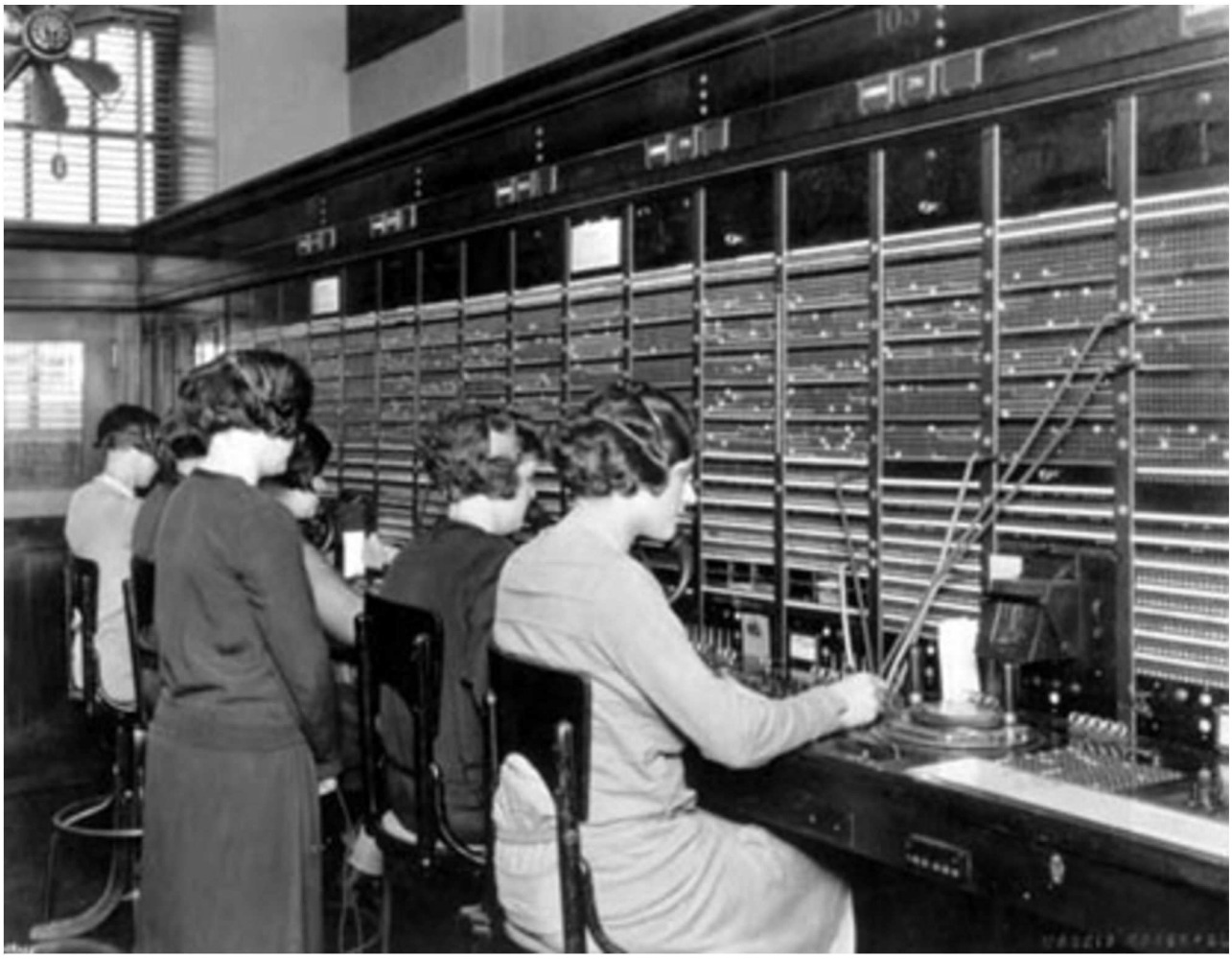

# Information needs assessment of civic administrators and concerned citizens

Produced for Virginia Sea Grant

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## Background

In 2012 Virginia Sea Grant (Pizer & Krenn, 2012) determined that it has interaction with over 30 different publics, ranging from individual researchers to government agencies. As valuable as this type of information may be it is also of limited use. Smith (2009) and Botan (2006) both showed that merely knowing which groups an organization interacts with does not provide enough data to effectively influence how that organization communicates with any one group or groups specifically. Recognizing this knowledge gap existed, VASG commissioned this study in an effort to identify its diverse publics' communication behaviors. It is hoped that the data gathered will allow for a more focused communication plan to be developed, enabling the organization to better serve those that directly or indirectly rely upon it for vital Virginia coastal information.

Understanding the number of publics represented to be a large number which one could not possibly address individually in a single study, each public was organized into one of four broad typologies: researchers, business and industry leaders, civic administrators, and concerned citizens. Furthermore, how VASG's organizational culture and development over thirty years has influenced its relationships between these four groups was also taken into consideration when determining the best approach to studying them over a 10-week period. It was determined through discussion with multiple VASG employees that the level of interaction and related awareness with each group varies greatly -- it is high among the researchers and business leaders, low with the civic administrators, and almost non-existent with the citizen group. Based upon this understanding it was determined to focus research efforts on exploring and identifying communication behavior of the civic administrators and concerned citizens because little

to no data, anecdotally or formally, exists about either. To effectively accomplish this research inquiry, three research questions were developed.

RQ1. What is the most important Virginia coastal information need for civic administrators and concerned citizens residing in and around the Virginia coast?

RQ2. What are the ways civic administrators and concerned citizens residing in and around the Virginia coast access Virginia coastal information?

RQ3. What is civic administrators' and concerned citizens' awareness of VASG?

## Method

### Interpretivist Approach

Answering the research questions could have been accomplished through myriad methods, yet recognizing that a desire to see information from the "publics" point of view made use of the interpretivist approach an obvious choice. This paradigm seeks to make sense of perceived reality rather than trying to describe a universal and true reality. The interpretivist approach to qualitative research "is not about truth and getting it right. Instead, it's about continued redrafting of an emerging story so that it becomes comprehensive, incorporates more of the observed data, and is more resilient in the face of criticism" (Weick, 2005, p. 415). In sum, in attempting to see how issues are perceived from another person's point of view makes the use of this research approach most appropriate.

Data were gathered using a combination of case study and focus group methodology. Case study methodology has been shown to be effective at explaining the impacts of strategic level decisions on organizations (Ledford, Willett, & Kreps, 2012; Yin, 2009), and focus groups have proven highly effective in providing a far richer level of

knowledge about people's perception of topics than more traditional quantitative methods tend to yield (Dickson, 2000; Morgan, 1997; Morgan, 1998).

**Focus Group Script**

A semi-structured focus group script comprised of three open-ended questions was designed to address the three concepts associated with the research questions: information importance, information seeking behavior, and participant awareness of VASG. Each question was designed to elicit a natural flowing dialogue between the participants (Creswell, 1998, Morgan, 1997; Morgan, 1998; Yin, 2009). It was hoped that multiple sub-concepts would be discussed naturally without the encouragement of the moderator. Follow-up questions were asked to explore and elucidate relevant issues or to clarify statements when required.

In the script below the linkage connecting each open-ended question to its associated research question can be seen. The sub-questions were only asked if the groups did not discuss each sup-topic naturally in their discourse.

*Concept 1: information needs.*

1. What kinds of information about the Virginia coast do you think would be *useful* to people like you?

    a. Explain to me what type of coastal information is *most important* for people like you to have?

    b. In your own words tell me *why* this information most important to you?

*Concept 2: information seeking behaviors.*

1. In your own words explain how you acquire Virginia coastal information?

    a. When seeking coastal information, how do you determine if a source is credible?

b. If you could change the way coastal information was disseminated, tell me how you would do it differently?

*Concept 3: awareness of VASG.*

1. Prior to being invited to participate in this focus group had you ever heard of VASG?
2. If yes, when did you become aware of VASG (i.e. 1 month ago, 2 years ago, etc…)
3. In your own words tell me what VASG does?
    a. What type of information would people like you turn to VASG for?
    b. What type of information do you think VASG should provide?
    c. In your own words do you believe VASG is currently doing this?

**Sample Populations**

To ensure participants were of a certain demographic (concerned citizen or civic administrator) volunteering and network sampling methods were combined together to form the recruitment approach (Frey, Botan, & Kreps, 2000). Another constraint on recruiting was the amount of time afforded to conduct research (10-weeks). Recognizing that soliciting participants and facilitating groups far away from VASG could be extremely time consuming and logistically challenging it was decided to constrain the recruitment effort to the unincorporated rural areas around VASG.

**Volunteering.** This method was used only for recruiting citizens. Flyers advertising the focus group were disiminated at locations concerned citizens frequented such as public beaches, fishing stores, and post offices. Solicitation requests were also passed to local civic organization leaders, whom agreed to discuss and encourage their memberships to participate. Organizations contacted ranged from the Ruritan Club to local Churches.

**Network sampling.** This method was used for recruitment in both groups. Citizens that responded to participate in the focus group were asked if they could recommend an additional participant. If they were willing to do so, the method of contact would be arranged and efforts to recruit the person would be made.

Civic administrators that VASG has previously worked with were solicited to participate in a focus group and were asked if they would recommend an additional participant for the discussion. Just like the citizens, if they were willing to pass additional participants, arrangements on how to contact these people were established and further recruitment efforts were made.

***Concerned citizens.*** Three groups ($n_1$=8, $n_2$=8, and $n_3$=7) comprised of citizens from unincorporated population areas.

***Civic administrators.*** One group ($n_4$=4) comprised of a county planning director, regional planner for a local planning commission, outreach coordinator for a federal coastal management program, and a coastal training coordinator for a national nature reserve.

**Data Analysis**

Upon completion of each focus group, impressions from the discussions were documented and the recordings were transcribed resulting in 73 pages of data. To interpret the data a coding schema was developed by examining six randomly selected pages of transcript data to determine what concepts (i.e. themes) were most frequent (Bradley, Curry, & Deevers, 2007; Ledford, Willett, & Kreps, 2012; Morgan, 1997; Morgan, 1998). Using this schema as a lens each transcript was examined and when themes appeared the occurrences were documented (Dickson, 2000). Themes that were most prevalent were selected as warranting further explanation.

## Results

Coding identified numerous themes. To present the data in an organized manner each theme, along with evidentiary support from the transcripts, is presented below as it relates to the research questions.

### RQ1 – Most Important Information Needs

**Water quality.** Need for information about the health of the water was significant. Almost unanimously, participants stated they know the water quality has declined along the Virginia Coast over the last several decades but are unsure about the causes and are unclear if efforts to reverse the damage are working. One citizen said, "I'd like to know about the health of the water… I'm interested whether it's coming back or not." Further interest was noted when a second group member stated, "I think the overall load of things in the bay contribute to a great deal of things we don't even associate with it, like fecal bacteria, I don't know I'm not a scientist, but I've seen a lot of changes in the water quality in my 77 years in this county." Also echoed by many citizens was a recognition that a connection exists between pollution and the quality of the coastal waters, as seen in one participant's desire to know about, "[t]he state of the water particularly, what's going on pollution wise."

**Fish health.** Information about fish populations and their health appeared to be as prevalent as the need about water quality information was. In the words of one resident, "…overfishing and over crabbing is a concern to people on the coast." Even more significant was the discussion about the menhaden population. Comments such as "I would like to see more studies done on menhaden…" were repeated often in all three citizen

groups. Uncertainty about other fish populations was also noted, as seen in one person's words discussing this season's crab harvest:

> we were anticipating bunches of crabs [based] upon information we trusted, and I don't see any pilings and I see nets put out and bringing them back in and when you go out on the bay, I see very few crab pots, it's a disconnect there we were getting information that this would be a great season of crabs.

Much like water quality, the data indicates that people are concerned about Virginia coastal fish populations but suffer from an information deficit enabling them to know what the true state of the coastal fish populations is.

**Sea level rise.** In the focus groups the need for information regarding its impact on coastal residents and what actions could be taken to mitigate or prevent it were consistently discussed. "[E]ither land is settling or water is rising, and man I don't know if we caused all of it or not, but I don't know if we can stop it be honest." Another local resident presented a poignant personal narrative about the loss of coastal land:

> I've been told that during the 1920s that there were half a dozen of these Mumford islands, now there are only 2 left, one is a sandbar and the other is a marsh. You used to be able to see the ruins of a house but I don't know if you can anymore. People would hunt ducks from there, but I think they will disappear in our lifetime. It's not hard to imagine both of them turning into sandbars.

Sea level rise, like the other two themes was significant among many participants but like the other subjects was not fully understood due to a lack of information regarding the subject.

One person's comment best summarizes how many of the participants appeared to feel regarding these issues, "are we improving? All these things we are doing are they making a difference at all. I know for a fact that there are fewer fish than there were in the last 25 years, I mean what's causing it?" People know there are significant things occurring around them but appear to be suffering from an information deficit.

**RQ2 – Accessing Information**

**Internet.** Three out of twenty-three participants stated they use print material such as local newspapers to access information regarding the Virginia coast. The remaining participants reported they used the internet. When asked how they specifically use the internet their responses varied. Furthermore, between the two groups (citizens and administrators) the manner in which the internet was used was different. Citizens stated they often "Google it" and others said they belong to email distribution lists associated with industry and government organizations that push information to them. Administrators reported they relied upon both established internet databases such as Geospatial and Educational Mapping System (GEMS) and more traditional academic sources such as research papers and journals.

Use of the internet appears to be the most prevalent tool used by participants to gather information, yet the manner in which it is used differs relative to the type of person.

**Credibility.** Recognizing that the internet has vast amounts of information but that not all of it is accurate led many participants to discuss the importance of information credibility. When asked how they determined if information was credible two minor themes emerged: source and neutrality.

***Source***. Most participants stated that who information was presented by was most significant in determining credibility. One citizen that is a horticulturist provided a discourse about how he determined credibility in this manner:

> I ha[d] to do find the zone for different types of flowers and plants. I didn't go to Google, but I went to the USDA and I type[d] in the Latin name of the plant and it t[old] me everywhere it grows and where I can grow and so forth and I trust that information because it comes from someone who obviously is very knowledgeable and science based in plants. And when I look at Google…I look at it for 3 hours [and] get 100 different opinions on it and I don't necessarily trust it.

Many other participants echoed this sentiment as seen in one person's comments stating that they would, "like to see that [information] has an endorsement from NOAA…to me that lends credibility". When asked if they trusted sources such as the USDA because it was a government agencies or because it had reputable history the latter was given as the reason. A significant number of participants did delineate government organizations into two categories (political and apolitical). Information from political groups was routinely seen as unpersuasive because they are biased or out of touch with local citizens. This was evident in comments made by participants stating, "I'd like to see [politicians] focus less on who donates to them and more on what's better for the welfare of all of the citizens…" and "politician's making decisions in Richmond on crabbing or whatever and the crabbers will tell you they don't even know what they are talking about."

***Neutrality.*** How information was gathered, processed, and presented had to be transparent and unbiased. This was said repeatedly but summarized well by one participant's words when she said she "want[s] [information] to be accurate and unbiased".

Throughout all the focus groups this was an issue. Seeing that information was used to promote or advance a cause brought into question the credibility of the information. Such statements like,

> [organizations that do self-funded studies] will skew their own data, they have their own conclusion in many cases, certainly those that are funded by commercial sources. They will cherry pick their data to suit their conclusion, but scientific sources like those produced at VIMS here, seem to be accurate, unbiased.

More evidence of this view is seen in quotes such as "I'd like to have information that's… passed through someone like an investigative reporter, someone that has no bias whatsoever…"

Information credibility appears to be judged by two things - the source producing the information and their motivation for generating the data.

**Centrality.** When asked what they would change about the way coastal information was disseminated, a significant number of participants agreed that centralizing information would be helpful. Participants felt that accessing information was challenging because it was scattered in myriad places on the internet. An administrator stated it best: "the information is all there but it's not all there when you need it, so to be able to go one stop shopping [would be useful]". Another participant said "searching for information on Google was like chasing 'rabbit trails,'" and another said she "does not have time to dig."

In sum, it appears that in many instances people view searching for information to be an exhausting task.

**Usability**. The desire to have information presented in a manner in which average citizens can understand was identified as important. This was best stated by a citizen who

commented "I want the results of the research in understandable language, I don't want the research."

**RQ3 – Awareness Level Of VASG**

When asked if they had ever heard of VASG, 19 of 28 citizens (68%) and all four of the administrators stated they at one point in time had been made aware of the organization. When asked what VASG does, the responses ranged from views stating that VASG "sponsor[s] projects to acquaint the public with what VIMS does…", "education and research", "offering courses", and "administering funds which in turn has something to do with education." Overall, the level of understanding among those participants that knew about VASG was very limited in depth. During all the focus groups several programs supported by VASG were mentioned such as the clean marina program, an aquuaculture and seafood preparation course, and the living shoreline in Deltaville, Virginia.

To ascertain what participants would desire from VASG in the way of Virginia coastal information, a brief of explanation of how the organization is organized and administered was given. Afterwards, when asked what information VASG could provide, many participants alluded to the view that VASG could help mitigate many of the previously discussed issues as seen in statements such as "being aligned with NOAA gives them instant credibility" and indicating that they could "help make research practical". Perhaps most significant was a collective view that VASG held a unique position that has not been leveraged in its role as a conduit connecting diverse people and organizations to communicate about Virginia coastal information. This was most evident in one person's comment stating that, "VASG does not…try to get [information] to the right people." It was

agreed upon by many participants that this norm was changing, but it was unsure about the extent of change.

## Discussion and Suggestions

This report was not developed using a prescriptive approach that would detail specific actions that VASG should take to improve its communication with civic administrators and concerned civilians. That approach would be more properly aligned with a consultant who could track developments and suggest responses. Instead, a descriptive approach was used. Patterns in the data conclusions and broadly generalized suggestions are provided below that VASG may consider as it moves forward.

### An Information Deficit Exists

It is evident that information deficits exist among the research participants regarding specific issues. One could argue that these deficits are present because information about the discussed topics does not exist. However, in the case of Virginia coastal water quality, fish health, and sea level rise this is not true. Research about these subject areas has been conducted in great depth by both academic and government agencies at the Commonwealth and federal levels. In other words, the information that the group participants need exists, but appears not to be easily accessible.

VASG could address the challenge of information deficit by examining how it uses the internet as a tool to communicate. Currently the organization's website does not contain a broad variety of information relative to the issues discussed by many participants, in either the posted documents or links to external sources. By increasing what type of information is presented on the website and its function as a launching pad to

other credible sources, VASG could potentially better align its webpage with the public's information seeking behavior.

**There Is No Information Filter**

More so for the concerned citizens than the administrators, results indicate that Google or other internet search engines in combination with intuition and personal judgment are the methods used to determine the accuracy of information. Recognizing that Google is not a valid filter for accurate and viable scientific information, there is a distinct possibility that many people are informing themselves with inaccurate data. In addition to this self-selection process the importance put on information sources must be noted -- specifically, the finding that government organizations that appear to be apolitical, scientific in nature, and have reputable histories are seen as highly credible sources.

VASG could do two things to act as an information filter: (1) promote a redesigned web-page and (2) leverage its direct relationship with NOAA.

**Promote – promote - promote.** If a redesigned web-page became a reality, promoting it through a strategic campaign could change people's Virginia coastal internet seeking behavior. Instead of using Google they may become more apt to go directly to VASG – much like the one participant goes directly to the USDA site for plant information.

**Leverage.** Directly connected to this effort would be to leverage the organization's relationship to NOAA, since it is already viewed as a highly credible source. How to best accomplish these two suggestions goes beyond the scope of this report, but could be addressed using formative research as part of a broader communication campaign.

**Awareness of VASG Is Superficial**

Again, more for the concerned citizens than the administrators, data indicated that most individual's level of awareness about VASG is extremely low. While some participants reported they knew about VASG and some of its endeavors, the depth of their knowledge on any given subject was still very shallow in depth. Only one citizen of the 19 reported knowledge that VASG had an extension program. When some participants became aware the extension program existed they became visibly upset that such a program had been operating and they were unaware of it. These findings are significant because they allow an inference that limited awareness of VASG has prevented it from being able to act as a channel for people to use when seeking and accessing coastal information.

VASG could increase people's level of awareness by promoting itself among a broader group of publics than researchers. One suggestion would be to expand the extension program from being solely specialized to also include localization. Models like this exist in most land-grant extension programs and other sea-grant programs such as Florida's. These programs operate with a hybrid approach where local or "regional" extension officers develop and maintain relationships with coastal publics, enabling them to assist in meeting information needs while the "specialist" extension officers ensure the most accurate information is being disseminated and used in each field. How VASG could best incorporate these models goes beyond the scope of this report, but should be considered as a possible course of action.

## Summary

VASG has a demanding communication responsibility, but at the same time is in a unique position – a modern day switch-board operator. Unfortunately many people are not

aware that such a switch board exists. Recognizing this VASG should consider branding itself as the "GO-TO" place for Virginia coastal information. If done successfully, they will connect multiple publics resulting in improved education, information exchange, and an enhanced quality of life for those living and working in and around the Virginia coast.

## Limitations And Recommendations

Concerned citizen focus groups were conducted in unincorporated rural areas. It is recommended that the study be replicated in urban areas such as Hampton Roads or Virginia Beach to expand upon the results. Furthermore, the responses from researchers and business leaders could also differ from the two populations discussed in this report. Based upon this, additional research should be conducted to ascertain how these groups seek coastal information and perceive VASG.

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