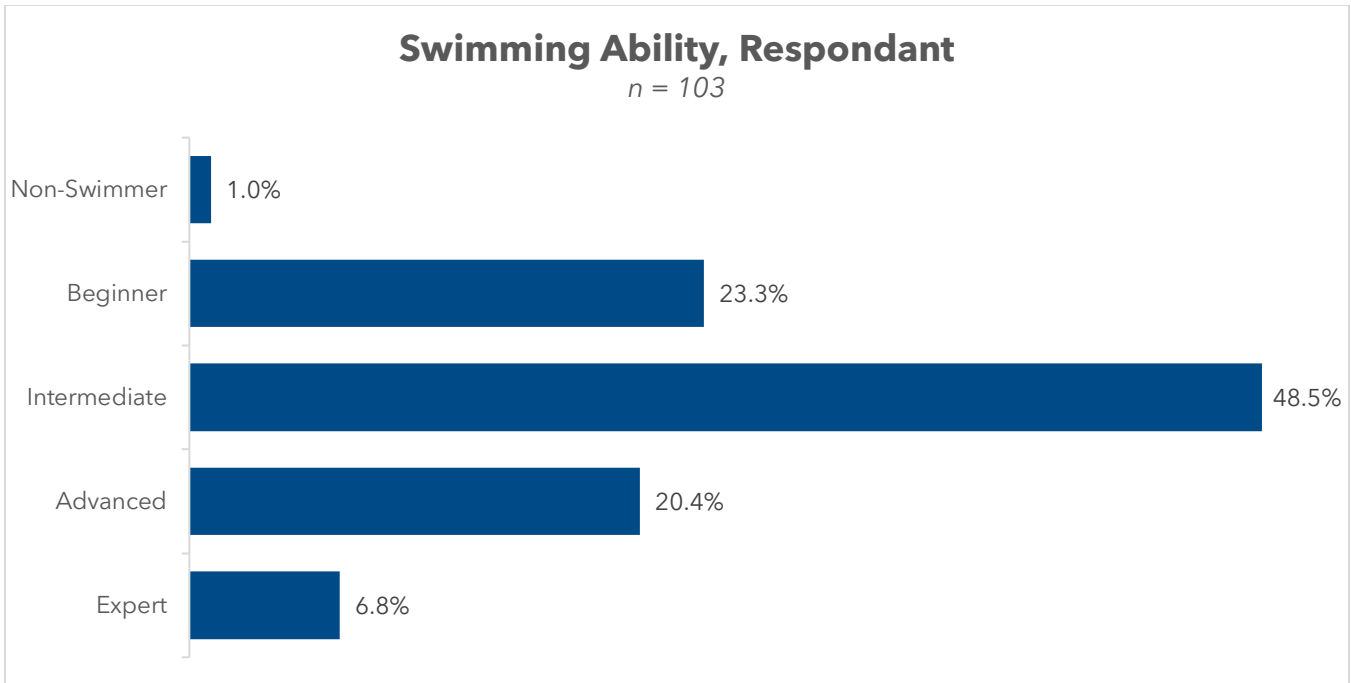
## Swimming Ability

Respondents were asked to assess both their own swimming ability and that of the people who typically accompany them to the beach. Ratings followed a five-level scale:

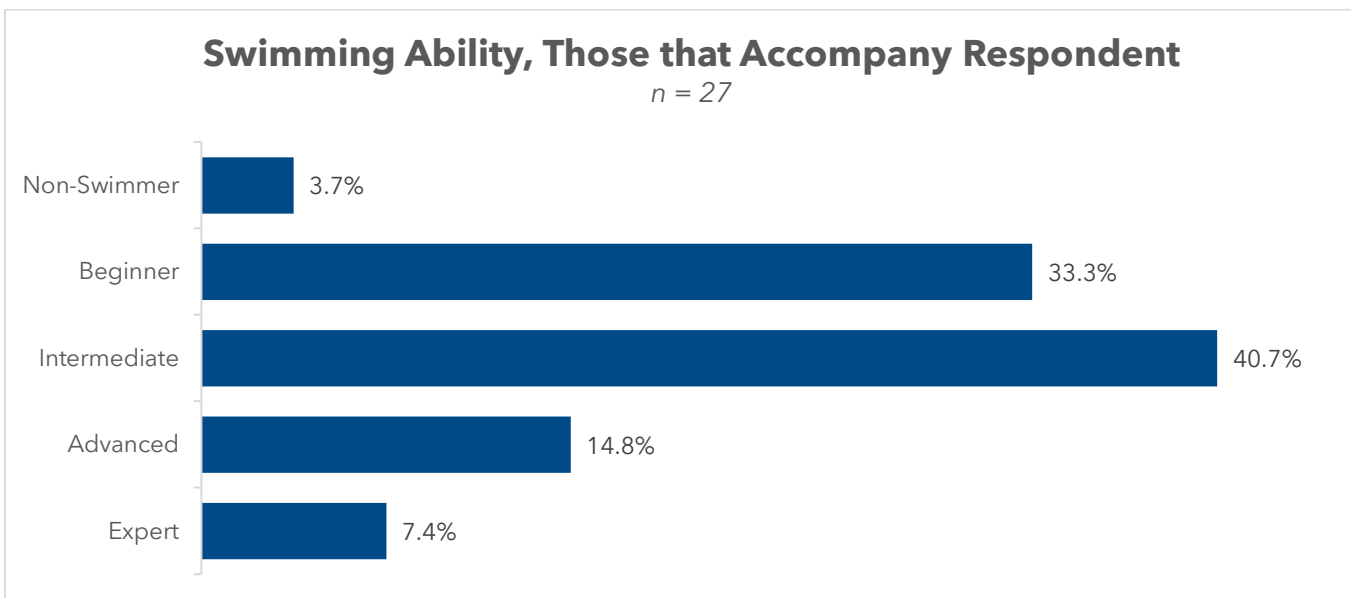
- **Non-Swimmer** - No swimming ability, uncomfortable in water, and unable to float or swim unassisted.
- **Beginner** - Can float and swim short distances in shallow water but lacks deep-water skills and endurance.
- **Intermediate** - Comfortable in deep water, able to swim 25 metres continuously, and capable of basic self-rescue techniques.
- **Advanced** - Proficient in multiple strokes, able to swim long distances, and capable of handling moderate open-water conditions.
- **Expert** - Highly skilled in all strokes and water environments, with the ability to perform advanced survival techniques and rescues.

These self-reported ratings provide context for understanding water-entry behaviours and the safety considerations described in the following sections.

Among the 103 respondents who rated their own swimming ability, nearly half (48.5 percent) identified as intermediate swimmers, indicating comfort in deep water and basic self-rescue skills. About one in five (20.4 percent) described themselves as advanced, and a smaller group (6.8 percent) considered themselves expert swimmers capable of handling challenging open-water conditions. Roughly a quarter (23.3 percent) rated themselves as beginners, while only 1.0 percent reported being non-swimmers. This distribution suggests that most participants feel at least moderately confident in their swimming skills, which is important context when considering their water-entry behaviours and safety decisions.



Among the 27 respondents who rated the swimming ability of the people who typically accompany them to the beach, intermediate swimmers again formed the largest group (40.7 percent). About one-third (33.3 percent) described their companions as beginners, while smaller shares identified them as advanced (14.8 percent) or expert (7.4 percent) swimmers. A few companions (3.7 percent) were reported as non-swimmers. This mix suggests that many beach visits include friends or family members with a wide range of swimming skills, highlighting the need for safety measures and awareness that accommodate both confident swimmers and those with limited ability.



## Experiences with Drowning or Near-Drowning

Of the 103 respondents who answered this question, 26.1 percent reported that they or someone they know had experienced trouble swimming or a near-drowning incident, while 73.8 percent said they had not.

Respondents that said yes to the previous question were asked to share their experiences. A total of 24 respondents described personal experiences with drowning or near-drowning. Several clear themes emerged from their accounts.

- **Childhood incidents** were the most common theme. Many respondents recalled being pulled under by waves, struggling to stay afloat, or needing rescue as children while swimming in lakes, creeks, or pools. Some mentioned that these events occurred before they had strong swimming skills or while they were learning to swim.
- **Rescues and lifesaving actions** were frequently described. Some respondents had acted as lifeguards or bystanders who pulled others from dangerous situations, sometimes saving multiple people. A few recounted dramatic rescues involving rip currents or undertow, and one person reported witnessing fatal drownings.
- **Environmental hazards** such as strong waves, undertow, rip currents, and sudden cold water appeared in many stories. Several respondents noted that even experienced swimmers or divers can be overwhelmed by local lake conditions or by high surf in other locations.
- **Risk factors and human error** also surfaced. Some incidents involved alcohol use, panic attacks, exhaustion from swimming too far, or poor judgment about weather and water conditions.

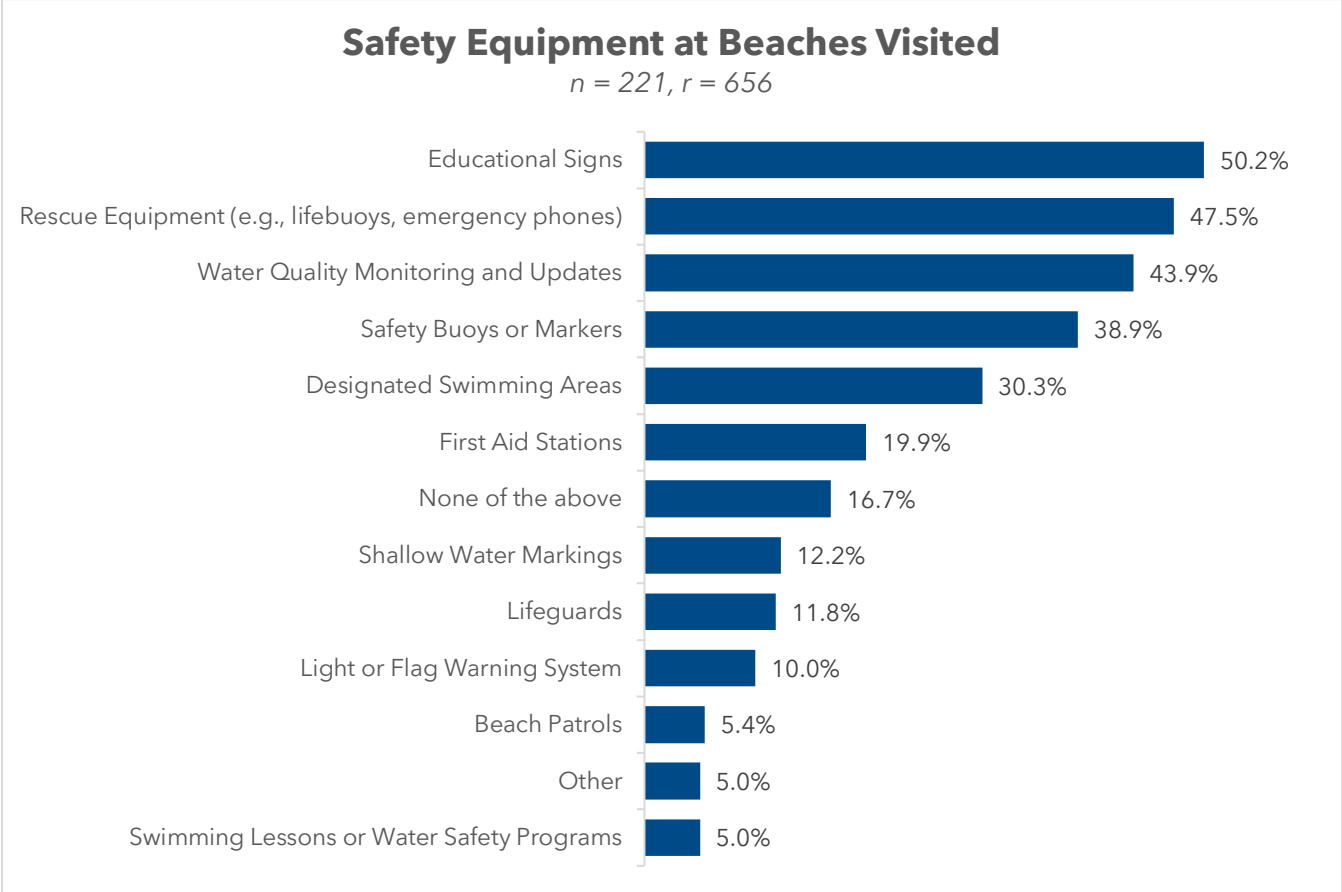
Most of these accounts underscore that drowning risk can affect both inexperienced and highly skilled swimmers, and that unpredictable lake conditions and human factors combine to create dangerous situations even for those who consider themselves confident in the water.

## Safety and Hazards at Beached Visited

### Safety Equipment

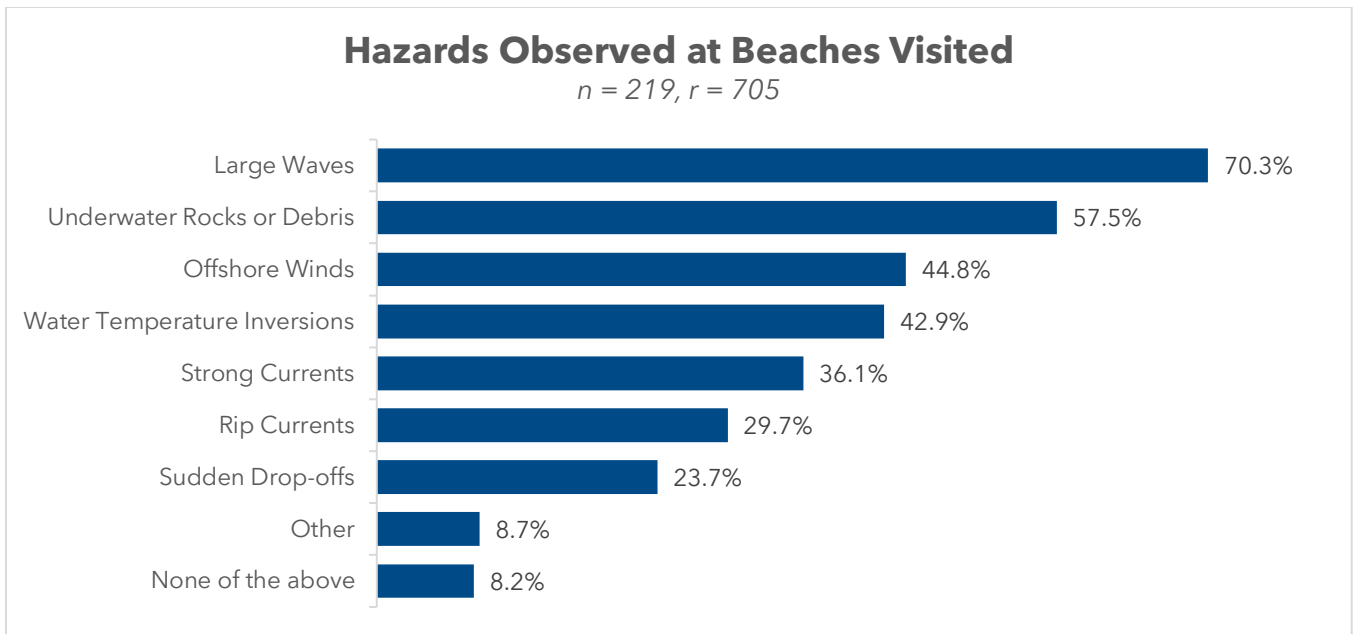
Respondents were asked to identify the types of safety equipment they typically see at the beaches they visit, with the option to select all that apply. Among the 221 people who answered, the most frequently observed features were educational signs (50.2 percent), rescue equipment such as lifebuoys or emergency phones (47.5 percent), and water quality monitoring or updates (43.9 percent). Other commonly noted measures included safety buoys or markers (38.9 percent) and designated swimming areas (30.3 percent). Fewer

respondents reported seeing first aid stations, lifeguards, or other active monitoring such as beach patrols or a light or flag warning system, and a small group indicated that they noticed none of the above. These features are known to exist, the gap between actual and perceived availability suggests a need for further investigation and improved visibility.



### Hazards Observed

When asked about natural hazards encountered at the beaches they frequent, respondents most often reported large waves (70.3 percent) and underwater rocks or debris (57.5 percent). Significant numbers also noted offshore winds (44.8 percent) and water temperature inversions (42.9 percent), along with strong currents (36.1 percent) and rip currents (29.7 percent). Fewer participants mentioned sudden drop-offs, while only small shares selected other hazards or said they had observed none. These observations highlight that many visitors routinely experience conditions that can create safety risks, underscoring the importance of warnings and education in application development.



## Weather and Lake Forecast Practices

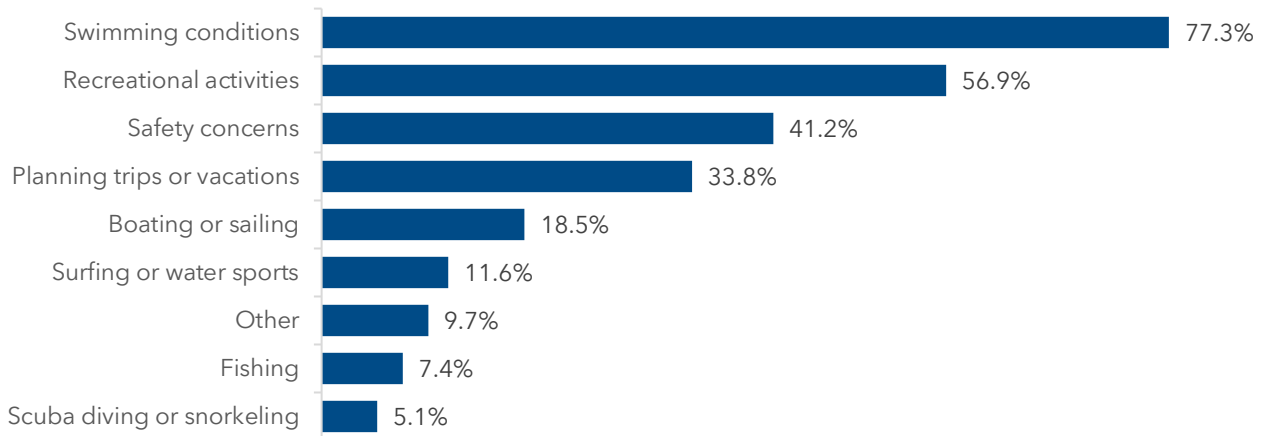
This section explores how respondents gather and use weather information when preparing for beach activities. It explores the reasons people check marine or beach forecasts, the tools and platforms they rely on, and the smaller subset who seek out lake-specific forecasts. Together, these findings show that while general weather forecasting is an essential part of trip planning for most beachgoers, only a limited group routinely looks for detailed lake conditions, and those who do tend to depend on a few trusted applications and websites.

### Motivators

To understand how people use weather information when planning beach activities, respondents were asked why they check lake or beach forecasts. Among the 216 participants who answered, most reported checking forecasts to assess swimming conditions or to plan for general recreational activities, while smaller groups cited safety concerns, trip or vacation planning, or specific pursuits such as boating, water sports, or fishing. The graph below shows the range of reasons, illustrating that forecast information supports both everyday decision-making and specialized water-based activities.

## Reasons for Checking Lake or Beach Weather Forecasts

*n = 216, r = 565*

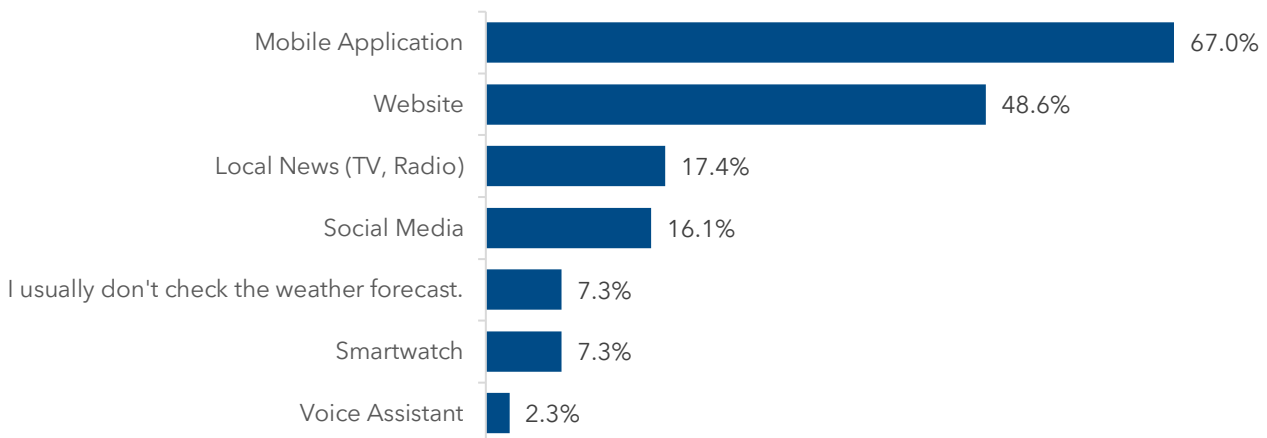


## Methods - Weather Forecasts

Respondents were also asked how they typically access marine or beach weather forecasts. Mobile applications were the most common method, used by 67.0 percent of participants, followed by websites at 48.6 percent. Smaller groups relied on local news sources such as TV or radio (17.4 percent) or social media (16.1 percent). A few reported using a smartwatch (7.3 percent) or a voice assistant (2.3 percent), and a similar share (7.3 percent) said they usually do not check forecasts at all.

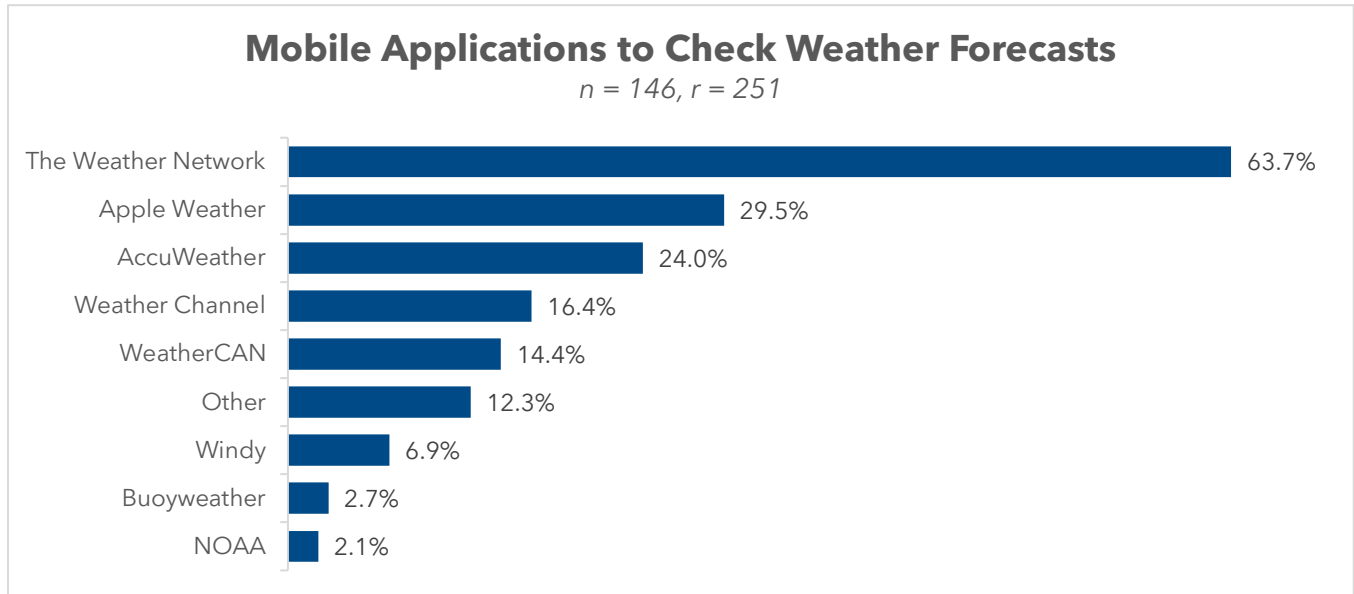
## Method to Check Weather Forecasts

*n = 218, r = 362*

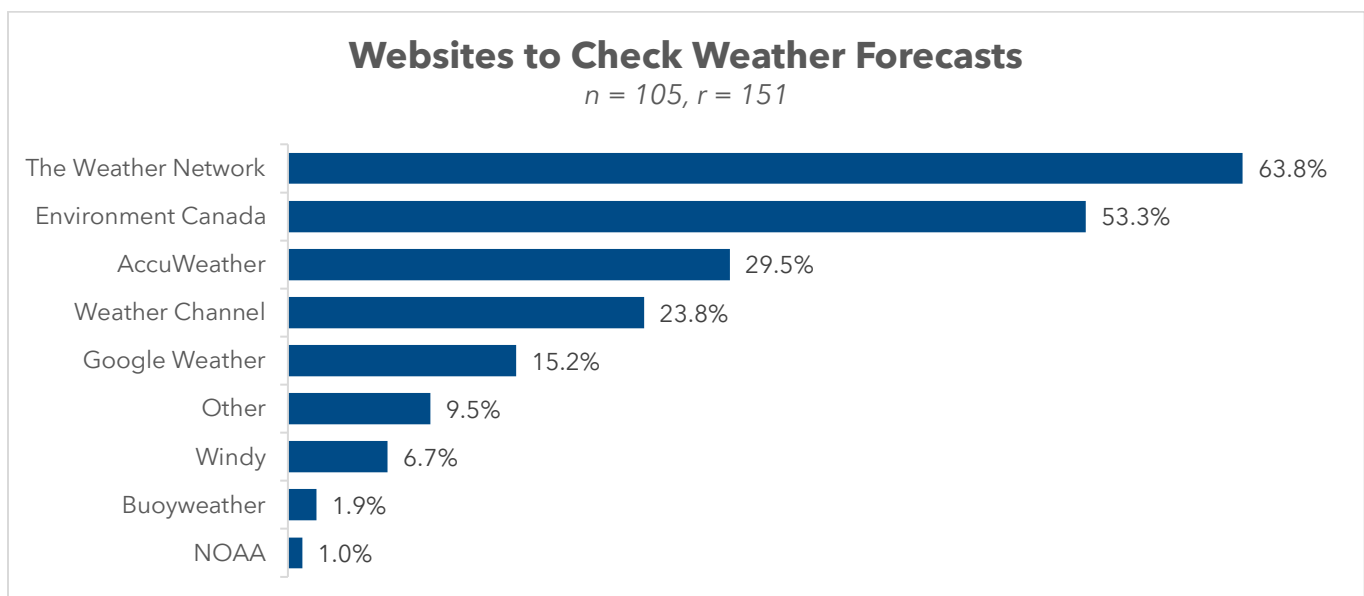


Among respondents who use mobile applications to check weather forecasts, The Weather Network was by far the most popular choice, cited by 63.7 percent. Other frequently used

apps included Apple Weather (29.5 percent) and AccuWeather (24.0 percent), while smaller groups reported using the Weather Channel (16.4 percent), WeatherCAN (14.4 percent), or other apps (12.3 percent). Less common options were Windy (6.9 percent), Buoyweather (2.7 percent), and NOAA (2.1 percent).

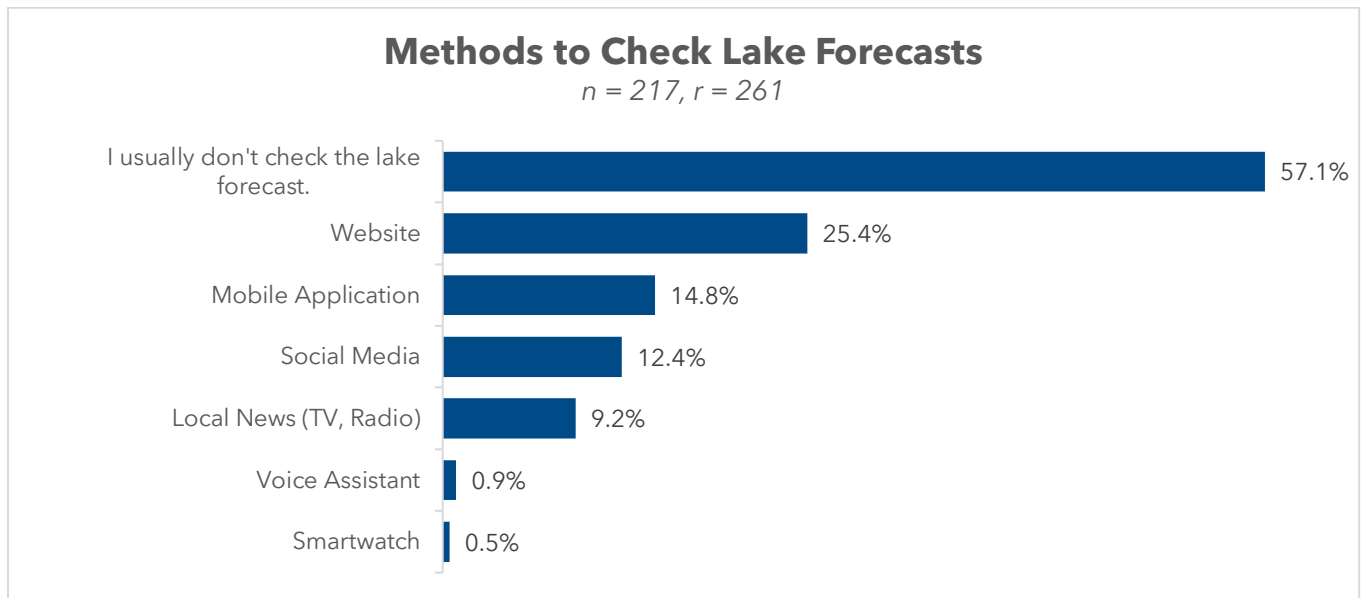


Among respondents who check forecasts on websites, The Weather Network again led as the most frequently used source, cited by 63.8 percent of participants. Environment Canada was also highly trusted, with 53.3 percent using it for marine or beach weather information. Other commonly mentioned sites included AccuWeather (29.5 percent), the Weather Channel (23.8 percent), and Google Weather (15.2 percent). Smaller groups relied on other websites (9.5 percent), Windy (6.7 percent), Buoyweather (1.9 percent), or NOAA (1.0 percent).



## Methods - Lake Forecasts

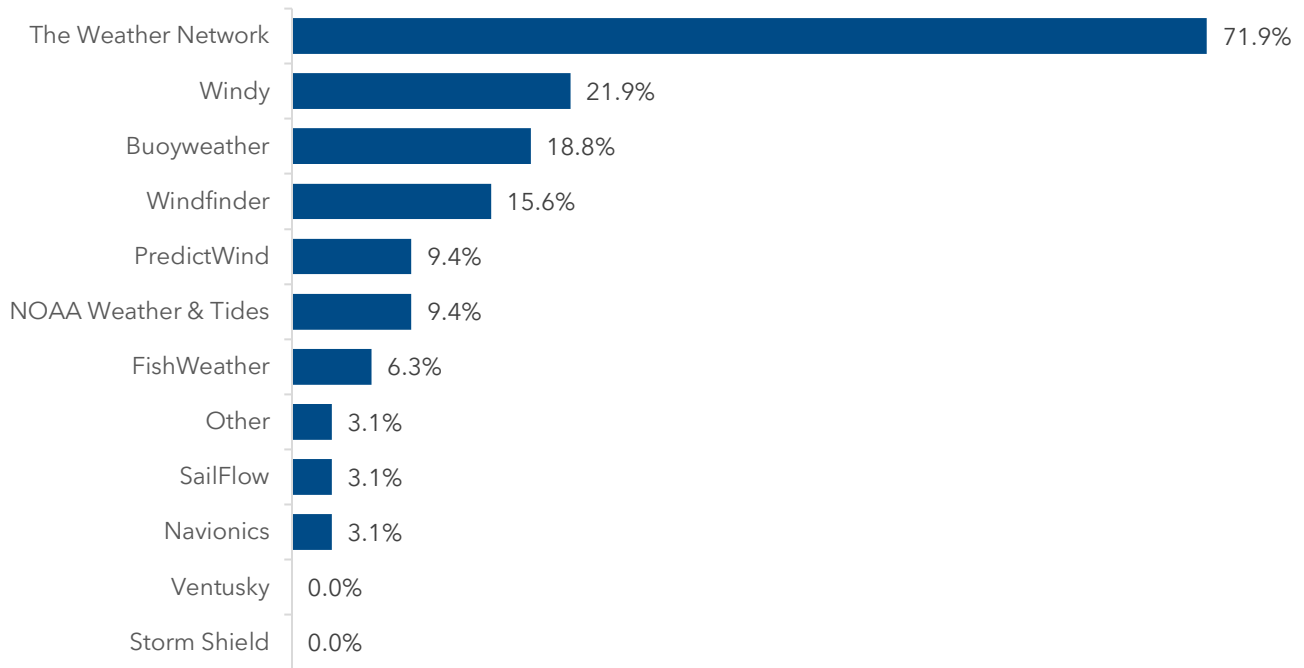
When asked how they access lake-specific forecasts, a majority of respondents (57.1 percent) said they typically do not check these forecasts at all. Among those who do, websites were the most common source (25.4 percent), followed by mobile applications (14.8 percent) and social media (12.4 percent). Smaller groups reported using local news outlets such as TV or radio (9.2 percent), a voice assistant (0.9 percent), or a smartwatch (0.5 percent).



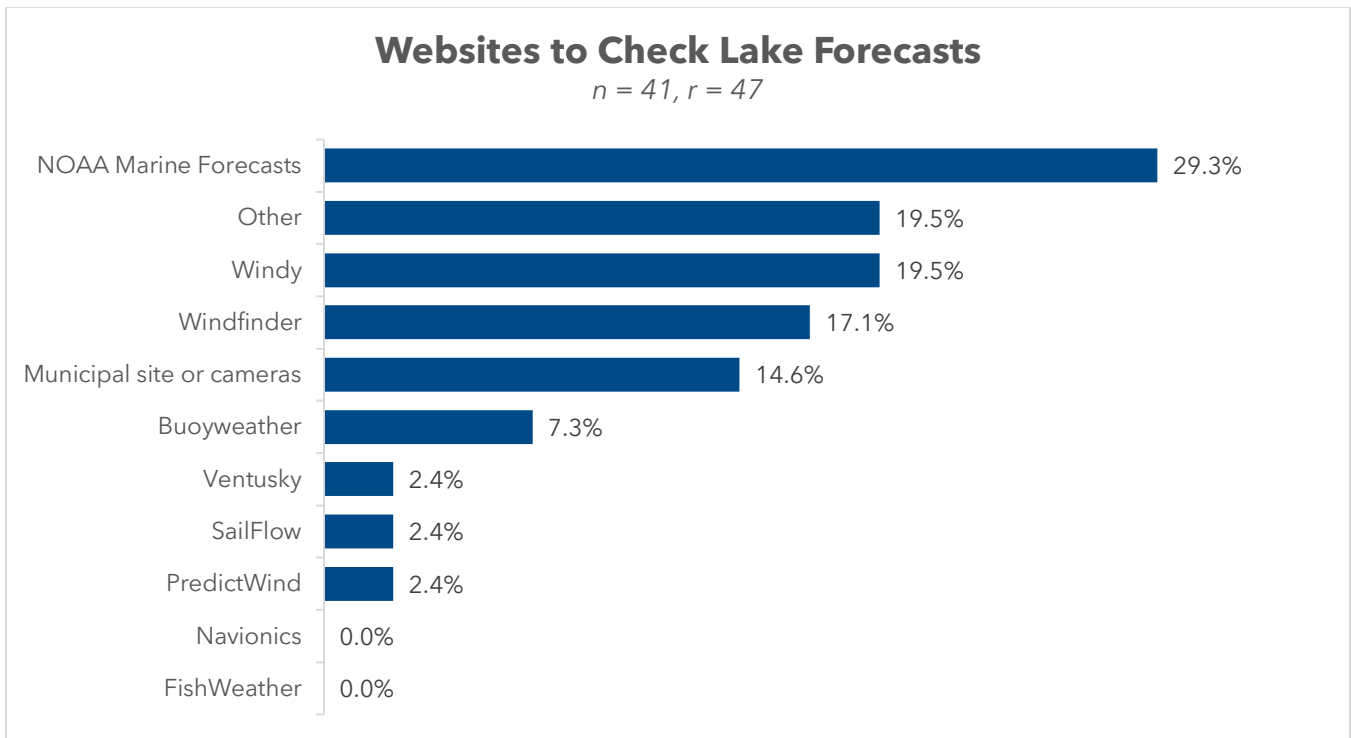
Among the relatively small group of respondents who reported using mobile applications to check lake forecasts ( $n = 32$ ), The Weather Network was by far the most common choice, cited by 71.9 percent. Other apps were mentioned far less frequently, including Windy (21.9 percent), Buoyweather (18.8 percent), Windfinder (15.6 percent), and PredictWind or NOAA Weather & Tides (9.4 percent each). Only a few respondents selected more specialized tools such as FishWeather, SailFlow, or Navionics (each 3–6 percent).

## Mobile Applications to Check Lake Forecasts

$n = 32, r = 52$



Among the 41 respondents who reported using websites to check lake forecasts, NOAA Marine Forecasts was the most frequently mentioned source, cited by 29.3 percent. Smaller but notable shares relied on other websites (19.5 percent), Windy (19.5 percent), or Windfinder (17.1 percent), with a few referencing municipal sites or live cameras (14.6 percent) for local updates. Less common options included Buoyweather (7.3 percent) and specialized services such as Ventusky, SailFlow, or PredictWind (each 2.4 percent). No respondents reported using Navionics or FishWeather.



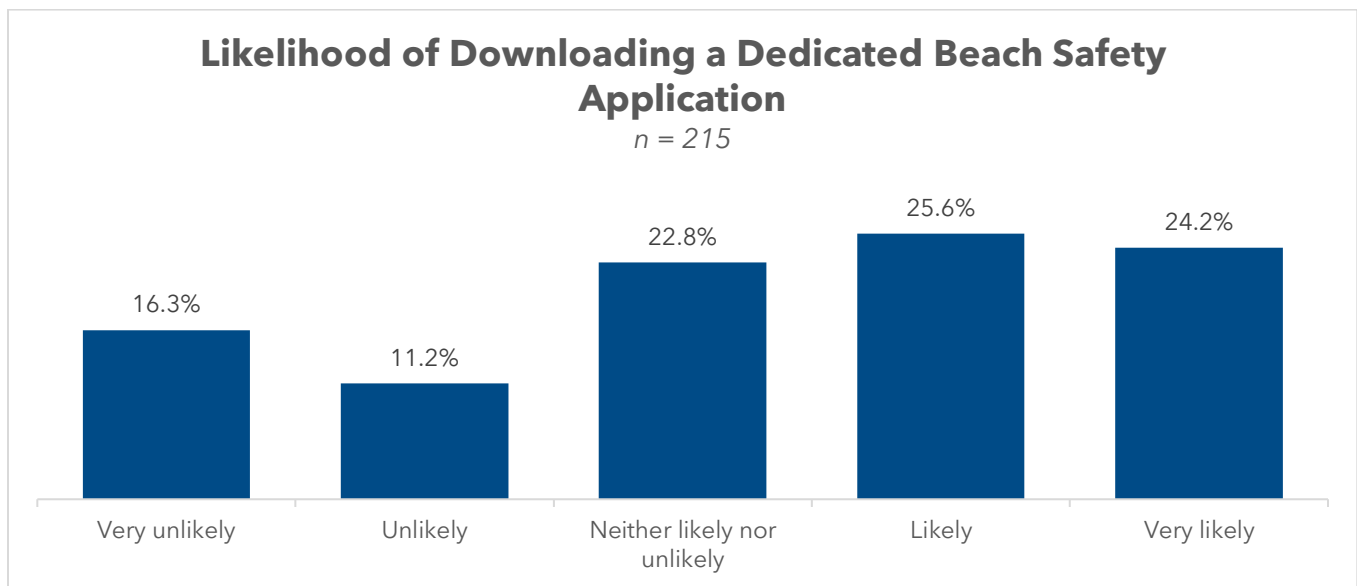
Comparing methods across the two types of forecasts shows a clear difference in both reach and tools. General marine and beach weather forecasts are checked by the vast majority of respondents and are dominated by mobile applications (67.0 percent) and websites (48.6 percent), with The Weather Network leading on both platforms. By contrast, more than half of respondents (57.1 percent) said they do not check lake-specific forecasts at all. Among those who do, websites (25.4 percent) are used more often than mobile apps (14.8 percent), and usage is spread across a wider variety of specialized services such as NOAA Marine Forecasts, Windy, and Windfinder. In short, while weather forecasts are a routine part of trip planning accessed through a few mainstream apps and sites, lake forecasts remain a niche resource consulted by a much smaller audience using a broader mix of specialized tools.

## Interest in a Beach Safety Application

To explore demand for a digital tool that supports safer and more informed beach visits, the survey asked participants about their willingness to use a dedicated beach safety application and the features they would value most. Responses provide a clear picture of both overall interest and specific priorities. The following section summarizes how likely respondents are to download such an app, highlights the functions they consider most useful, and presents related comments from a small group of open-text submissions for additional context.

## Likelihood of Download a Dedicated Application

Respondents were asked how likely they would be to download a dedicated beach safety application if one were available. Among the 215 participants who answered, opinions were mixed but leaned toward openness. Just under half indicated a positive response, with 25.6 percent saying they would be likely and 24.2 percent very likely to download such an app. About one in five (22.8 percent) were neutral, while smaller groups said they were unlikely (11.2 percent) or very unlikely (16.3 percent) to use it. These results suggest that while not everyone would adopt a dedicated beach safety tool, there is a substantial audience interested in real-time safety and environmental information delivered through a mobile application.

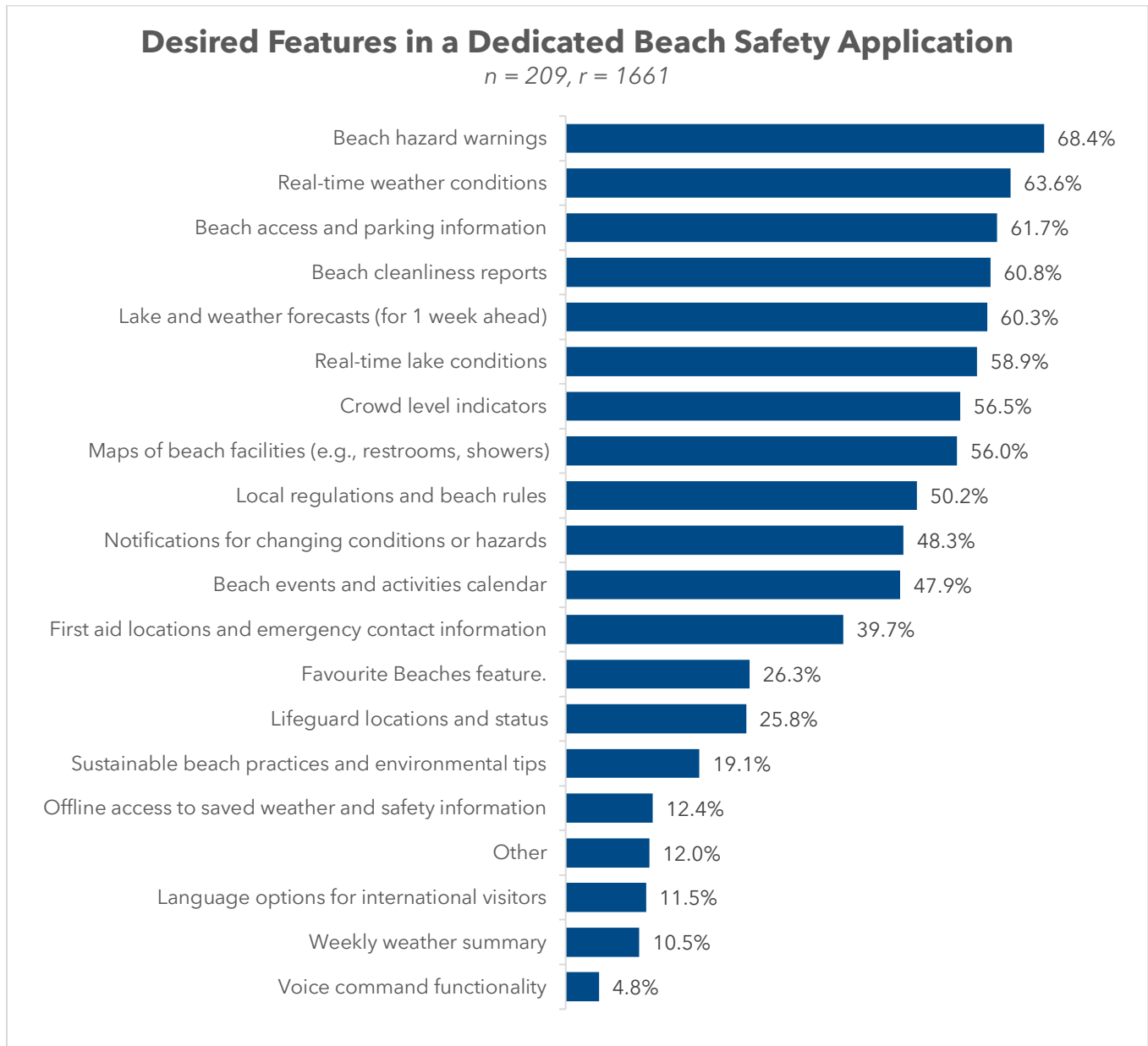


## Desired Features and Integration Preferences

Among the 209 respondents who provided input on what they would like to see in a dedicated beach safety application, several clear priorities emerged. The most frequently requested features were beach hazard warnings (68.4 percent), real-time weather conditions (63.6 percent), and practical details such as beach access and parking information (61.7 percent). Many participants also valued beach cleanliness reports (60.8 percent), one-week lake and weather forecasts (60.3 percent), and real-time lake conditions (58.9 percent). Indicators of crowd levels and maps of beach facilities like restrooms or showers were also popular, each selected by more than half of respondents. Roughly half wanted local regulations, notifications for changing conditions or hazards, or a calendar of beach events and activities. Interest tapered for items like first aid locations, a "favourite beaches" feature, lifeguard status, and sustainable beach tips, with fewer than 20 percent requesting offline

access or language options for international visitors. Only a small number suggested other features or voice command functionality.

Certain options received no selections at all and therefore do not appear on the graph. These included Air temperature, Current weather conditions, Surf and swim conditions, UV Index, Wave height, and Water temperature. These have been removed from the visualization.



Among the small group of respondents who provided open-text comments under the “please specify” option (a total of 24 responses), several clear themes emerged regarding potential features for a dedicated beach app.

**Forecast and Water Conditions:** A few respondents suggested real-time environmental information, such as wind direction changes, water temperature, and wave or rip current warnings. These comments highlighted the need for timely updates to help boaters and swimmers make safer decisions.

**Water Quality Monitoring:** Several comments focused on water quality reports, including requests for frequent updates with specific data such as E. coli levels and advisories following heavy rains or river runoff.

**Rules, Regulations, and Safety:** Some respondents recommended clear guidance on local regulations, including boating and watercraft distances from shore and designated times or areas for dogs on beaches. Others proposed features for reporting incidents or hazards and sharing information about Blue Flag certification or similar safety programs.

**Accessibility and Facilities:** A few participants asked for information on washrooms, adult changing tables, mobility mats, water wheelchairs, and the presence of bylaw officers or patrols to maintain safe and accessible beach environments.

### **Other Feedback Outside the App Concept**

Several respondents used this space to raise broader concerns or to express limited interest in an app. These included calls for stronger bylaw enforcement, worries about agricultural runoff, and skepticism about the cost or usefulness of a dedicated beach app. Some simply stated that they would not use an app or that they do not visit beaches.

While these 24 comments provide helpful insight, they represent a small subset of the overall survey sample. The suggestions highlight specific areas of interest but should be interpreted as targeted feedback rather than broad community demand.

## Key Insights and Trends

The survey was designed with two complementary goals: to understand beachgoer behaviour in Saugeen Shores and to guide the development of a potential beach safety application. The expanded findings below are organized around these two purposes and draw on the full set of quantitative and qualitative results.

### Beachgoer Behaviour

- **Strong local base with regional reach** - A clear majority of respondents live in Saugeen Shores or neighbouring Bruce and Grey County communities, confirming that the beaches are a core amenity for local residents. At the same time, roughly one third of participants reported postal codes from the broader Southwestern Ontario corridor, including the GTHA, Waterloo Region, and London or Windsor areas. This mix demonstrates that Saugeen Shores beaches attract both year round residents and a steady stream of day trippers and seasonal visitors.
- **High visitation frequency** - Most respondents visit the beach more than four times per year and almost two thirds visit ten times a year or more, indicating that beach recreation is a routine activity rather than an occasional outing.
- **Short notice planning** - Nearly two thirds decide to go the night before or on the day of their trip, while only about one in ten plan a month or more in advance. This pattern reinforces the importance of accurate, real time information on weather, lake conditions, and safety hazards because many visitors are making decisions within hours of departure.
- **Primarily day trips with notable overnight use** - Just over half rarely or never stay overnight, often because they live nearby or can comfortably make day trips. Yet more than a third usually or always spend at least one night, showing that Saugeen Shores beaches also function as a destination for extended visits and that overnight amenities remain relevant.
- **Weather and water conditions as dominant triggers** - Both the decision to visit the beach and the choice to enter the water are strongly influenced by environmental factors. Importance Scores place rain and air temperature at the top, but water temperature, wave height, and wind speed are also highly rated. Conditions experienced on site such as sudden changes in wind or waves carry similar weight.
- **Regular water entry and mixed swimming ability** - Most respondents report entering the water on nearly every visit, making swimming and wading a central part of the beach experience. Almost half rate themselves as intermediate swimmers and

another quarter as advanced or expert, but the skills of companions vary widely, with many beginners and a small number of non swimmers present. This diversity highlights the need for messaging and infrastructure that protect both confident swimmers and those with limited ability.

- **Exposure to natural hazards** - Large waves, underwater debris, strong currents, and rip currents were commonly observed across beaches. Over one quarter of respondents reported personal or second hand near drowning experiences, ranging from childhood incidents to dramatic rescues. These findings underscore the importance of clear warnings, education about local conditions, and access to rescue equipment.
- **Limited reports of safety infrastructure** - Safety infrastructure was reported at rates of 50 percent or less; while these features are known to exist, the gap between actual and perceived availability suggests a need for further investigation and improved visibility.

## Application Features and Considerations

- **Meaningful but not universal interest** - About half of respondents indicated they are likely or very likely to download a dedicated beach safety application. Another fifth were neutral and roughly a quarter said they were unlikely or very unlikely to use one. This suggests a significant potential user base while also highlighting the need for broad outreach and clear value to encourage adoption.
- **Clear priorities for content** - Requested features cluster around real time hazard warnings, up to date weather and lake conditions, water quality reports, and practical details such as parking, beach access points, and cleanliness information. Many also want indicators of crowd levels and maps of facilities such as washrooms and showers.
- **Need for integrated water quality reporting** - Across both the feature selection and open text responses, frequent and detailed water quality updates, particularly after heavy rainfall or river runoff, were a recurring theme. Respondents asked for specifics such as E. coli counts and clearer notification when beaches are safe for swimming.
- **Regulatory and accessibility information** - Participants expressed interest in clear guidance on boating and watercraft regulations, dog access rules, and the ability to report incidents or hazards. Others requested information on accessible facilities, mobility mats, and bylaw enforcement to ensure safe and inclusive beach use.
- **Opportunity to bridge a data gap** - While two thirds of respondents regularly use mobile apps or websites to check general weather forecasts (dominated by The

Weather Network), more than half never check lake specific forecasts. Those who do rely on a patchwork of specialized services such as NOAA, Windy, or municipal cameras. A dedicated app could fill this gap by integrating lake specific data and presenting it in a familiar, mobile friendly format.

- **Integration with popular platforms** - Because The Weather Network, Apple Weather, and AccuWeather dominate current behaviour, a successful beach safety app should either partner with or provide seamless links to these widely used services to encourage adoption and reduce duplication.
- **Feedback highlights broader concerns** - A small subset of respondents used the open text option to raise issues beyond app functionality, such as calls for stronger bylaw enforcement, concerns about agricultural runoff, and skepticism about the need or cost of an app. These views, while limited in number, signal that clear communication of purpose and value will be critical.
- **Digital alerts can offset limited on site safety measures** - Given the scarcity of lifeguards and formal flag systems, a mobile application delivering real time hazard notifications, water quality warnings, and forecast updates could play a vital role in improving public safety and supplementing physical infrastructure.

Together, these findings show that Saugeen Shores beachgoers are frequent, often spontaneous visitors who rely heavily on current weather and lake information but rarely access specialized lake forecasts. An effective beach safety application should therefore prioritize timely environmental data, water quality updates, clear regulatory guidance, and accessibility features while recognizing that not all residents will adopt a new tool unless it integrates smoothly with the services they already use.

## Next Steps

The survey results provide clear guidance for the next stage of the Smart Beach program and the development of a dedicated beach safety application.

### App Development Priorities

- Integrate real time data on weather, lake conditions, and water quality, since these factors drive both the decision to visit the beach and the choice to enter the water.
- Include practical information such as parking, access points, and crowd levels to support the large number of spontaneous, same day visitors.

- Offer hazard alerts and clear explanations of rip currents, strong winds, and sudden wave changes to address the common natural risks identified by respondents.
- Provide accessibility details, local regulations, and options for reporting hazards or incidents, reflecting frequent requests for these features.
- Ensure seamless use on mobile platforms and consider partnerships or data sharing with popular services such as The Weather Network to match current user habits.

### **Informing the Smart Beach Program**

- The high proportion of frequent, local users means outreach and education can be focused within Saugeen Shores while still addressing regional visitors.
- The mix of swimming abilities and the regular presence of children and beginners highlight the importance of continued investment in clear signage, rescue equipment, and public education campaigns.
- Findings on trip timing and the heavy reliance on real time information support the Smart Beach goal of delivering timely safety messages and environmental updates.

These insights will help the Smart Beach team design an application and supporting communication strategies that reflect actual beachgoer behaviour and meet the needs of both residents and visitors.

## References

Town of Saugeen Shores. (2016). *Recreation Master Plan*. Retrieved from <https://www.saugeenshores.ca/en/town-hall/resources/Documents/FINAL-SS-Recreation-Master-Plan-Dec-2016.pdf>

Statistics Canada. (2022). *Focus on Geography Series, 2021 Census: Saugeen Shores, Town (Ontario)*. Statistics Canada Catalogue no. 98-404-X2021001. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/Page.cfm?Lang=E&topic=1&Dguid=2021A00053541045>

### **AI Use Statement**

Artificial intelligence tools were used to help draft and summarize sections of this report. All AI-generated text was reviewed and verified by the authors for accuracy and alignment with the survey data and project objectives. The final document reflects human analysis and decision-making, with AI serving only as a writing aid.

# Appendices

## Full survey instrument

### Introduction

You are invited to participate in a research study about beach safety in Ontario. The purpose of this study is to determine what factors affect decisions to travel to the beach or enter the water. Surf hazards, for example large waves and strong currents, represent a significant risk even to experienced swimmers. The objective of this study is to develop a beach safety application and warning system that will be freely available to the public. Your responses will guide which features and functionalities will be included, ensuring the application offers valuable safety information and enhances your beach experience.

Participation in the study will consist of an online anonymous survey, using Survey Monkey. The survey will take approximately 10-15 minutes to complete. You will be asked a series of questions related to your swimming ability, beach trip planning, and perceptions of surf zone hazards. We are also collecting demographic information because previous research has shown that certain groups may be at a higher risk of drowning or may experience different challenges when it comes to beach safety. Lastly, with your permission we may use anonymous quotes provided in the open-ended responses in presentations and publications.

All are welcome to participate in this study. Your participation is voluntary; you may decide to skip any questions if you prefer not to answer and may stop your participation at any point by not answering the remaining questions and closing your browser.

You will not receive anything for your participation in the study; however, your responses will be fundamental in developing a freely available beach safety application that you will have access to.

Participation in the study may benefit you by providing a free-to-use beach safety application that will help to guide your beach trip planning and decisions on when it is safe to enter the water. This application will be designed to improve public safety on Ontario's beaches.

There are no anticipated risks associated with this anonymous survey. Your participation is voluntary and you may choose to skip any questions you are not comfortable with answering.

Your identity will not be known, as this survey is completely anonymous. Your identity will be kept confidential by assigning an ID to respondents' answers. We may further group these by demographic information; however, your identity will remain completely anonymous. Survey responses cannot be removed later because they are anonymous and we will not be able to determine the source of the responses.

This survey is hosted by Survey Monkey, a secure third-party platform, and access to the survey will be restricted by role-based permissions, secure logins, and other safeguards. Once the survey is complete, all data will be downloaded onto a secure, password-protected device. At that point, the original data will be deleted from Survey Monkey servers to further protect privacy and ensure full control over data access and storage.

Data collected in this survey will be used for the beach safety application development. This information may also be used in presentations and publications by the Principal Investigators.

This study is funded by Natural Sciences and Engineering Research Council of Canada (NSERC) College and Community Social Innovation Fund (CCSIF - 2024 - 00013).

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #47358). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca.

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact Alex Smith at a229Smith@uwaterloo.ca.

- **About how many days do you visit the beach per year?**
  - a. Rarely or never
  - b. 1-3 times
  - c. 4-6 times
  - d. 7-9 times
  - e. 10 or more times
- **Which beach locations in Southwestern Ontario have you visited in the past three years? (Select all that apply)**
  - a. Central West (Bruce, Grey, Huron, Perth, Waterloo, Wellington)
  - b. South West (Elgin, Essex, Kent, Lambton, Middlesex, Oxford)
  - c. None of the above
- **Which Central West beaches have you visited in the last three years? (Select all that apply)**
  - a. Bayfield Main Beach (Huron);
  - b. Belwood Lake Conservation Area Beach (Wellington);
  - c. Black Creek Provincial Park (Bruce);
  - d. Christie Beach (Grey);
  - e. Edit's Grove (Bruce);
  - f. Elora Quarry Conservation Area Beach (Waterloo);
  - g. Gobles Grove Beach (Bruce);

- h. Goderich Main Beach (Huron);
- i. Guelph Lake Conservation Area Beach (Wellington);
- j. Halfway Log Dump (Bruce);
- k. Laurel Creek Conservation Area Beach (Waterloo);
- l. Lion's Head Beach (Bruce);
- m. Little Cove Beach (Bruce);
- n. Memorial Park Beach (Grey);
- o. Northwinds Beach (Grey);
- p. Oliphant Beach (Bruce);
- q. Port Elgin Beach (Bruce);
- r. Sauble Beach (Bruce);
- s. Singing Sands Beach (Bruce);
- t. Southampton Beach (Bruce);
- u. St. Joseph Beach (Huron);
- v. Station Beach (Bruce);
- w. Wildwood Conservation Area Beach (Perth);
- x. Other (please specify)

- **Which South West beaches have you visited in the last three years? (Select all that apply)**

- a. Canatara Beach (Sarnia, Lambton);
- b. Cedar Beach (Kingsville, Essex);
- c. Colchester Beach (Essex);
- d. Erieau Beach (Chatham-Kent);
- e. Holiday Beach Conservation Area Beach (Essex);
- f. Ipperwash Beach (Lambton);
- g. Kettle Point Beach (Lambton);
- h. Lakeside Park Beach (Kingsville, Essex);
- i. Lighthouse Cove Beach (Essex);
- j. Mitchell's Bay Beach (Chatham-Kent);
- k. Point Pelee National Park Beach (Essex);
- l. Port Burwell Provincial Park Beach (Elgin);
- m. Port Franks Beach (Lambton);
- n. Port Stanley Main Beach (Elgin);
- o. Rondeau Provincial Park Beach (Chatham-Kent);
- p. Seacliff Park Beach (Leamington, Essex);
- q. Shoreline Park Beach (Lambton Shores, Lambton);
- r. Turkey Point Beach (Norfolk);
- s. Wheatley Provincial Park Beach (Chatham-Kent);

- t. Other (please specify)
- **When you visit the beach, do you stay overnight?**
  - a. Rarely or never
  - b. Sometimes
  - c. Usually or always
- **If you rarely or never stay overnight, which of the following applies? (Select all that apply)**
  - a. I live in a beach town
  - b. I visit beaches that are close enough for day trips
  - c. Other (please specify)
- **If you sometimes or usually stay overnight, which of the following applies? (Select all that apply)**
  - a. I have a secondary residence near the beach
  - b. I book overnight accommodation (e.g. hotel, short-term rental, campsite, etc.)
  - c. I stay with friends or family near the beach
  - d. Other (please specify)
- **How far in advance do you usually plan to visit the beach?**
  - a. The night before or the day of
  - b. A few days before
  - c. A few weeks before
  - d. A month or more before
- **When deciding whether to go to the beach, how important are the following forecast factors?**

(Scale: Very important, Somewhat important, Somewhat unimportant, Very unimportant)

  - a. Air temperature
  - b. Cloud cover
  - c. Rain
  - d. Water temperature
  - e. Wave direction
  - f. Wave height
  - g. Wind direction
  - h. Wind speed
  - i. UV Index
- **How often do you or your family enter the water when visiting the beach?**
  - a. Rarely or never
  - b. Sometimes
  - c. Often

- d. Almost always
- **When you are at the beach, what factors affect your decision to enter the water? (Select all that apply)**
  - a. I consider weather and lake forecasts
  - b. I consider weather and lake conditions onsite
  - c. I consider posted warnings or advisories
  - d. I consider the behaviour of other beachgoers
  - e. I assess the presence of lifeguards or safety personnel
  - f. I consider the time of day
  - g. Other (please specify)
- **If you consider weather and lake forecasts, how important are these forecast factors?**

(Scale: Very important, Somewhat important, Somewhat unimportant, Very unimportant)

  - a. Air temperature
  - b. Cloud cover
  - c. Rain
  - d. Water temperature
  - e. Wave direction
  - f. Wave height
  - g. Wind direction
  - h. Wind speed
  - i. UV Index
- **If you consider onsite conditions, how important are these conditions?** (Scale: Very important, Somewhat important, Somewhat unimportant, Very unimportant)
  - a. Air temperature
  - b. Cloud cover
  - c. Rain
  - d. Water temperature
  - e. Wave direction
  - f. Wave height
  - g. Wind direction
  - h. Wind speed
  - i. UV Index
- **Who accompanies you on your beach visits? (Select all that apply)**
  - a. Seniors (e.g. grandparents)
  - b. Adults (e.g. friends, siblings)
  - c. Children

- d. Pets
- e. I usually go alone
- f. Other (please specify)
- **How would you describe your swimming ability?**
  - a. Non-Swimmer (No swimming ability; uncomfortable in water and cannot float or swim unassisted.)
  - b. Beginner (Can float and swim short distances in shallow water but lacks deep-water skills and endurance.)
  - c. Intermediate (Comfortable in deep water; can swim 25 meters continuously and perform basic self-rescue techniques.)
  - d. Advanced (Proficient in multiple strokes; can swim long distances and handle moderate open water conditions.)
  - e. Expert (Highly skilled in all strokes and water environments, capable of advanced survival techniques and rescues.)
- **How would you describe the swimming ability of those that accompany you?**
  - a. Non-Swimmer (No swimming ability; uncomfortable in water and cannot float or swim unassisted.)
  - b. Beginner (Can float and swim short distances in shallow water but lacks deep-water skills and endurance.)
  - c. Intermediate (Comfortable in deep water; can swim 25 meters continuously and perform basic self-rescue techniques.)
  - d. Advanced (Proficient in multiple strokes; can swim long distances and handle moderate open water conditions.)
  - e. Expert (Highly skilled in all strokes and water environments, capable of advanced survival techniques and rescues.)
- **Have you or someone you know ever had trouble swimming or had a near-drowning experience?**
  - a. No
  - b. Yes (please provide more details, if you are comfortable doing so)
- **What swimming safety measures are in place at the beach you most frequently visit? (Select all that apply)**
  - a. Educational Signs;
  - b. Lifeguards;
  - c. Light or Flag Warning System;
  - d. Safety Buoys or Markers;
  - e. Designated Swimming Areas;
  - f. Shallow Water Markings;
  - g. First Aid Stations;

- h. Rescue Equipment (e.g., lifebuoys, emergency phones);
  - i. Beach Patrols;
  - j. Swimming Lessons or Water Safety Programs;
  - k. Water Quality Monitoring and Updates;
  - l. Other (please specify);
  - m. None of the above
- **What swimming hazards have you observed at the beach you most frequently visit? (Select all that apply)**
    - a. Large Waves;
    - b. Offshore Winds;
    - c. Rip Currents;
    - d. Strong Currents;
    - e. Water Temperature Inversions;
    - f. Underwater Rocks or Debris;
    - g. Sudden Drop-offs;
    - h. Other (please specify);
    - i. None of the above
- **What is/are your primary reason(s) for checking marine or beach weather forecasts? (Select all that apply)**
    - a. Boating or sailing
    - b. Fishing
    - c. Planning trips or vacations
    - d. Recreational activities
    - e. Safety concerns
    - f. Scuba diving or snorkeling
    - g. Surfing or water sports
    - h. Swimming conditions
    - i. Other (please specify)
- **How do you check the weather forecast? (Select all that apply)**
    - a. Website
    - b. Mobile Application
    - c. Local News (TV, Radio)
    - d. Voice Assistant
    - e. Smartwatch
    - f. Social Media
    - g. I usually don't check the weather forecast
- **Which mobile applications do you use to check the weather forecast? (Select all that apply)**

- a. AccuWeather;
  - b. Apple Weather;
  - c. Buoyweather;
  - d. NOAA;
  - e. The Weather Network;
  - f. Weather Channel;
  - g. WeatherCAN;
  - h. Windy;
  - i. Other (please specify)
- **Which websites do you use to check the weather forecast? (Select all that apply)**
    - a. AccuWeather;
    - b. Buoyweather;
    - c. Environment Canada;
    - d. Google Weather;
    - e. NOAA;
    - f. The Weather Network;
    - g. Weather Channel;
    - h. Windy;
    - i. Other (please specify)
- **How do you check the lake forecast? (Select all that apply)**
    - a. Website
    - b. Mobile Application
    - c. Local News (TV, Radio)
    - d. Voice Assistant
    - e. Smartwatch
    - f. Social Media
    - g. I usually don't check the lake forecast
- **Which mobile applications do you use to check the lake forecast? (Select all that apply)**
    - a. Buoyweather;
    - b. FishWeather;
    - c. Navionics;
    - d. NOAA Weather & Tides;
    - e. PredictWind;
    - f. SailFlow;
    - g. Storm Shield;
    - h. The Weather Network;
    - i. Ventusky;

- j. Windfinder;
- k. Windy;
- l. Other (please specify)
- **Which websites do you use to check the lake forecast? (Select all that apply)**
  - a. Buoyweather;
  - b. FishWeather;
  - c. Navionics;
  - d. NOAA Marine Forecasts;
  - e. PredictWind;
  - f. SailFlow;
  - g. Ventusky;
  - h. Windfinder;
  - i. Windy;
  - j. Other (please specify)
- **How likely are you to download a dedicated mobile application for beach safety?**
  - a. Very likely
  - b. Likely
  - c. Neither likely nor unlikely
  - d. Unlikely
  - e. Very unlikely
- **What features would you like to see in a dedicated beach safety app? (Select all that apply)**
  - a. Beach access and parking information;
  - b. Beach cleanliness reports;
  - c. Beach events and activities calendar;
  - d. Beach hazard warnings;
  - e. Crowd level indicators;
  - f. Favourite Beaches feature to save certain beaches and receive tailored updates;
  - g. First aid locations and emergency contact information;
  - h. Lake and weather forecasts (for 1 week ahead);
  - i. Language options for international visitors;
  - j. Lifeguard locations and status;
  - k. Local regulations and beach rules;
  - l. Maps of beach facilities (e.g., restrooms, showers);
  - m. Notifications for changing conditions or hazards;
  - n. Offline access to saved weather and safety information;
  - o. Real-time weather conditions (Air temperature, wind conditions, cloud cover, UV index);

- p. Real-time lake conditions (Wave height and direction, water temperature, water currents);
- q. Sustainable beach practices and environmental tips;
- r. Voice command functionality;
- s. Weekly weather summary;
- t. Other (please specify)
- **Would you prefer a beach safety app that integrates with existing weather apps or one that functions as a standalone app?**
  - a. I would prefer an integrated app
  - b. I would prefer a standalone app
  - c. I don't have a preference
- **What are the first three digits of your postal code? (Open response)**
- **How old are you?**
  - a. Under 18
  - b. 18-24
  - c. 25-34
  - d. 35-44
  - e. 45-54
  - f. 55-64
  - g. 65+
  - h. I prefer not to answer
- **What gender do you identify with?**
  - a. Woman
  - b. Man
  - c. Non-binary
  - d. Two-spirit
  - e. Transgender
  - f. Genderqueer
  - g. I prefer not to answer
  - h. I prefer to self-describe (open text)
- **Which of the following describes you?**
  - a. I was born in Canada
  - b. I was born outside of Canada
- **If born outside of Canada: Where were you born? (Open response)**
- **How many years have you been in Canada?**
  - a. I am just visiting Canada
  - b. Less than a year
  - c. 1-3 years

- d. 4-6 years
- e. More than 6 years

- **Is there any other information you would like to share with the researchers?**  
(Open response)

## Detailed tables, charts, or additional analyses

When deciding **whether to go to the beach**, how important are the following **forecast factors** in your decision-making?

<i>Maximum Raw Score</i>		460				
<i>n</i>		115				
<b>Answer Choices</b>	Very important	Somewhat important	Somewhat unimportant	Very unimportant	Raw Score	Forecast Factor Importance Score
<b>Air temperature</b>	49	47	13	6	369	0.80
<b>Cloud cover</b>	18	55	27	15	306	0.67
<b>Rain</b>	81	22	5	5	405	0.88
<b>Water temperature</b>	20	47	26	22	295	0.64
<b>Wave direction</b>	11	26	28	50	228	0.50
<b>Wave height</b>	30	29	20	36	283	0.62
<b>Wind direction</b>	11	34	31	38	246	0.53
<b>Wind speed</b>	26	49	20	20	311	0.68
<b>UV Index</b>	23	43	19	30	289	0.63

When deciding **whether to enter the water**, how important are the following **forecast factors** in your decision-making?

<i>Maximum Raw Score</i>		152				
<i>n</i>		38				
<b>Answer Choices</b>	Very important	Somewhat important	Somewhat unimportant	Very unimportant	Raw Score	Forecast Factor Importance Score
<b>Air temperature</b>	20	16	2	0	132	0.87
<b>Cloud cover</b>	6	16	11	5	99	0.65
<b>Rain</b>	27	7	4	0	137	0.90
<b>Water temperature</b>	13	17	6	2	117	0.77
<b>Wave direction</b>	6	12	7	13	87	0.57
<b>Wave height</b>	16	12	4	6	114	0.75
<b>Wind direction</b>	6	9	13	10	87	0.57
<b>Wind speed</b>	11	16	7	4	110	0.72
<b>UV Index</b>	11	12	6	9	101	0.66

When deciding **whether to enter the water**, how important are the following **onsite conditions** in your decision-making?

Maximum Raw Score		304				
n		76				
Answer Choices	Very important	Somewhat important	Somewhat unimportant	Very unimportant	Raw Score	Onsite Condition Importance Score
Air temperature	39	32	4	1	261	0.86
Cloud cover	3	40	21	12	186	0.61
Rain	51	11	9	5	260	0.86
Water temperature	28	38	8	2	244	0.80
Wave direction	9	26	13	28	168	0.55
Wave height	31	29	10	6	237	0.78
Wind direction	7	22	26	21	167	0.55
Wind speed	22	30	17	7	219	0.72
UV Index	15	25	12	23	182	0.60

## Calculations

### Confidence and Margin of Error Calculation

Population (N): 15,908

Sample size (n): 279

Proportion for maximum variability (p): 0.5

Z-score for 95 % confidence: 1.96

Formula:

$$\text{Margin of Error} = Z \times \sqrt{[ p(1 - p) / n ] \times \sqrt{[ (N - n) / (N - 1) ]}}$$

Inputs substituted:

$$\text{Margin of Error} = 1.96 \times \sqrt{[ 0.5(1 - 0.5) / 279 ] \times \sqrt{[ (15,908 - 279) / (15,908 - 1) ]}}$$

Solved result:

Margin of Error  $\approx$  **0.057**, or  **$\pm 5.7$  %**

Interpretation: At a 95 % confidence level, the survey's percentages are accurate to within approximately  $\pm 5.7$  percentage points of the true value for the Saugeen Shores population.

### Required Sample Size for 95% Confidence and $\pm 5\%$ Margin of Error

Population (N): 15,908

Desired margin of error (e): 0.05

Proportion for maximum variability (p): 0.5

Z-score for 95% confidence: 1.96

Formula:

$$\text{Required Sample Size} = \left[ \frac{N \times Z^2 \times p(1 - p)}{e^2 \times (N - 1) + Z^2 \times p(1 - p)} \right]$$

Inputs substituted:

$$\text{Required Sample Size} = \left[ \frac{15,908 \times 1.96^2 \times 0.5(1 - 0.5)}{0.05^2 \times (15,908 - 1) + 1.96^2 \times 0.5(1 - 0.5)} \right]$$

Solved result:

Required Sample Size  $\approx$  375 completed responses

Interpretation: To achieve a 95% confidence level with a  $\pm 5\%$  margin of error for the Saugeen Shores population, the survey would have needed about 375 valid responses from a true random sample.

## Ethics clearance details and funding acknowledgements

### Ethics Clearance

Research Ethics Board (REB) approval for this study was granted by the University of Waterloo on June 2, 2025 and is valid through June 3, 2026 (REB #47358). Following this approval, the project was reviewed for submission to the Georgian College REB and was confirmed as exempt because the University of Waterloo approval was fully aligned with Georgian College research ethics policies.

### Funding Acknowledgements

This research is funded by the Natural Sciences and Engineering Research Council of Canada (NSERC) College and Community Social Innovation Fund, grant number CCSIF - 2024 - 00013.

# Summer 2025 FlashVote Report

## Smart Beach Project

Summer 2025 FlashVote Report (September, 2025)

### Introduction

The Beach Use flash vote survey was a collaboration between the University of Waterloo, Georgian College and the Town of Saugeen Shores. This explores how technology can enhance safety and visitor experience at local beaches. As part of this initiative, a survey was administered by FlashVote and sent out to community members who were registered with FlashVote in the Town of Saugeen Shores, to capture public perspectives on beach use, swimming behaviors, and desired in-app safety features. This FlashVote served as a rapid engagement tool to complement a broader survey.

### Methodology

#### *Survey Administration*

The FlashVote survey was administered online between June 16-18, 2025, through the FlashVote community platform. This method enabled rapid distribution and collection of community insights within a 48-hour period, ensuring timely feedback.

FlashVote surveys are intentionally designed to be completed in about one minute, maximizing value while minimizing effort for participants. All responses are collected anonymously and handled securely.

To maintain credibility, FlashVote operates independently of government and applies thorough, non-partisan quality control measures to every survey. The platform engages residents through email, text, and phone, and verifies participation using physical address filters to ensure local results are accurate and reliable.

Participation in FlashVote is voluntary, with community members opting in to provide input on local issues. For this project, FlashVote was selected because it allowed the Town of Saugeen Shores and Georgian College to quickly capture community perspectives through a condensed version of the broader Smart Beach survey.

#### *Survey Design*

The FlashVote represented a condensed version of a broader beach-use survey developed by Georgian College as part of the Smart Beach project. To align with local priorities, the Town of Saugeen Shores and FlashVote selected five key questions from the larger survey. These questions were chosen to capture behaviors, safety factors, and desired app features most relevant to the project's objectives, while keeping the survey brief to encourage strong participation.

## *Target Population and Sampling*

The target population for this survey was residents of Saugeen Shores, ON, who were part of the FlashVote panel. According to the 2021 Census, Saugeen Shores had a population of 15,908 residents. It is important to note that the survey was conducted during late spring/early summer, when the community typically experiences seasonal population increases due to tourism and seasonal residency. FlashVote panels consist of community members who volunteer to provide feedback on local issues, allowing for rapid and representative engagement. While this approach provides valuable community insights, results reflect the views of engaged residents and may not perfectly capture the full demographic diversity of the broader population.

## *Response Rate*

Response rates were examined using both Census population figures and invite-based participation. According to the 2021 Census, Saugeen Shores had a population of 15,908. Of the 839 FlashVote members from this community who were invited to participate in the 48-hour survey, 526 responded, representing a 55% completion rate of those invited. An additional 61 participants also took part, resulting in 587 total responses, or about 3.7% of the Census population.

## *Margin of Error*

The margin of error provides insight into the accuracy of survey results, indicating how closely the sample reflects the views of the overall Saugeen Shores population. Based on the 526 responses collected, out of a total population of 15,908 (2021 Census), the margin of error at the 95% confidence level is approximately  $\pm 4.2\%$ .

In practical terms, this means the reported results are expected to fall within  $\pm 4.2$  percentage points of the actual population values in 95 out of 100 instances. This margin of error is within the typical 5% threshold, indicating that the survey results are statistically significant and provide a reliable reflection of the population's opinions and behaviours. (See Appendix for full calculation.) This size is generally considered strong for community level surveys, as it indicates a high level of reliability in the findings. While no survey can perfectly capture the views of every resident, this margin suggests that the results provide a solid and trustworthy representation of community perspectives.

## *Data Handling and Security*

Responses were collected anonymously and securely through the FlashVote platform. Individual responses were kept confidential and cannot be traced back to any participant. Only the summarized data was shared with Georgian College and the Town of Saugeen Shores. The project adhered to Georgian College's Research Ethics Board requirements for research involving human participants.

## *Limitations*

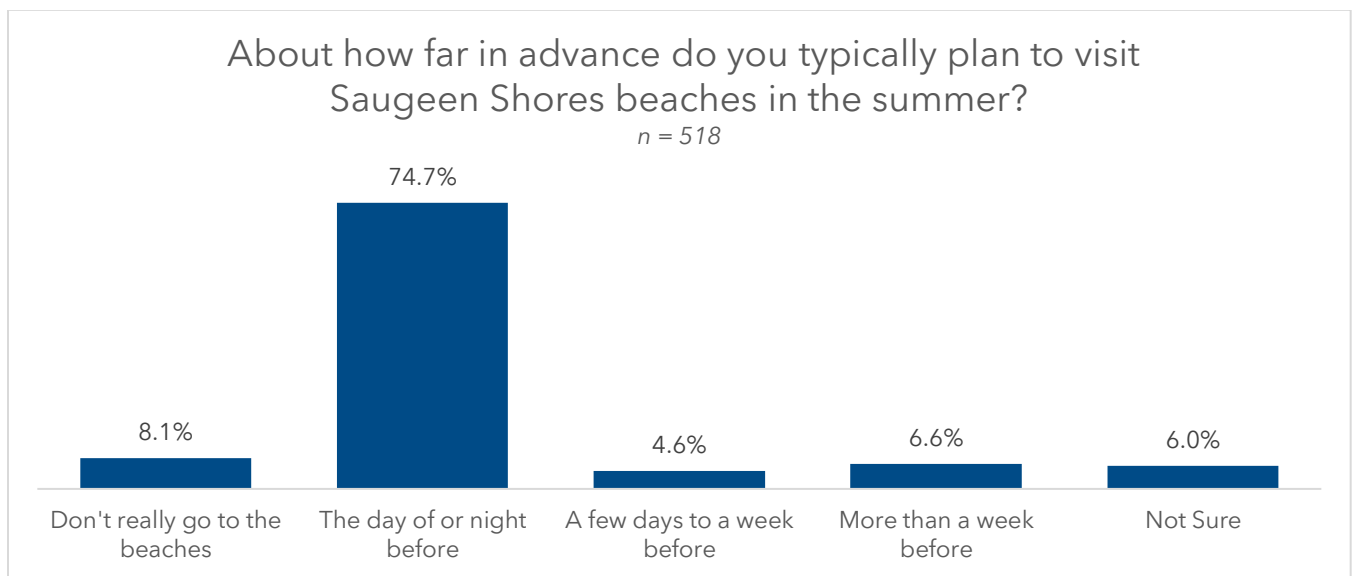
The short survey window of 48 hours may have excluded residents who were unavailable during that period, potentially limiting participation from certain segments of the community.

Since the survey relied on FlashVote’s pre-registered panel, the results reflect that specific community sample. As a result, findings may not be fully generalizable beyond Saugeen Shores.

Additionally, the survey was limited to five questions. While this allowed for rapid collection of insights, it did not capture the full range of topics explored in the broader Georgian College survey.

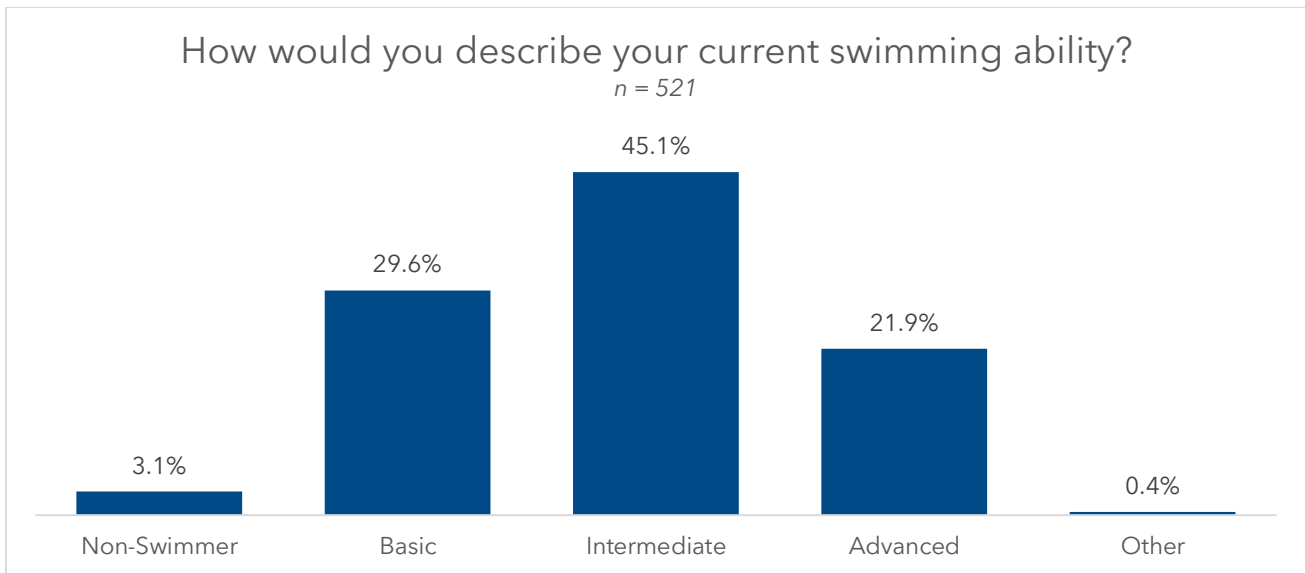
## Findings

### Q1 - Planning for Beach Visits



The survey results show that 75% of respondents make the decision to go to the beach either on the same day or the night before. Only a small portion (7%) of respondents reported planning their visit more than a week in advance. This indicates that beach visits are largely spontaneous. As a result, timely conditions such as weather, water temperature, and facility status are likely to have a strong influence on visitor behavior.

### Q2 - Swimming Ability

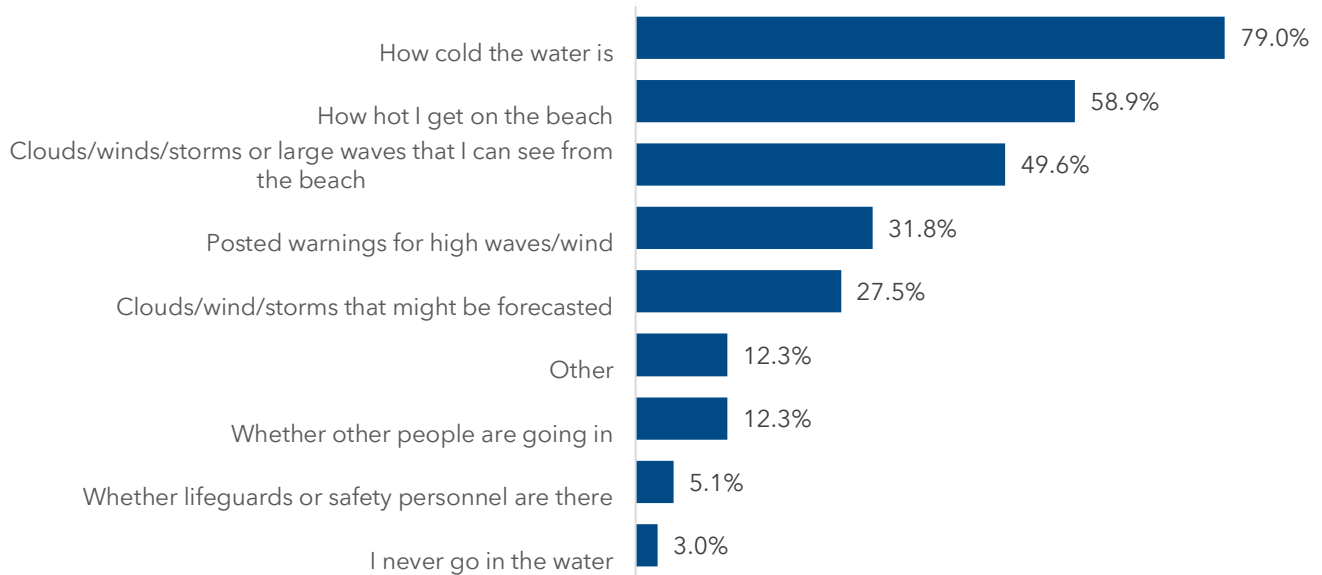


Swimming skills vary across respondents. A small number of individuals (3%) identified as non-swimmers, while nearly one-third (30%) of respondents described themselves as having only basic swimming ability. A majority indicated they are either intermediate (45%) or advanced swimmers (22%), suggesting that while many feel comfortable in the water, roughly one in three people may still be vulnerable to risks. This group is likely more sensitive to safety considerations, including the presence of lifeguards, clear signage, and accessible safety notifications. These concerns directly connect to the factors affecting water entry and the features residents want in a beach safety app.

### *Q3 - Factors Affecting Going in the Water*

## When you go to the beach, which factors most affect your decision to go in the water?

n= 472 r= 1319



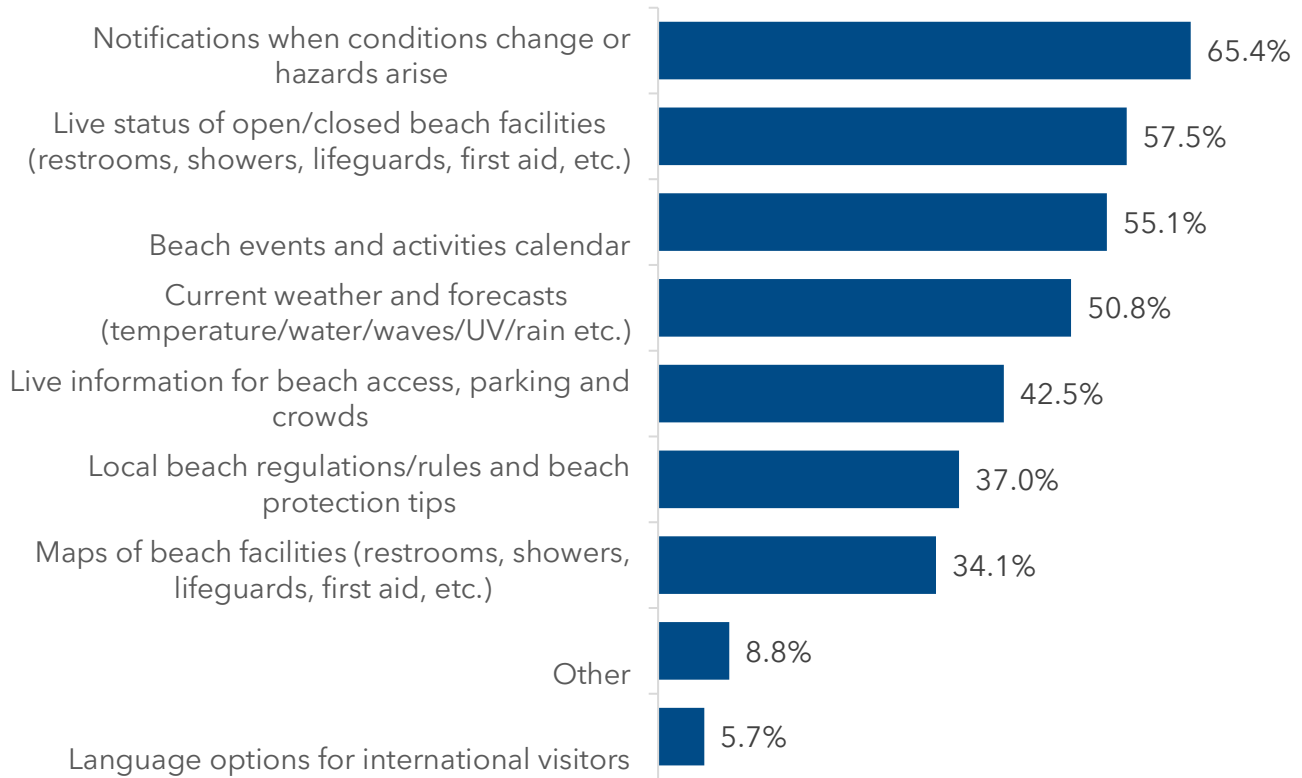
When asked what influences their decision to go into the water, the vast majority of respondents pointed to comfort-related factors, with 79% citing water temperature and 59% mentioning hot weather on the beach. Half of respondents (50%) also said that visible conditions, such as large waves, affect their choices, while 28% noted that weather forecasts play a role. Fewer respondents emphasized safety features, though nearly one-third (32%) said posted warnings influenced them, and a small share (5%) mentioned the presence of lifeguards. These results suggest that while comfort factors outweigh direct safety concerns for most beachgoers, environmental conditions both visible and forecasted remain closely tied to perceptions of risk.

Open-ended responses, however, revealed a strong concern around water quality and E. coli warnings. Many participants reported that posted bacteria advisories, pollution after heavy rainfall and muddy or murky conditions are primary factors in deciding whether to swim. Mentions of E. coli levels and bacteria related warnings were among the most frequent themes in these responses, highlighting that while not always captured in the closed-ended survey options, water quality concerns are top of mind for a substantial portion of beachgoers.

### *Q4 - Desired Features in a Beach Safety App*

## What features would you want the most in a dedicated beach safety app?

*n= 457 r= 1631*



Respondents were clear in expressing a preference for real-time, actionable information over static details. A majority (65%) wanted notifications about hazards and 58% of respondents wanted live updates on facility status. Similarly, 42% also reported the importance of live information for beach access, parking and crowds. Many (51%) also valued access to weather conditions and over half of the respondents (55%) valued access to a calendar of local events. Fewer (37%) prioritized rules and regulations, and 34% valued facility maps, suggesting that while these are useful, they are not essential.

A small but notable group around 6% also highlighted the importance of having language options available in the app. While this represents a minority of respondents, it reflects the presence of international visitors and underlines the need for multilingual communication as part of a broader tourism and visitor strategy. These findings mirror the spontaneity highlighted in beach planning decisions and the condition driven choices that influence whether individuals go into the water, while also pointing to opportunities to make the app more inclusive for visitors from outside the community.

The open-ended responses expressed a strong desire for water quality information, including E. coli levels, coliform counts, and notifications of beach closures due to contamination. Water temperature

was another highly requested feature, often linked to safety and comfort. In addition, several respondents highlighted the importance of visible safety measures, such as lifeguards, life rings, and clear emergency information, with some noting that recent incidents could have been prevented with stronger safeguards.

At the same time, there was also a vocal group resistant to the idea of a dedicated app, calling it unnecessary, a waste of taxpayer money, or something that could attract more tourists rather than serving residents. These participants often emphasized that enforcement of dog bylaws, beach cleanliness, and public safety infrastructure were more urgent priorities than investing in digital tools.

### *Q5 - Open Ended Responses*

Many respondents called for stricter enforcement of existing bylaws, particularly around issues such as smoking, dogs, and bikes on the beach. With some respondents saying:

- “No smoking on the beach should be enforced and there should be signage. Other municipalities have much clearer signage for basic safety rules.”
- “Please maintain the NO Dogs on our beaches during the summer except in designated areas.”

Some raised concerns about closures and maintenance, noting frustrations with bathrooms, garbage, and other facilities. A number of respondents expressed a desire for lifeguards during peak season, while others asked for clearer signage and more consistent bylaw patrols. One respondent stated that they we don't need a high tech app for beach safety but rather prefer that beachgoers are educated on core safety messages.

In addition, multiple respondents specifically mentioned repeated beach closures and called for greater transparency around why these occur. While the issue was not always explicitly identified as “E. coli,” water quality appears to be an underlying concern. One respondent stated, “When bacteria levels are high, and beaches are closed, we should have more frequent testing to show when water is safe again. Last year, we waited a week after they were posted as closed. In a tourist town where the beach is a priority, testing should be a priority.” This suggests that future communications should not only provide timely updates about closures but also proactively explain the reasons behind them and any remediation steps being taken to keep beachgoers informed.

### *Findings*

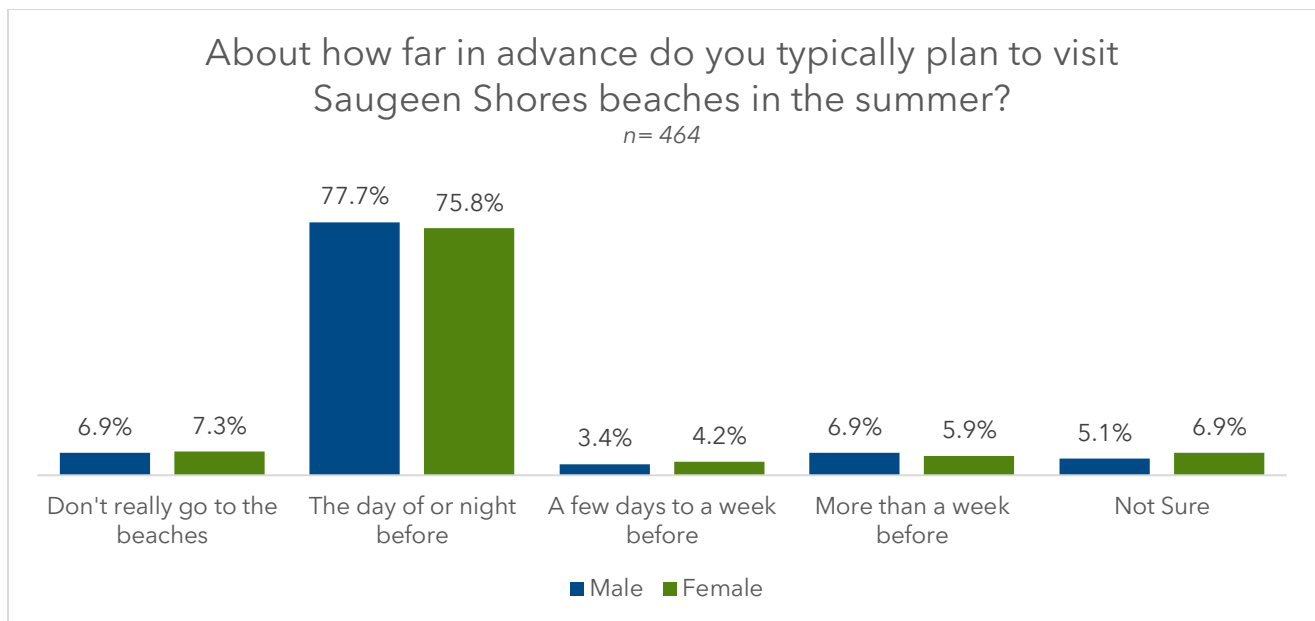
The survey reveals that beach visits are largely spontaneous (Q1), which links directly to the strong demand for real-time updates through a beach safety app (Q4). Since for most visitors going to the beach is a last minute decision, immediate information on weather, hazards, parking, and facility status becomes essential.

Swimming ability (Q2) also connects closely with safety expectations in later questions. While many identify as intermediate or advanced swimmers, a sizable share report only basic or no ability, explaining the demand for lifeguards, signage, and accessible safety guidance noted in Q3 and Q5.

Comfort factors (Q3), especially cold water and hot weather are consistent drivers of decisions to swim, and this aligns with the interest in app features like weather forecasts and hazard notifications (Q4). At the same time, safety signals such as posted warnings and environmental alerts are especially valued by less confident swimmers, women, and non-owners, reinforcing how comfort and safety considerations overlap.

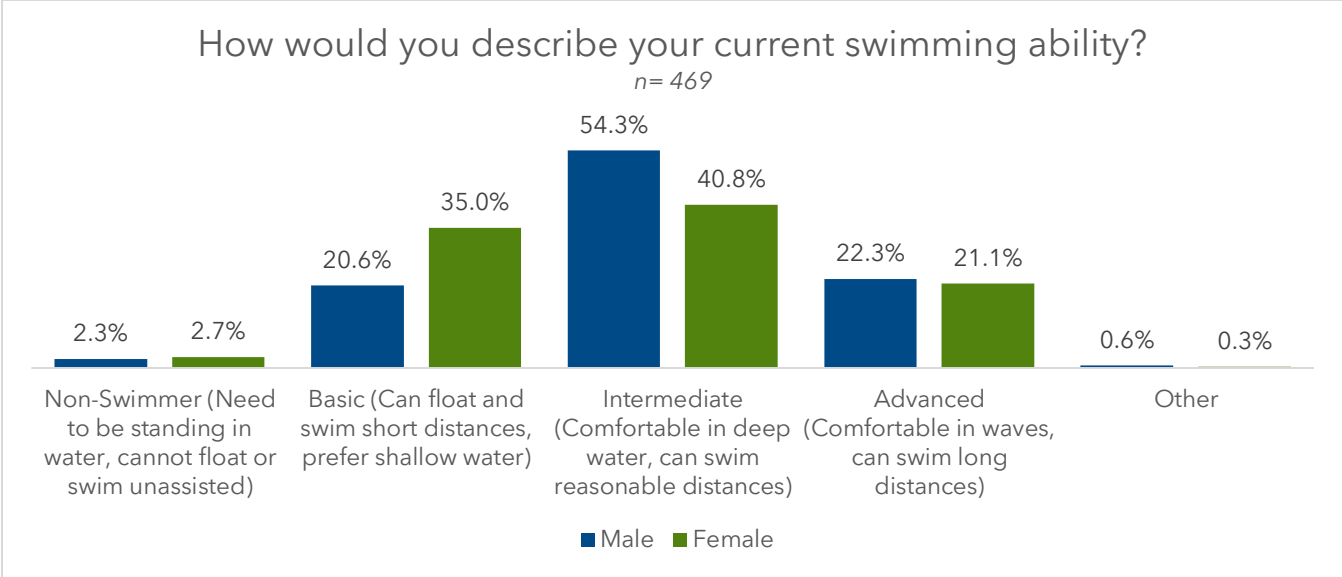
Finally, while digital tools are highly valued, responses across questions emphasize that technology cannot replace on-site measures. Requests for lifeguards, bylaw enforcement, and clear regulations highlight the need for physical management alongside real-time digital updates.

### Q1 - Planning for Beach Visits (Gender)



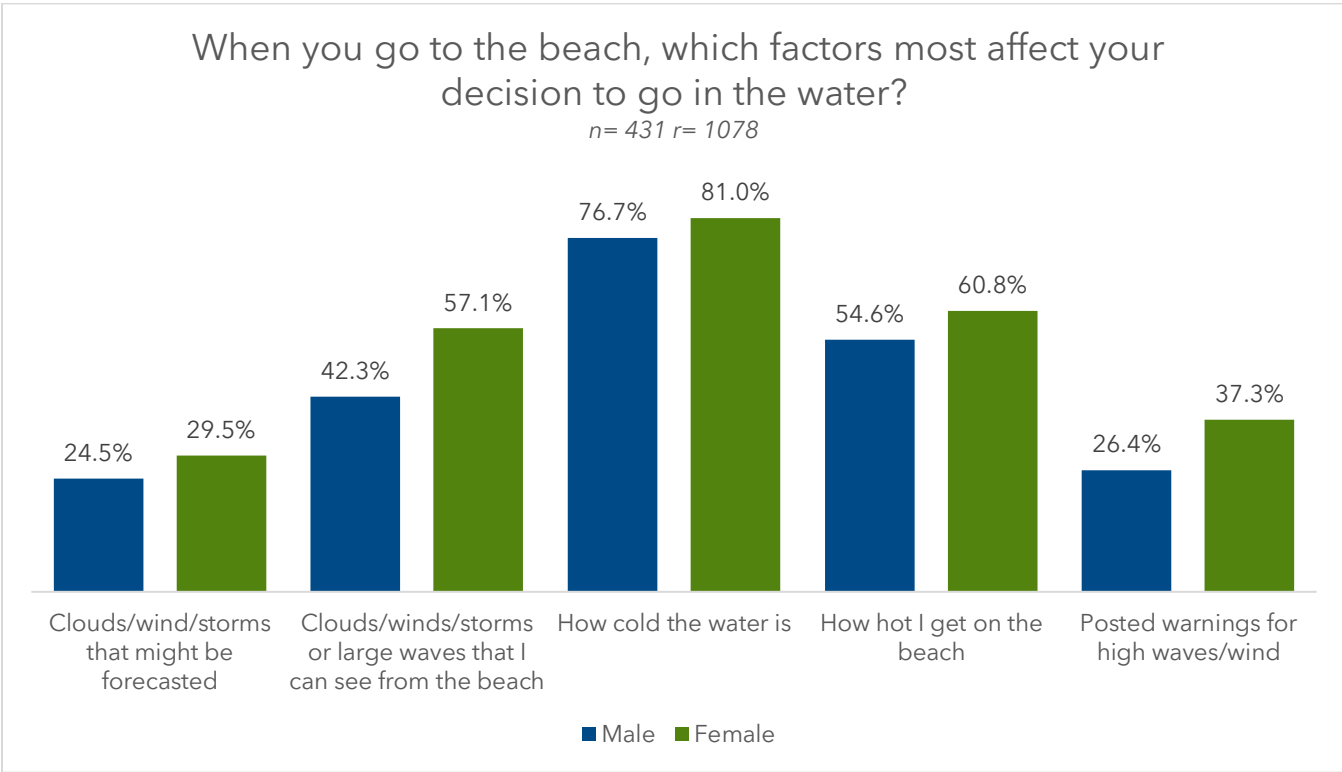
Beach use is largely spontaneous among both men and women, with similar patterns reported across genders in this category. Most participants reported planning visits at the last minute, with 78% of men and 76% of women deciding either the day of or the night before. Only a small minority about 6 to 7 percent said they plan more than a week in advance. In addition, about 7 percent of respondents male and female respondents alike indicated that they do not typically visit beaches at all.

### Q2 - Swimming Ability (Gender)



Swimming ability differs noticeably by gender. Overall, intermediate swimmers make up the largest group, representing 45% of the total respondents. Men were more likely to describe themselves as confident swimmers, with 54% identifying as intermediate and 22% as advanced. Women, by contrast, were less confident: 41% identified as intermediate and 21% as advanced, while a larger share 35% compared to 21% of men described themselves as basic swimmers. Non-swimmers represented only a very small minority in both groups (2-3%).

*Q3 - Factors Affecting Going in the Water (Gender)*



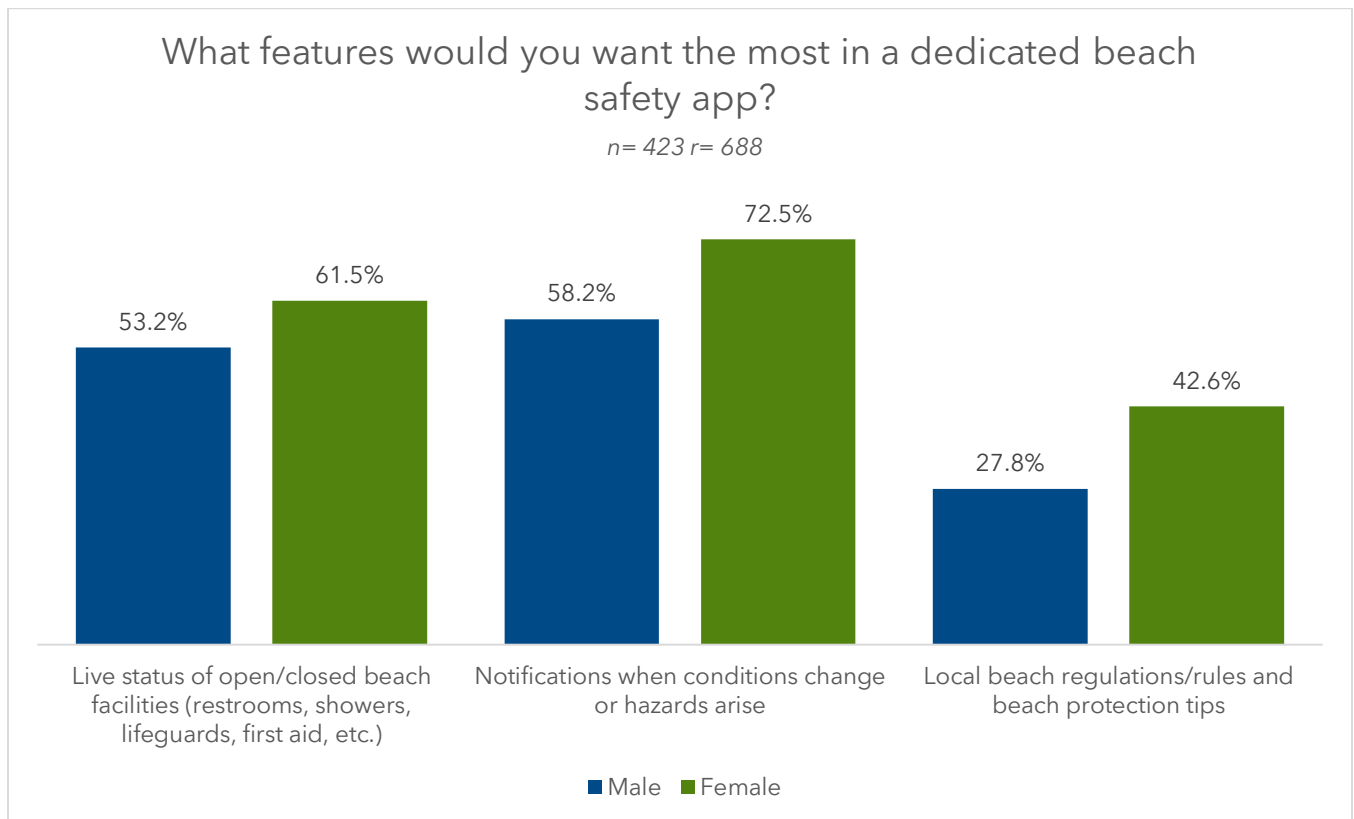
**Disclaimer:** The graph presents only the most relevant factors to avoid clutter and ensure readability. Some less frequently mentioned or less directly related influences were excluded from visualization but are available in the full dataset.

Comfort factors such as cold water and hot weather were the most common influences on the decision to swim, but women were consistently more likely than men to cite these as important. For instance, while a large majority of both groups were deterred by cold water, the effect was slightly stronger among women (81%) than men (77%). A similar pattern appeared with heat on the beach, where 61% of women said it influenced their decision, compared with 55% of men.

Gender differences emerged more strongly in relation to safety signals and environmental warnings. Women were more likely to report being influenced by posted warnings for high waves or wind (37% compared to 26% of men, an 11-point gap). Women were also more sensitive to visible storm activity and large waves, with 57% noting this as a factor compared to just 42% of men - a 15-point gap.

Forecasted conditions such as clouds, wind, or storms had the lowest impact overall, but still showed a slight gender difference: 30% of women versus 25% of men said forecasts affected their decision to swim

#### Q4 - Desired Features in a Beach Safety App (Gender)



**Disclaimer:** *The graph presents only the most relevant factors to avoid clutter and ensure readability. Some less frequently mentioned or less directly related influences were excluded from visualization but are available in the full dataset.*

There was strong interest in app features that provide real-time and safety-focused information, with women consistently showing higher levels of demand than men. Hazard notifications emerged as the most popular feature overall, selected by 58% of men and 73% of women, highlighting a notable 15-point gender gap. Similarly, women showed stronger interest in local beach regulations and environmental protection tips (43% compared to 28% of men), suggesting greater engagement with rules and awareness initiatives. In contrast, men's preferences remained more moderate across all categories, with their highest interest still falling well below women's for safety-related tools. Live updates on the status of beach facilities, such as restrooms, lifeguards, and first aid, were valued by both groups, with 53% of men and 62% of women identifying this as important. The 9-point gap shows that women place more importance on knowing these facilities are available and working, which highlights how safety and comfort play a bigger role in their beach experience.

## **Gender-Based Summary of Findings**

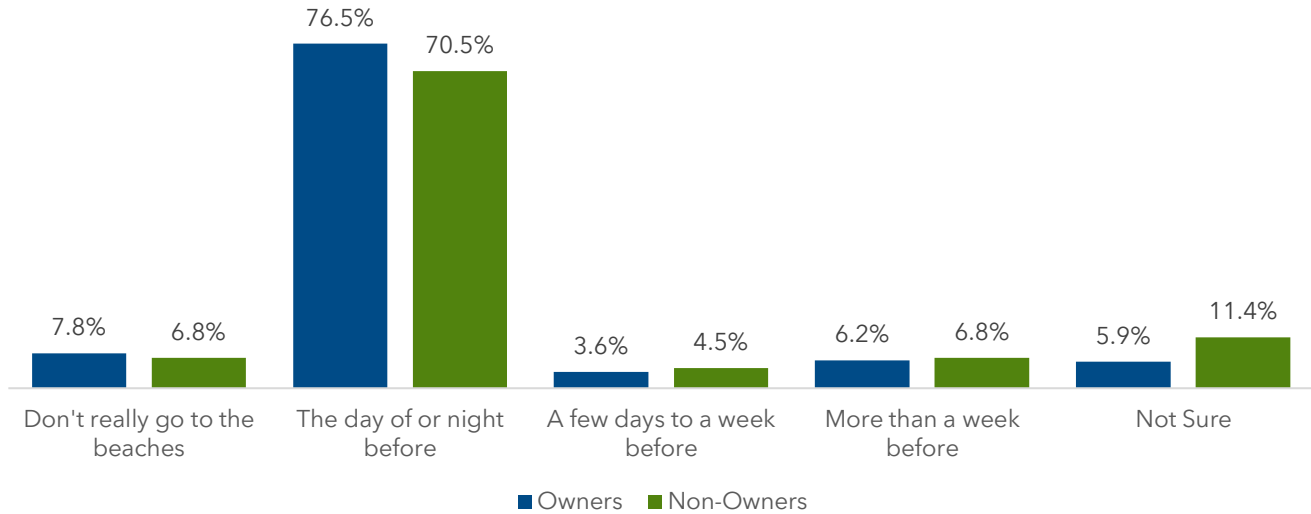
The analysis highlights differences between men and women in how they plan visits, assess safety, and prioritize information, but the goal is not to create separate experiences. Instead, these gender patterns reveal what is most valued overall and where improvements can strengthen services for everyone. Women's stronger focus on safety, environmental risks, and reliable facilities suggests these are areas where clearer communication and better tools would benefit all visitors. At the same time, comfort factors like water temperature and heat, important to both groups, reinforce the need for timely and accessible updates.

While gender differences highlight varying levels of sensitivity to safety, comfort, and facility reliability, these findings point less to the need for separate approaches and more to opportunities for universal improvement. By strengthening real-time updates, enhancing clarity around safety risks, and ensuring reliable communication of rules and facility status, beach authorities can address the areas most valued by women while simultaneously improving the overall experience for all visitors. In this way, insights drawn from gender patterns serve as a guide to building a safer, more responsive, and more inclusive environment for every beachgoer.

### *Q1 - Planning for Beach Visits (Owners/Non-Owners)*

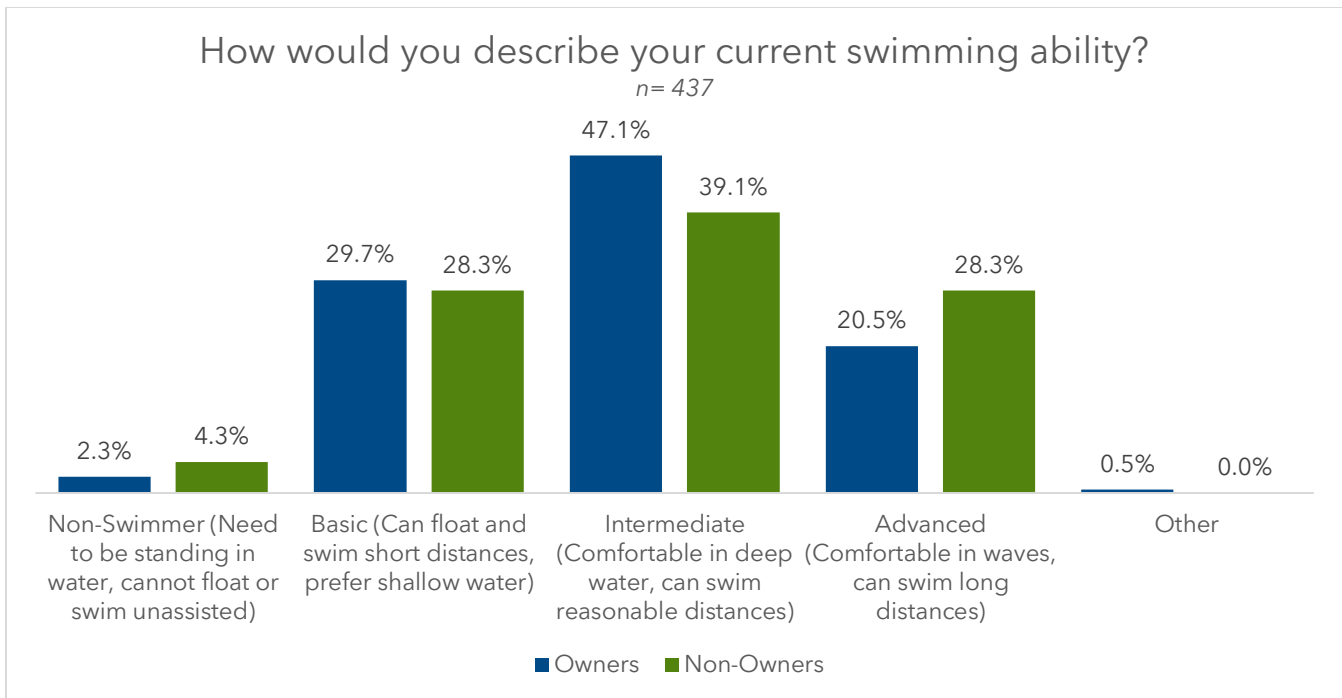
## About how far in advance do you typically plan to visit Saugeen Shores beaches in the summer?

n= 431



Both owners and non-owners of property in Saugeen Shores tend to plan their beach visits at the last minute, but there are some notable differences between the two groups. A large majority of owners (76%) reported deciding to go the day of or the night before, compared to a slightly smaller share of non-owners (70%). This 6 point gap suggests that owners are somewhat more spontaneous in their visit planning than non-owners. Similarly, 6% of owners plan more than a week in advance, compared with 7% of non-owners. These small differences suggest non-owners may be marginally more likely to plan ahead than owners, even though both groups overwhelmingly favor last minute decisions. A clear distinction emerges in the level of uncertainty: 11% of non-owners selected "not sure," nearly double the 6% of owners. This indicates that non-owners are less predictable in their visit behaviors, perhaps because their beach attendance depends on external factors such as whether, travel, accommodations, or availability.

### *Q2 - Swimming Ability (Owners/Non-Owners)*



A clear distinction emerges between owners and non-owners in their reported swimming abilities. Owners were more likely to identify as intermediate swimmers, with nearly half (47%) placing themselves in this category compared to 39% of non-owners. By contrast, non-owners were more likely to identify as advanced swimmers, with 28% reporting this level of ability versus only 20% of owners - an 8-point gap that may reflect the fact that non-owners are more often visitors or seasonal residents who actively choose to spend time at the beach and may therefore include a greater share of confident swimmers. At the lower end of the spectrum, the share of basic swimmers was almost identical across groups (30% of owners and 28% of non-owners), while non-swimmers were slightly more common among non-owners (4%) than owners (2%).

### *Q3 - Factors Affecting Going in the Water (Owners/Non-Owners)*

Owners and non-owners showed distinct patterns in what influenced their decisions to swim. Cold water was the leading factor for both groups, but it was slightly more common among owners (81%) than non-owners (75%). The largest gap appeared around heat on the beach, which shaped decisions for 62% of owners but only 33% of non-owners - a 29-point gap. This suggests that owners are much more likely than non-owners to let temperature at the beach influence their decision to go into the water.

By contrast, non-owners placed more emphasis on forecasts affecting their decision to go into the water, with 45% citing clouds, wind, or storms compared to just 25% of owners, a 20-point gap. Non-owners were also more likely to consider visible storms or large waves (58% vs. 51%), reinforcing their stronger reliance on environmental warnings.

### *Q4 - Desired Features in a Beach Safety App (Owners/Non-Owners)*

Both owners and non-owners expressed strong interest in a dedicated beach safety app, but their priorities diverged in notable ways. Hazard notifications were the top feature for both groups, though demand was stronger among non-owners (78%) compared to owners (66%), a 12-point gap. This highlights how non-owners place greater emphasis on proactive safety alerts

Owners, by contrast, showed higher interest in features tied to local amenities and community life. Nearly 60% wanted live updates on beach facilities (restrooms, lifeguards, first aid), compared to only 35% of non-owners, a striking 25-point gap. Similarly, 57% of owners valued a beach events and activities calendar, versus 44% of non-owners, reflecting their deeper connection to local infrastructure and programming.

Other features showed smaller but telling differences. Weather and forecasts were important across both groups, but owners expressed slightly stronger interest (52% vs. 48%). Maps of facilities were also more popular among owners (36% vs. 25% of non-owners). On the other hand, non-owners leaned more toward regulatory information, with 26% wanting local rules and environmental tips, compared to 18% of owners. Both groups showed relatively low demand for language options and “other” features, though non-owners were slightly more likely to suggest additional needs (12% vs. 9% of owners).

## **Owner/No-Owner-Based Summary of Findings**

The analysis of beach behaviors and preferences among property owners and non-owners in Saugeen Shores highlights both commonalities and meaningful differences. While both groups share a spontaneous approach to beach visits and value safety information, their planning habits, swimming abilities, risk perceptions, and app feature preferences suggest that tailored strategies could improve engagement and safety for each group. Owners tend to focus on comfort and connection to local amenities, while non-owners are more attuned to environmental warnings and proactive safety measures. Together, these insights provide a clear roadmap for designing initiatives and tools, such as a beach safety app that can serve diverse needs while reinforcing community safety and enjoyment.

Beach behaviors show common patterns but also key differences, owners focus more on comfort, amenities, and community ties, while non-owners place greater importance on safety alerts and clear rules. A flexible approach that blends real-time safety alerts with tailored information on facilities, events, and travel conditions will best serve both groups.

### *Key Takeaways & Recommendations*

- **Planning for Beach Visits:** Since most beach visits are spontaneous, improvements should emphasize real-time updates on safety, comfort, and amenities. This ensures owners, non-owners, men, and women alike can make timely and informed decisions, while also accommodating the greater uncertainty shown by non-owners.
- **Swimming Ability:** Safety communication should be inclusive of all ability levels, providing visible support and reassurance for less confident swimmers while offering more advanced information

for stronger swimmers. This approach improves overall visitor confidence, regardless of gender or residency status.

- **Factors Affecting Going in the Water:** Clear and visible hazard warnings, forecasts, and environmental alerts are critical, as women and non-owners place greater weight on these signals, while owners are more influenced by comfort factors such as heat. Strengthening both hazard alerts and comfort-related updates will ensure all visitors are better supported in their decision-making.
- **Desired Features in a Beach Safety App:** A modular app design that foregrounds hazard notifications while also providing reliable facility updates, community events, and clear regulations will address the priorities of both genders and both owner groups. Balancing proactive safety tools with local amenity information makes the app practical, trustworthy, and widely appealing.

## Appendices

### Survey Questions

#### Survey

1. About how far in advance do you typically plan to visit Saugeen Shores beaches in the summer?
  - a. Don't really go to the beaches
  - b. The day of or night before
  - c. A few days to a week before
  - d. More than a week before
  - e. Not Sure
2. How would you describe your current swimming ability?
  - a. Non-Swimmer (Need to be standing in water, cannot float or swim unassisted)
  - b. Basic (Can float and swim short distances, prefer shallow water)
  - c. Intermediate (Comfortable in deep water can swim reasonable distances)
  - d. Advanced (Comfortable in waves, can swim long distances)
  - e. Other [Open ended response]
3. When you go to the beach, which factors most affect your decision to go in the water, if any?  
(You can choose up to FOUR, if any)
  - a. Clouds/wind/storms that might be forecasted
  - b. Clouds/winds/storms or large waves that I can see from the beach
  - c. How cold the water is
  - d. How hot I get on the beach
  - e. Whether other people are going in
  - f. Whether lifeguards or safety personnel are there
  - g. Posted warnings for high waves/wind
  - h. I never go in the water
  - i. Other [Open ended response]
4. What features would you want the most in a dedicated beach safety app, if any? (You can choose up to FIVE, if any)
  - a. Current weather and forecasts (temperature/water/waves/UV/rain etc.)
  - b. Maps of beach facilities (restrooms, showers, lifeguards, first aid etc.)
  - c. Live status of open/closed beach facilities (restrooms, showers, lifeguards, first aid, etc)
  - d. Notifications when conditions change or hazards arise
  - e. Live information for beach access parking and crowds
  - f. Beach events and activities calendar
  - g. Language options for international visitors
  - h. Local beach regulations/rules and beach protection tips
  - i. Other [Open ended response]
5. Any other comments or suggestions about beach use or safety?

[Open ended responses only]

### **Full List of Open-Ended Responses to Question 3**

Survey Question: "When you go to the beach, which factors most affect your decision to go in the water, if any? (You can choose up to FOUR, if any)"

Disclaimer: The following open-ended responses are copied verbatim from the survey. They are presented exactly as written by participants, with only identifying information removed to protect privacy. Any spelling, grammar, or relevance issues reflect the original submissions and do not represent the views or edits of the research team.

1. Posted by the Health Unit for bacteria
2. Water Quality postings, especially after a rainstorm--that is my #1 reason
3. Water quality
4. Warning for ecoli
5. Any signs saying not good for swimming
6. Bacteria levels
7. If recent rains, waves, muddy river water then don't swim because of bacteria
8. How clean the water looks
9. Water quality warning
10. And whether the beach is busy. Volleyball curtails space and noise for kids and handicap
11. Bacteria warnings
12. I always go in the water
13. How stirred up the water is and e-coli
14. Where the sand is in the water! Avoid rocks when possible.
15. How clean/free of seaweed the water is
16. Bacteria levels posted
17. Roughness of the water or behaviour of ppl (I am a TBI survivor)
18. Lightning
19. Posted water quality warnings
20. Pollution, post storm uncertainty.
21. If there is signs posted for e-coli
22. Bacteria warnings and how busy the beach is
23. Can my dog join me
24. The amount of people on the beach
25. I like jumping in the waves with the kids when it is windy
26. Any signs showing water is not safe for swimming.
27. Crowded beach and number of people in the water, especially with paddle boards, blowups, etc.
28. The colour/muddiness/clarity of the water, pollutants/bacteria, from river/storm sewer runoff.
29. Rarely go in water, just walk the beach
30. Any signs about e coli or cleanliness of water
31. How many tourists are flooding the beach

32. If it's too busy I don't bother
33. Water quality advisory
34. whether dogs are on the beach, and if they're running free
35. If there is a lot of goose poop present.
36. How clear/cloudy the water is
37. If the water is murky
38. If there are lots of people I don't bother. We need to do more to encourage tourists NOT to come!
39. Too much lake goop which happens occasionally
40. To play with grandkids
41. Bacteria warnings
42. Recent rainfall polluting the water
43. If there's been a large rain, I stay out of the water
44. THE AMOUNT OF DOGS STILL ON THGE BEACH NO ENFORCEMENT
45. Whether my children want to
46. Water quality
47. Not a beach user
48. I like to find areas that are all sand and mostly rock free so we can wade fairly far in the water.
49. Water quality
50. The older I get, I prefer to swim in a pool.
51. I seek out wind for kitesurfing
52. Temperature of the water.
53. How dirty the water is from the Saugeen River
54. How clean the water is
55. I swim when I want and none of these factors have any impact on my decision
56. Main reason: how hot I am
57. Wish we had lifeguards
58. Bacterial levels

#### ***Full List of Open-Ended Responses to Question 4***

Survey Question: "What features would you want the most in a dedicated beach safety app, if any? (You can choose up to FIVE, if any)"

Disclaimer: The following open-ended responses are copied verbatim from the survey. They are presented exactly as written by participants, with only identifying information removed to protect privacy. Any spelling, grammar, or relevance issues reflect the original submissions and do not represent the views or edits of the research team.

1. E. coli ppm after every rainstorm
2. Water quality
3. Beach closures (too many in the last year)
4. How clean the beach is including public use areas as well as shoreline
5. Water quality. Is it safe to swim.

6. Don't need one!
7. Regular testing of water for health safety and posting.
8. Info to help ppl like emergency numbers, signs of distress, basic rescue tips, also bacteria levels
9. Enforcement regarding dogs in no dog areas
10. lifeguards - the recent drawing was preventable bc it was in the swimming area
11. Water temperature
12. Not really interested in a 'beach app', but if there was one, I would love if it posted water temp
13. Clean and rake North of the River
14. it's tiring having an app for everything. I vote no app
15. Any closures due to water quality
16. I wouldn't use an app.
17. Better enforcement of leash laws. Guidelines to users re interaction with aquatic birds & wildlife.
18. We do not need an app to bring more people to our beaches !
19. Is the first option available on other apps? If so provide a link rather than repost everything
20. This sounds like a complete waste of time and money
21. Enforcement of dogs on the beach
22. Current water temperature
23. I don't want my taxes paying for this. Hard stop.
24. Water quality
25. Coliform count in the water
26. Webcam at each beach to show live water/wave conditions
27. DOG BYLAW ENFORCEMENT
28. Water quality results
29. Water temp and bacteria safety as well as closures
30. Notification of high bacteria
31. I don't use apps.
32. No App needed
33. We don't need app. We need safe and decent parking area. Also need to secure the emergency route.
34. Don't really need a beach app
35. cleanliness of water
36. life rings, mounted every 50 yards
37. Enforce absolutely NO dogs, pets on the beach which is routinely ignored!!!
38. Life guards on duty
39. Dedicated safety app is a waste of taxpayer dollars

### ***Full List of Open-Ended Responses to Question 5***

Survey Question: "What features would you want the most in a dedicated beach safety app, if any?  
(You can choose up to FIVE, if any)"

Disclaimer: The following open-ended responses are copied verbatim from the survey. They are presented exactly as written by participants, with only identifying information removed to protect privacy. Any spelling, grammar, or relevance issues reflect the original submissions and do not represent the views or edits of the research team.

- we don't need a high tech app for beach safety, educate users on core safety messages
- I hate all of the cigarettes and smoking on the beach. More bathrooms would be nice at Eids....porta potties are gross
- No smoking on the beach should be enforced and there should be signage. Other municipalities have much clearer signage for basic safety rules.
- Last year the beach was closed several time! Let's investigate why and how to prevent this from happening. Let's not make Southampton sauble beach
- Change the plan of the building that is currently in limbo- it is taking too long.
- Everything good thx
- I think dogs should be allowed to go to the beach or have set hours. So many people travel with dogs and many other communities allow it. The majority of people look after the dogs and pick up and other things can be just as invasive or disruptive. Saugeen Shores seems anti friendly towards dogs, when I go to other communities they are allowed in many stores as well.
- Need more regular bylaw patrols to enforce re no dogs on beach and no bike riding on the beach sidewalk. The patrols need to happen throughout day hours to catch early and late problems.
- Signage needed to remind people of basic rules....
- Consider reinstating life saving guards from the start of school holidays up until Labour Day Monday.
- We have amazing beaches. Don't over crowd. Don't add undesirable infrastructure.
- Better parking options along Southampton beach and signage
- More signs for people to pick up and take their garbage away. Let dogs on the beach
- Homeless have too strong of a presence at the beaches and they are peeing in the outside showers and using the public bathrooms like there their own personal ones. This is concerning to me and my family for safety and sanitation.
- I would like to see the dog access to the beach moved to June 1st instead of May 1st. as there is no people on the beach and would like to continue to walk with my dogs when there is relatively good weather.
- Port Elgin beach needs to be cleaned up as it is an eyesore and not very tourist attraction friendly. Compared to the Southampton beach it is not kept as clean and in a locals eye, definitely not as favorable to take our families too which is unfortunate since this is why we live here.
- Keep trash cans emptied.
- Accessible garbage cans.
- Regulate the use of fully enclosed tents

- Encourage active transport. Everybody is welcome, but putting all the signs up for trail access on narrow roads is unsafe. Need parking lot brought back at Gobles.
- None
- 1. Patrol people who bring their dogs to the beach, despite the signs. 2.patrol people who have open liquor 3 . Patrol the beach after dark for noise, open fires, open liquor 4. Patrol people who pull their seadoo up on the beach 5. Put an end to large water crafts tying up to each other( sometimes up to 6 of them) for entire afternoon's for partying - they are sooooo noisy and sound carries over the water and makes the beach very unpleasant. 6. Fine people who use the beach as their bathroom
- Let's keep our beaches clean. Always take your garbage with you when you leave.
- We need somewhere that is not all rocks for dogs to be able to go.
- I don't know what this is about, but don't make an app. Why pay for something that is already available and obvious? Honestly. Making work and costs when it is not necessary!
- Would love to see physical beach status information, similar to flags used in resorts in Cuba and other warm weather destinations. Red means stay out of the water, yellow means swim with caution and green means okay.
- I am noticing tents on the beach. Are these allowed? If not, is it possible to have large signs indicating that they are not allowed on the beach. Thank you.
- It would be great to have permanent info regarding tips - I don't think people understand how they work or that they even occur in the big lakes.
- More patrolling of officers. More garbage cans.
- There used to be swimming lessons ON THE BEACH in Southampton (before the amalgamation). They were the best for teaching the kids how to behave in such a big lake! I wish you would bring them back!
- Please maintain the NO Dogs on our beaches during the summer except in designated areas.
- Keep the dogs off the beach.
- What about some water safety sessions for the public. More swim test options for kids and adults.
- We are so fortunate to have the beaches we have and need to maintain them.
- People continue to bring dogs to the beach even when it is posted no dogs. Who monitors this?
- The beach is great and the town does a good job keeping it up
- Lifeguards on duty mid June to end August
- When bacteria levels are high, and beaches are closed, we should have more frequent testing to show when water is safe again. Last year, we waited a week after they were posted as closed. In a tourist town where the beach is a priority, testing should be a priority.
- More parking
- Ignoring the elephant in the room makes for a poor survey. The ramifications of this so-called commercial beach development are many, most being negative. The loss of too many beach parking spots will have a lasting effect on uptown tourism which 95% of EVERY business is impacted.

- Stronger enforcement of dogs on the beach during summer months,
- Build a 1 storey building, not the ugly monstrosity being planned. Re-think this poor decision
- Keep it natural. Stop developing.
- NO fast food chain ie dairy queen. NO convention center..
- During busy summer months the beach is too crowded and there is not easy parking so we just avoid it all together sadly. This summer will be worse with the current beach construction so we definitely stay away!
- You need to provide more street parking near beach access points. Why did you reduce parking near South Street Beach access. Please clean up debris on Southampton beaches. Could you provide a small bridge over the water channels between South Street access and Gerrys Fries areas for beach walkers? Reduce sand build-up under swings at South Street beach? Allow dogs on beaches on a leash in summer as the dog friendly beach areas are hazardous to their paws. Be realistic and cancel the project at Port Elgin beach. We have to admit, it's not moving ahead as proposed.
- I would like to see the town ban all tents on the beach except for ones made specifically for babies. Not really part of this discussion but I would also like to see some major work done at the dog beach in Port Elgin. I understand everyone's concerns with dogs on the public beach but I don't think it's unreasonable to ask that the dog beach at least be some place that's comfortable for people and dogs.
- Beach appearance would be greatly enhanced by removal of huge pile of sand
- Education is key so have an ambassador.summer student/town employee walking the beach advising people of proper beach etiquette. Somehow limit "sprawl" since visitors seem to be arriving/setting up huge tents, shade shelters and still taking up space outside these
- Need to keep boats away from beach areas
- Bring back lifeguards. Get hot dog carts, ice cream vans-and cold beer at the restaurants-can get it al gas ststions, why not at restaurants on harbour and beach
- There is far to much beach grass being planted on the beach, which is now taking over many areas of the sand beaches. Huron & Chantry Beaches historically have never had beach grasses dating back to 1895. I have post cards & photos to prove this information. The beach grass locations collect the sand which normally would be distributed over the entire beach area. Thus, the beach grass mounds grow into large mounds of sand, which may reach 6 to 10 feet high in only a few years. Therefore, the beaches shrike & the shore line becomes rocky. Saugeen Shores need to change their beach plan before it is too late. [Respondent email mentioned, email redacted]
- I would like to see dog use expanded to sandy areas of the beach. The current dog use areas are rocky and dangerous to walk on, I've turned my ankle twice. Perhaps dogs permitted at one end of a sandy area or dogs permitted before 9 am and after 6 pm , just people with families are not on the beach outside of those windows. I understand this is a contentious issue, and done owners do not, sadly pick up. However, I have seen people urinate on the beach. Also there has bird poop, and other animal feces on the beaches. I do not think it is fair to completely

offside ostracise did owners during summer months, dogs are part of our families. I firmly believe a silent majority would allow dogs if they spoke up.

- Too many people on the beach at times. Feels unsafe. Also no lifeguards. Also many people littering or drinking alcohol on beach
- Better patrol of the beach areas. Drinking, people bringing their dogs, parties must be better regulated!!!
- Based on the survey, a few improvements would make the beach more enjoyable and safe. Having lifeguards on duty would provide peace of mind for families. Food trucks would offer convenient meal options. Organized parking would help reduce confusion, and clear warning signs would keep everyone informed about any hazards.
- More Parking and washrooms at all beaches (Dunes)
- I would like more patrols and ticketing for people who have their dogs on the beach, or maybe a way to report loose dogs on a live app.
- The issues most important to me are garbage cleanup, parking and beach cleanliness (no pooping inside tents and no feeding the seagulls).
- I have seen dogs on beach on many occasions. There are signs posted for no dogs during summer. We need more bylaw enforcement officers to patrol.
- A summer calendar showing all planned events, fireworks , music on all beaches would be helpful. Clarity in rules on more signage (for example, rules re dogs - where and when permitted and not, leash requirements while in water or not, who to call (Bylaw, Police) if something is concerning.
- Please keep up or increase the by law officers trying to keep people with their dogs off the prohibited area of 53 beach in the May- October period. I have found the self righteousness and indignation displayed by violators to respectful reminders to be annoying
- We definitely need more beach safety with all the people who are not familiar with water coming to the beach nowadays..there must be quick response when a potential event occurs.....thank you
- Link to weather app
- South Beach pedestrian access point needs clear parking signs/no parking allowed and enforcement of such.
- The boat launch at Saugeen Beach Road and George Street is unsafe. Please stop allowing motor vehicles to launch watercraft in this area. Have police show more presence in that area and conduct ride programs especially at end of the day when picking up watercraft.
- Fix the parking. There isn't enough parking for the amount of tourists we get every year
- Having a well maintained beach is imperative. A good job has been done to remove large wood objects and to keep it tidy. Of concern is that access into the water has become more difficult since rocks have taken over the sand in the water and there is always a few feet of sharp pebbles right at the water's edge.
- There needs to be more excessable parking especially for south street in Southampton
- Sure that the Port Elgin Beach remains a beautiful, accessible family beach. Not a convention centre.

- I like the free safety vests available at Port Elgin beach. Great idea.
- Even though I personally don't have a dog I think there should be a section of beach in the Port Elgin or Southampton area where families can go for the day with their dogs. Not just a rocky beach but part of a sandy beach. In countries like England dogs are considered part of the family and many families don't have someone to take care of their dog so have to bring them on vacation with them.
- Noticed cigarette/marijuana paraphernalia at the beach. Is there a smoking bylaw in place? Beach users often bring their dogs, even where "no pets" signs are posted. Possibility of bites, etc. On crowded beaches it is often noisy when everyone plays music loudly. Is there a noise bylaw?
- I am grateful Saugeen shores doesn't have a lot of Sea Doo/ Jet Ski riders in swimming areas. At other beaches they ride too close to swimmers.
- Residents of Saugeen Shores should be given priority parking and beach use as we pay the taxes in this locality
- Lifeguards are needed on the beaches of Saugeen Shores. Otherwise, how can they be described as 'safe'?
- All beach rules should be enforced to all people.
- Have a bylaw officer patrolling the beaches to enforce rules ( tents, bbqs, dogs etc )
- Racking of the beach should be way more frequent if not daily.
- I don't think an app is needed.
- Life guards Beaches patrolled hourly and fines issued for pets, open fires, alcohol, drug use
- Our beaches need to be better patrolled. People are using the beach as a toilet, drinking alcohol and using drugs. As well, we have large tents, overnight camping and BBQ's or hibachis.
- Accessible portable washroom at Eids Grove.
- I do not like tents, closed change tents or dining tents at the beach. People with tents tend to leave waste, garbage, wrappers and food on site. There should also be no bathing allowed with soaps! The lake is not a personal bath house!!
- A life jacket' library or stand where anyone can borrow life jackets either manned or honour system
- Water temperature would be useful. I don't recall seeing on the previous page
- Charge non residents for street parking
- I am a local resident and love to go for beach walks. I appreciate the effort the town goes to in cleaning up and maintaining our wonderful beaches in Saugeen Shores!!
- Daily monitoring for animals on the beach, garbage pickup and foul language
- Available parking is a big issue for me as there is no parking now at Goble's Grove and parking at the main beach is severely restricted by construction
- No
- Life guards should be present in designated locations so families can have this safety option. Rip tide warnings need to be posted using flags. There must be enforcement of the no dogs on beach, especially during busy weekend times.

- As a year round resident of Southampton I tend to avoid the beach in the summer when it's busy. I much prefer the shoulder seasons to sit and read without the crowds. But I think beach safety is critical especially for families. People visiting for the day may not have checked conditions and it would be good to have that information posted and updated regularly.
- Do not allow tents on beach. Sun umbrellas can be used for shade. Tents sometimes used as toilets; I have witnessed. Also no BBQ on beaches; people bury food waste.
- Dogs should be allowed on leash! People leave way more garbage than dogs do!
- Lifeguards at the main beach on weekends would be good.
- Police the beach. Charge those that litter. Enforce traffic law. Keep the homeless away from North Shore park. Stop the bus from downtown Toronto. Get this town back to the way it was.
- eliminate leash free areas at the beach and other parts of shoreline.
- I know police are busy with more important duties, but having someone monitoring the beach for dogs would be nice. And perhaps some signage about water safety near the break wall, and about how far the buoys actually are... so many people swim out to them without life jackets (unless they're actually good swimmers).
- Get in gear and permit dogs at Miramichi Bay.
- Increased police presence and very steep fines via bylaw for unsanitary behaviour.
- Parking at South Beach is now an issue Any plans to add additional parking and make it safer
- Please groom Port Elgin beach!
- Let the dogs on the beaches.
- dogs should have daytime access somewhere
- Ensure there are enough human waste and dog waste receptacles. Post general kindness and respect rules
- It would be nice if patrols were there to ensure beach rules were being followed.
- GET CEDAR VILLAGE REMOVED FROM THE BEACH THEY ARE A WASTE OF OXYGEN
- Would be a good idea to have lifeguards at the beach
- There should be a designated area and times of day on this vast beach for dogs - on sand, not on rocks and pebbles. People should be warned there is a Federal Bird Sanctuary less than 2 km's away from the main beaches and if they choose to eat in the birds backyard they risk birds trying to eat too and throwing rocks at the birds is completely unacceptable.
- Allow leashed dogs and have garbage cans. Humans litter (broken glass bottles, cigarette butts, food waste, garbage, etc) and smoke ruins beach's far more than few poor dog owners who leave waste. Perhaps the town needs to consider lifeguards that are also enabled as bylaw officers (or both).
- We need more amenities at the beach. Better food options both current restaurants are subpar and I have no idea how they pass food safety inspections.
- We live by the beach, so most of this not relevant. however more beach surveillance to enforce the rules already in place. With more and more people coming to our town and beaches, parking, garbage and loose dogs are a big problem. Thanks to the town staff who keep our beaches in such great condition

- Not a traditional beach user. In the water usually once or twice a summer when it's hot and I want to cool off. Not a sand sitter!
- Use colour coded flags to indicate water conditions. ie green for safe , yellow for use caution , red for dangerous conditions.
- Would love to see guards back at the beach for high use times. They've proven to effective and their presence is important.
- Use the Lifesaving Club and staff the beaches with lifeguards. There are drownings every year in Bruce County and we should be using our resources and world class swimmers to protect our beaches.
- Sunset times
- Keep bbq's off the beach due to hot coals in sand. Also large tents should not be allowed either. Easy Access to washroom facilities would be nice .
- Need to have lots of available parking. A beach convenience store would be nice.
- More enforcement for dogs loose on the beach (I'm ok if they are leashed), people biking on the boardwalk and cooking on the beach!
- People should be able to take their dogs to the beach anytime in the summer especially if the temperature is high.
- Beach patrols.
- Signs warning of undertow and that there is no life guard so you are taking a risk by going out over your head.
- I would love to see very visible and engaging signage in multiple places throughout the beach, boardwalk, and entrances that say "Leave No Trace" with an emphasis and clear messaging on cleaning up and leaving nothing behind. There are not enough trash receptacles around to help facilitate keeping the beach clean. If people have to walk "all the way" to the other side of the beach with all their stuff plus garbage in hand, it's likely they'll just leave it. It needs to be easier (sadly) for people to do so. Or maybe a some kind of incentive to clean up like a bag station with garbage and recycling bags that makes it easy to grab and clean up their spot. I also think signs should be written in other languages as well aside from English as we have many international visitors to the area. French, Hindi, Spanish, Arabic, Cantonese. Thanks for asking for input. Looking forward to another great summer 🌞
- Dogs should be allowed on the beach anytime except during July & August. On a Leash or under control except if in the water. This could be refined to allowed on the beach anytime between 8:00 pm and 8:00 am except during July & August. Fine for not picking up after your dog should be \$500.00
- I would like to see boats and jetski being prohibited from coming in close to shores where public is swimming...more enforcement from bylaw officers. Prohibit large structures (tents) on beach No bbq or loud music More washroom facility as well as trash cans
- As a former lifeguard in Saugeen shores, I would like to see more law enforcement. For the safety of the community. Lifejackets with paddle board use as an example.

- Unfortunately, I see too many examples of large groups parking themselves on the beach all day barbequing and even defecating by digging holes on the beach. It is disgusting and must be regulated by bylaw enforcement and signage.
- Please clean up the storm debris, especially large trunks and stumps
- Keep the beaches in their natural state. Keep signs, etc. on the beach to a minimum.
- We need decent and safe parking lots for the beach users.
- Dog usage
- More recycling options. More Sun shades/ gazebos. Benches near the playground equipment.
- The beach needs more amenities. There should be more to do at the beach than just sun bathing and swimming. More events, community gathering, food options (please no more fries and ice cream), and fun things
- I like to see the beach maintained from the flagpole to South Beach, with special attention to the storm water outflows so that they don't cut up huge sections of the beach.
- Please enforce pet rules for the sake of the pets and beach users.
- Let dogs on before 9a and after 8p in summer.
- Water quality posting regularly
- Thanks for survey I live by the beach so I just go whenever I want
- Port beach needs lifeguards
- More active policing of the beach to enforce rules and bylaws
- Love the beach. Love the updates they are doing at the beach area as a whole..Southampton right thru to Kinardine
- I use the beach regularly every week from spring until late fall. I hope the beach remains what it has been my entire life so all can continue to enjoy.
- More bylaw enforcement is needed - too many people completely ignore the rules
- Just ensure you leave it as, stop developing on areas like this, we want a beach not ugly buildings that will ruin our natural beautiful space, please listen to the towns people
- People leaving garbage on beach should be fined .internittabt security walking beach
- As a daily beach user who has witnessed two drownings at the Port Elgin beach and a few rescues by citizens,, I think a walking beach patrol of lifeguards is needed, similar to the one at Grand Bend. The irony is we have one of the country's top lifesaving teams but no lifeguards....
- Let's dogs have access to beach 24/7
- Remove the parking option so that people can shuttle to the beach.
- Bylaw officers should be enforcing the rules at the beaches eg. no dogs on the beaches. How are users of the South Beach supposed to get kayaks / paddle boards to the beach with the new setup?
- I was at the beach a few years ago when a paddleboarder drowned. I observed local First Responders standing on the shore - watching local citizens entering the water and providing CPR to the victim. The First Responders remained on shore and refused to enter the water to assist the victim until he was brought to shore by the local citizens. The First Responders lack of response was hard to watch, unacceptable, and may have resulted in the loss of life.
- Much greater patrol to ensure users of the beach adhere to the rules- alcohol, dogs, bbq's.

- Keep it cleaner.
- Preferred parking and beach area for locals why because we live here tear round and pay taxes
- An app? We don't need an app. It's the beach. Please do not make an app for the beach.
- Love our beach
- I would really like to see if there is not one already a bylaw posted at all of our beaches that there are no enclosed tents allowed. With our diverse town now we are seeing enclosed tents set up in which people use these to defecate in a hole and use as a enclosed bathroom. Day at the beach with large families. This proved catastrophic in Coburg where they closed the beach because of human feces when they were grating the beach in mornings. This happens in Sauble, Wasaga! the tents we cannot allow this you must put a bylaw sign up for this on our beaches and enforce it. I embrace our multicultural society I love all people but I do not love all of our customs we bring with it. Please take this seriously it is a reality of the beaches and future of our beach.
- Removal of dogs in particular. More garbage cans. Post when water quality is poor. Scoop up the black stuff that often is close to shore, feels gross to walk through it.
- More garbage cans.
- How about a few lifeguards on long weekends on the break wall and the beaches?
- Publicize location of AED devices.

## Calculations and Data Tables

### *Margin of Error Calculation*

#### Margin of Error Calculation

- **Population (N):** 15,908
- **Sample size (n):** 526
- **Confidence level (Z):** 1.96 (for 95% confidence)
- **Assumed proportion (p):** 0.5 (maximum variability)

#### **Formula:**

$$MOE = Z \times \sqrt{[p(1 - p) / n] \times [(N - n) / (N - 1)]}$$

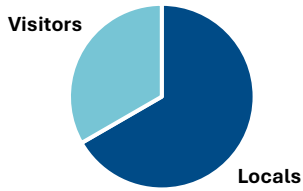
$$MOE = 1.96 \times \sqrt{[0.5(1 - 0.5) / 526] \times [(15,908 - 526) / (15,908 - 1)]}$$

$$MOE \approx 0.0420 \text{ (or } \pm 4.2\%)$$

# Beach Use and Safety Insights

**Sources:**  
Visitor Engagement Survey +  
FlashVote Pulse Poll

## Visitor Profile and Beach Use Patterns



**Local Presence:**  
Roughly **two thirds** of respondents are local residents, while about **one third** are visitors to the area.

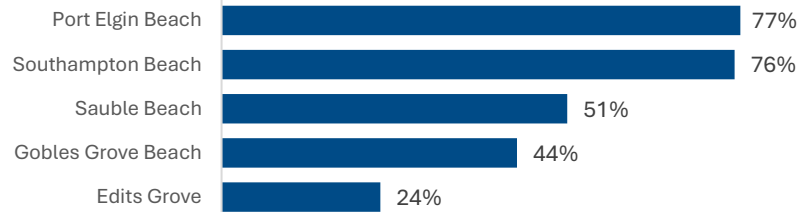
**Repeat Visitors:** Almost two thirds of respondents visits the beach 10 or more times per year.



**97%** of respondents had visited **Central West** beaches in the last three years.

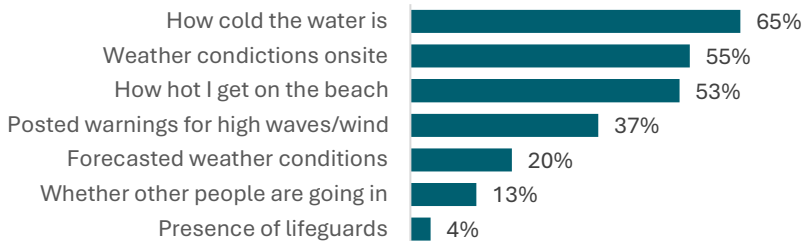
**73%** of respondents make the decision to go to the beach the **day or night before**.

## Most Popular Central West Beaches



## Deciding to Visit the Beach and Deciding to Enter the Water

### Considerations for Deciding to Swim



**Rain** and **Air Temperature** were the most important factors when deciding whether to go to the beach.



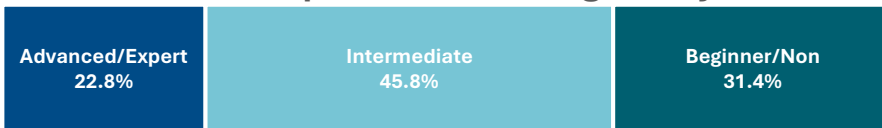
**56%** of respondents say they almost always enter the water when they go to the beach.

**Importance of Onsite Conditions:** Respondents rely **twice as heavily** on their own assessments of onsite conditions as on forecasts when deciding to enter the water.

## Safety and Risk Awareness

**Skills and Water Entry Mis-match:** Most respondents enter the water on nearly every visit, but about a quarter report beginner-level swimming skills.

### Self-Reported Swimming Ability

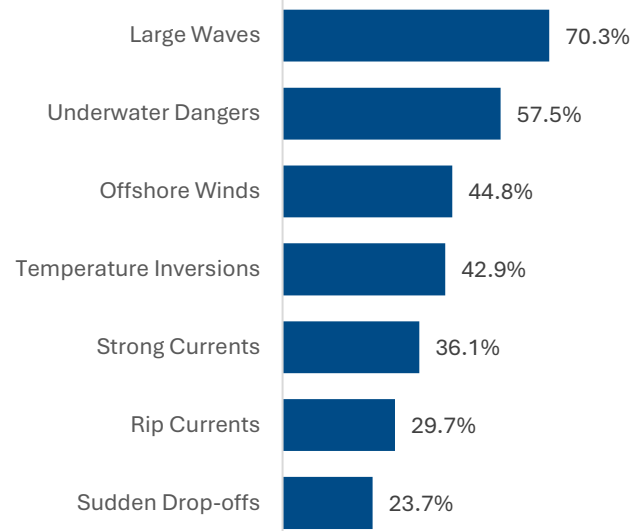


**Safety Features Lack Prominence:** Although basic safety features are frequently present, they are reported in fewer than half of site assessments, showing that these features are not prominent enough to draw attention.

### Most Frequent Safety Features



## Hazards Observed



**Large Waves** are the leading hazard, reported in nearly **three quarters** of observations.

# Key Insights and Trends

## Strong local base with regional reach

A clear majority of respondents live in Saugeen Shores or neighbouring Bruce and Grey County communities, confirming that the beaches are a core amenity for local residents. At the same time, roughly one third of participants reported postal codes from the broader Southwestern Ontario corridor, including the GTHA, Waterloo Region, and London or Windsor areas. This mix demonstrates that Saugeen Shores beaches attract both year-round residents and a steady stream of day trippers and seasonal visitors.

## High visitation frequency

Most respondents visit the beach more than four times per year and almost two thirds visit ten times a year or more, indicating that beach recreation is a routine activity rather than an occasional outing.

## Short notice planning

Nearly two thirds decide to go the night before or on the day of their trip, while only about one in ten plan a month or more in advance. This pattern reinforces the importance of accurate, real-time information on weather, lake conditions, and safety hazards because many visitors are making decisions within hours of departure.

## Primarily day trips with notable overnight use

Just over half rarely or never stay overnight, often because they live nearby or can comfortably make day trips. Yet more than a third usually or always spend at least one night, showing that Saugeen Shores beaches also function as a destination for extended visits and that overnight amenities remain relevant.

## Weather and water conditions as dominant triggers

Both the decision to visit the beach and the choice to enter the water are strongly influenced by environmental factors. Importance Scores place rain and air temperature at the top, but water temperature, wave height, and wind speed are also highly rated. Conditions experienced on site such as sudden changes in wind or waves carry similar weight.

## Regular water entry and mixed swimming ability

Most respondents report entering the water on nearly every visit, making swimming and wading a central part of the beach experience. Almost half rate themselves as intermediate swimmers and another quarter as advanced or expert, but the skills of companions vary widely, with many beginners and a small number of non swimmers present. This diversity highlights the need for messaging and infrastructure that protect both confident swimmers and those with limited ability.

## Exposure to natural hazards

Large waves, underwater debris, strong currents, and rip currents were commonly observed across beaches. Over one quarter of respondents reported personal or second hand near drowning experiences, ranging from childhood incidents to dramatic rescues. These findings underscore the importance of clear warnings, education about local conditions, and access to rescue equipment.

## Limited reports of safety infrastructure

Safety infrastructure was reported at rates of 50 percent or less; while these features are known to exist, the gap between actual and perceived availability suggests a need for further investigation and improved visibility.