

Media with Impact: Building A Community-Driven Model for Environmental Justice Coverage in the Great Lakes Region

University of Michigan

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Contributors

Note: Listed below are only a subset of contributors who agreed to be listed publicly, but we are grateful for all our contributors, even those who decided to remain anonymous.

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I. Executive Summary

Introduction

The journalism sector has struggled with financial strain, a decline in public trust, and an industry-wide shift away from print news since the early 2000s. Due to this financial strain, local media coverage has been on a decline, creating a void of reliable news sources for many communities. This is felt most acutely in underserved communities. The void of community-driven news coverage has been predominantly filled by large, privately-owned, centralized, and corporatized mainstream media organizations that seek to maximize returns through the production of high quantities of stories at the lowest possible cost. Both the decline in local media organizations and the ascendancy of centralized, corporate media have contributed to a growing disconnect between reporters and communities, which have created fewer community connections and more distrust. For environmental journalism in particular, many journalists lack the knowledge, training, and resources to accurately and authentically report on environmental justice issues. To help remedy this situation, there is a growing need and interest to help rebuild environmental media organizations, and individual reporters, to more equitably uplift the narratives of frontline environmental justice communities.

While a limited amount of existing toolkits and literature provide media organizations with suggestions on how to equitably engage with communities and/or how to center equity in environmental and climate change reporting, this study advances the field by comprehensively prioritizing the diverse insights of key stakeholders into a set of recommendations intended for both environmental media organizations and philanthropic institutions. Our key findings are operationalized into a toolkit that provides recommended goals, strategies, and actions for media organizations and journalists to advance equitable and community-based environmental journalism. Thus, our recommendations in this report and our corresponding toolkit are designed to help amplify the lived experiences and stories of frontline environmental justice communities in order to promote community change and, ideally, help reinvigorate environmental journalism.

Methodology

To develop our recommendations, we performed both a comprehensive literature review and conducted interviews. Our team reviewed existing research, toolkits, and suggested best practices oriented towards media organizations, journalists, funders, and scholars. We conducted 42 interviews with community organization leaders, media organizations, and experts and funders in the field of journalism, the environment, and community engagement. These interviews helped us to gain a better understanding of perceptions of current media coverage of environmental justice issues; media organizations' objectives and corresponding strategies related to community engagement and diversity, equity, inclusion, and justice; perceived gaps and desired improvements in how media organizations engage with the communities whose stories they report upon; and current and future philanthropic priorities regarding journalism, community engagement, equity, justice, and diversity initiatives. We centered interviewees'

insights into both the development of our key findings and corresponding recommendations in addition to the creation of our toolkit.

Recommendations

Our findings are organized into eight areas of recommendation including: (1) Reflect and Assess, (2) Build Organizational Capacity for Community Engagement, (3) Cultivate Trust and Relationships, (4) Partner with Communities and Engage in Co-Production, (5) Implement Non-Extractive Storytelling Practices, (6) Diversify Modes of Storytelling and Reach, (7) Utilize Journalism as a Tool for Community Change, and (8) Transform Funding and Incentive Structures.

In order to uplift frontline environmental justice communities' stories and move towards a more equitable and community-based environmental media model, we recommend environmental newsrooms first have to reflect and build their capacity for community engagement work. After bolstering their organizational capacity, newsrooms need to be transparent, work at the speed of trust, and build reciprocal relationships with frontline environmental justice communities in order to co-produce stories that serve their needs and accurately reflect their lived experiences. Co-production gives community members agency to craft their own narratives and allows them to be actively involved in the entire story production process. Environmental journalists should also implement non-extractive storytelling practices to help reverse historic harmful media practices and instead uplift locally-based solutions that address environmental injustices. In order to expand content reach and impact, journalists can diversify their modes of communication and dissemination. Considering the power of journalism to invoke civic change, environmental journalists should tap into this function by highlighting community-led solutions, uniting environmental justice communities in solidarity, motivating community members to become change agents, and holding powerful institutions accountable. Unfortunately, resource constraints may hinder many environmental media organizations from implementing our recommendations, emphasizing the need for philanthropic foundations to increase their scale of support for environmental newsrooms committed to community engagement and environmental justice. Even though philanthropic funding is one important avenue to advance environmental journalism, it is important to note that our recommendations may also financially aid environmental media organizations by increasing community trust and viewership, and subsequently revenue.

Conclusion

Not only will our recommendations help revitalize environmental journalism, but they will also promote a shift towards a more equitable and community-focused environmental journalism field that uplifts frontline environmental justice communities narratives, serves their needs, and helps to invoke civic change.

Keywords: Local media, environmental journalism, environmental justice, community engagement, community partnership, co-production, relationship building, equity, diversity, justice, locally-based solutions, community change, philanthropy, toolkit

II. Introduction

Struggles in Journalism

Decline in Local and Regional Media Organizations

The journalism sector has struggled with financial strain, a decline in public trust, and an industry-wide shift away from print news since the early 2000s (Abernathy, 2018; Atske, 2022). The collapse of the traditional advertising-based business model for journalism, especially print journalism, has been exacerbated by increased spending on digital advertising such as Google and Facebook (The Knight Commission on Trust, Media, and Democracy, 2019). In addition to the rise of the digital age, political polarization and the COVID-19 pandemic have also contributed to a decline in journalism and an increase in television consumption (Akske, 2022). Specifically, 25,000 newsroom staff have lost their jobs between 2008 and 2019 (Akske, 2022). Additionally, the costs for newsrooms to employ speciality journalism – in which journalists focus on a specialized topic such as environmental reporting – and investigative journalism – which is broadly defined as in-depth, systemic, original reporting that may uncover secrets and tends to focus on social justice and accountability – has increased (The Knight Commission on Trust, Media and Democracy, 2019; Global Investigative Journalism Network, 2024). Fewer print newspapers, the shift towards more online news consumption, and the consolidation of family-owned businesses into larger newspaper chains has caused some underserved communities to become “news deserts” (Abernathy, 2018). The term “new deserts” refers to a lack of professional journalism or sources of original reporting in and for local communities (The Knight Commission on Trust, Media, and Democracy, 2019).

This void of community-driven news coverage has been predominantly filled by large, privately-owned mainstream media organizations that seek to maximize returns through the production of high quantities of stories at the lowest possible cost. Mainstream media generally refers to large corporations that typically have ample resources, trained journalists, and dominate the market (Maryville University, 2021). In turn, mainstream media tends to drive out the smaller, more locally-based sources of news (Maryville University, 2021). To capture the audience’s attention, many mainstream news outlets have historically relied upon stories that elicit negative emotions such as harm, fear, and distress (Wenzel et al., 2016). This journalistic bias towards negativity has manifested in an oversaturation of negative news stories (Wenzel et al., 2016; WAN-IFRA, 2022).

Both the decline in local media organizations and the ascendancy of centralized, corporate media have contributed to a growing disconnect between reporters and communities, which have created fewer community connections and more distrust (The Knight Commission on Trust, Media and Democracy, 2019). Despite the potential for local media to foster local community connections and trust, their increased focus on digital storytelling has reduced community engagement because this work is largely performed in newsrooms and not directly in communities (The Knight Commission on Trust, Media and Democracy, 2019). Additionally, mainstream media's historical legacy of harmful reporting practices has furthered the lack of trust

between communities and journalists. Specifically, many stories have historically been produced in an extractive manner, which either ignores marginalized communities, fails to serve their needs, or both (Rispoli and Morgan, 2016). This lack of inclusion may result in media coverage not pertinent to local communities' needs, which may make these communities feel misrepresented (Wenzel et al., 2016). The legacy of insufficient community participation in media coverage and the creation of self-fulfilling stories by newsrooms may further contribute to communities' distrust of the media (Rispoli and Morgan, 2016).

Overall, the financial strain in the journalism industry has led to the decline in locally-based news sources and the rise of corporatized and centralized mainstream media organizations, both of which have contributed to communities' increased distrust and distance from newsrooms.

Lack of Environmental Justice Media Coverage

Mainstream media models have contributed to a lack of environmental justice-focused reporting. In particular, this model has perpetuated a cycle of reactive coverage of individual climate and environmental news stories as they occur. Surface-level reporting often fails to acknowledge the justice implications or the systemic roots of environmental events (Cooper, 2022). For example, since television – a type of mainstream media – has become highly politicized and typically produces news stories that cover immediate disasters, these shows largely fail to address environmental justice issues (Cooper, 2023). Research found that television news coverage tends to ignore the voices of marginalized communities when covering environmental issues (Cooper, 2023). Ineffective environmental justice coverage is further exacerbated by the lack of diverse newsroom staff, who often do not reflect the communities they cover (Media Matters, 2023).

While regional or local media organizations closer to the community may be better equipped to uplift environmental justice issues, they continue to face significant challenges. For instance, even though numerous communities across the country experience pressing environmental justice challenges – such as unaffordable or poor-quality drinking water – these problems typically lack media coverage. This can be attributed to the common perception of environmental news coverage as a “rating killer,” which results in reduced funding for environment-focused media coverage (Great Lakes Now, 2023; Fischer, 2019). In fact, reduced budgets to the environmental journalism sector make it hard for many media organizations to create relationships with frontline environmental justice communities or educate themselves about equity issues (Wright et al., 2020). Thus, many environmental journalists lack the knowledge, training, and lived experiences necessary to effectively cover and accurately uplift frontline environmental justice communities' stories (West et al., 2001; WWF, 2009). Due to journalists' general lack of knowledge and education, especially with regard to the interconnected nature of environmental injustices, in addition to a lack of reporters and resources, many environmental justice stories fail to receive media coverage (Media Matters Staff, 2023).

Client & Site Background

Our project focuses on media coverage in the Great Lakes Region, with Great Lakes Now (GLN) – a regional program of Detroit Public Television (DPTV) – as our client. Great Lakes Now is dedicated to covering environmental news stories and amplifying community-driven solutions in the Great Lakes Region. Current GLN programming includes daily web-based news stories created by contributors and reproduced from other partner media affiliates in the region, as well as their monthly narrative-driven television show, which includes the segment “Waves of Change.” “Waves of Change” is a digital series that uplifts leaders of the environmental justice movement throughout the Great Lakes Region (Great Lakes Now, 2023). GLN’s monthly show airs on PBS and on subsequent Canadian cable stations, as well as on Youtube. These programs highlight environmental topics directly affecting the Great Lakes and the communities which rely on them, specifically stories on water quality, public policy, environmental justice, economic development, resource conservation, and tourism (Great Lakes Now, 2023). GLN also produces corresponding educational materials that are used by schools, museums, and aquariums to expose young people to Great Lakes stories.

As a member of the Great Lakes News Collaborative, GLN partners with Michigan Public, Bridge Michigan, and Circle of Blue to expand audience reach and impact through story coordination and shared reporting on pollution, climate change, aging infrastructure, and drinking water issues throughout the region (Great Lakes Now, 2023). As a part of a network of regional contributors, GLN has sixteen regular contributors located around the Great Lakes Region. These contributors include journalists, researchers, and nonprofit leaders (Great Lakes, 2023). GLN’s show regularly airs on more than 20 stations in the Great Lakes Region and was viewed 4,706,763 times on 31 stations nationwide between its launch in April 2019 and October 2022. Their audience continues to grow on both social media and the GLN website platform (Great Lakes Now, 2023). By building upon these existing programs, GLN aims to enhance issue coverage and provide value and effective collaboration with outlets across the region.

As part of Detroit Public Television, which is committed to diversity, equity, and inclusion as well as community engagement initiatives in their One Detroit and American Black Journal programs, GLN seeks to devise ways to most effectively engage with communities regionally when reporting on environmental stories. Their current theory of change revolves around building a Great Lakes identity among individuals, growing awareness of issues and threats to ecosystem health, and elevating solutions. In doing so, GLN strives to transform viewers into environmental stewards by encouraging them to appreciate the environment in which they live. Our team built upon this existing theory of change by identifying opportunities and developing strategies for GLN to sustainably enhance their environmental reporting initiatives in order to most accurately uplift the narratives of frontline environmental justice communities throughout the Great Lakes Region.

Project Goals

In order to serve our client's goals, as well as broaden our impact to also advance the overall environmental journalism field, our team developed three main goals that reflect our final three deliverables.

1. Develop key recommendations for media organizations and philanthropic foundations to advance equitable and community-based environmental journalism in order to uplift the narratives of frontline environmental justice communities and invoke civic change.
2. Operationalize key findings into the development of a toolkit for use by media organizations and journalists to inspire organizational change towards sustained community-centered environmental journalism.
3. Develop a strategic implementation plan for GLN to enhance and sustain their environmental justice and community-based reporting initiatives, including: (1) A guide for leveraging insights from the *Media with Impact* final report to inform project proposal development and bolster grant funding applications; (2) A corresponding case study of two example grant proposal concepts tailored towards the Press Forward journalism funding coalition; and (3) Recommended best practices and protocols to equitably engage with environmental justice leaders and produce content for GLN's Waves of Change digital series.

Project Responsibilities

In an effort to critically assess our role as outside researchers engaging with communities that have been experienced past harm by academic institutions (including the University of Michigan); decolonize our research methodology and approach; and acknowledge the generous contributions and support of our stakeholder partners – without whom this project would not have been possible – our team established and committed to upholding the following responsibilities:

1. Talk to and engage with as diverse and representative a set of individuals as possible throughout the Great Lakes Region.
2. Commit to the principles of environmental justice and community-based participatory research by engaging in decolonial practices as much as possible (given our position at the University of Michigan) and embodying non-extractive, co-produced, and reciprocal relationships.
3. Create a body of work in collaboration with our stakeholder partners that directly serves their needs and priorities and provides value to a broad variety of potential users.

III. Literature Review

Emerging Journalism Trends and Funding Strategies to Rebuild Local Journalism

Emerging Journalism Trends

Since 2004, there has been a net loss of almost 1,800 local newspapers (Abernathy, 2018). The decline in journalism and the subsequent loss of local news have both contributed to an erosion of communities' trust in democracy and a disruption in community education and social connections (Abernathy, 2018). Considering the financial stress that many local newspapers experience, newsrooms need to devise ways to combat these challenges to maintain a “robust news ecosystem” (Abernathy, 2018). Some of the strategies for local news to survive in the digital age include investing in journalists, developing news practices that serve communities’ needs, moving away from print revenue, and partnering with other media organizations and journalists (Abernathy, 2018).

The report by The Knight Commission on Trust, Media and Democracy (2019) describes the need to rebuild local journalism amidst the local news crisis and puts forth many recommendations. Some of the prominent recommendations include newsrooms employing “radical transparency,” utilizing solutions and engaged journalism as mechanisms to rebuild trust, and increasing collaboration among different levels of media organizations (The Knight Commission on Media, Trust and Democracy, 2019). The term “radical transparency” refers to the journalism industry creating standards on how to disclose the mechanisms through which they gather, report, and distribute their news stories (The Knight Commission on Media, Trust and Democracy, 2019). Furthermore, the report also highlights the necessity for increased diversity in all parts of the news ecosystem in order for newsrooms to rebuild community trust and produce stories that accurately reflect communities’ diversity (The Knight Commission of Media, Trust and Democracy, 2019). Thus, this influential report emphasizes the need to shift journalism practices towards mechanisms that foster trust, increase community engagement, center communities’ needs, and help to foster democracy, all of which work towards reversing the decline of local and regional media.

In support of this recent research, studies have shown the necessity for newsrooms to demonstrate their commitment to community, instead audience, engagement efforts in order to compete for philanthropic support (Zirulnick, 2022). In contrast to audience engagement initiatives that strive to cultivate a loyal audience, community engagement efforts seek to strengthen communities by understanding their information needs (Zirulnick, 2022). When media organizations only focus on the audience, this can perpetuate oppressive systems that may not prioritize communities’ needs. Community is defined as anyone within a newsroom’s coverage area despite their current level of media engagement (Bell and Rispoli, 2022). In light of the need for newsrooms to shift their focus to community engagement and centering community needs, many terms have been coined for alternative models including engaged journalism, equitable journalism, participatory journalism, solutions journalism,

community-centered journalism, and ethical journalism (Laperle, 2020; Democracy Fund, 2023; Jenkins, 2021; Solutions Journalism Network, 2023; Yahr, 2019; Ross, 2020).

Engaged and equitable journalism refers to journalists utilizing equity-centered story production processes that respond to communities' needs and report with communities instead of for or about them (Laperle, 2020; Democracy Fund, 2023). Additionally, equitable journalism requires journalists to show up for communities, which can involve attending and participating in community events (Bell and Rispoli, 2022). Through developing relationships with communities via mechanisms such as receptive listening, engaged journalists can help to correct power imbalances and regain trust among community members (Laperle, 2020). This form of journalism shares many of the same goals as participatory and solutions journalism (Laperle, 2020). Similar to engaged journalism, participatory journalism seeks to build trust with communities, but also emphasizes the need to co-produce stories with affected communities and strives to build community resilience through increased partnerships (Ross, 2020).

In addition to new journalism research highlighting the importance of building strong community relationships, research shows that reporting on solutions helps to foster community agency by uplifting locally-based solutions instead of solely the problems (Solutions Journalism Network, 2023). Solutions journalism has been found to be more accurate and complete, increase reader engagement, and have a positive impact on changing policies in communities (Solutions Journalism Network, 2023). Despite research on the benefits of solutions journalism on readers, little research examines solutions journalism's impact on underserved communities (Wenzel et al., 2016). However, one study examined the impact of solutions journalism on marginalized communities in Los Angeles and found that most residents appreciated solutions-oriented stories because it helped them think about ways to become involved to address the issues in their community (Wenzel et al., 2016). Despite the benefits of solutions journalism, journalists should use solutions journalism in tandem with community engagement strategies in order to effectively strengthen storytelling networks and community connections (Wenzel et al., 2016). This can be achieved through media organizations directly involving community members in the story production process, investing in local media resources to help develop long-lasting community relationships, and following up with communities (Wenzel et al., 2016).

Community-centered journalism, which combines both engaged and solutions journalism, prioritizes serving communities' needs (Jenkins, 2021). Engaged journalism helps to build trust and strengthen the relationships between media organizations and the communities they serve by centering their assets, while solutions journalism helps to communicate positive narratives. Thus, when engaged journalism works in tandem with solutions journalism, this promotes communities to become involved in civic change (Jenkins, 2021).

Ethical journalism builds off many of the parameters in the journalism trends previously discussed, but also discusses best practices for journalists to employ when reporting on communities who have experienced harm or trauma (Yahr, 2019). In addition to including community engagement strategies, the framework of ethical journalism also stresses the need for

journalists to be transparent, not mislead their sources, and conduct deep processing and inner work (Yahr, 2019).

Table 1

Types of Journalism

Types of Journalism	Summary	Key Resource(s)
Engaged Journalism/Equitable Journalism	<ul style="list-style-type: none"> - Respond to communities' needs - Report with communities - Show up for communities and develop relationships - Correct power imbalances - Regain trust with communities 	Laperle, 2020; Democracy Fund, 2023; Bell and Rispoli, 2022
Participatory Journalism	<ul style="list-style-type: none"> - Build trust with communities - Co-produce stories with communities - Increase partnerships to build community resilience 	Ross, 2020
Solutions Journalism	<ul style="list-style-type: none"> - Report on solutions to help foster community agency - Uplift locally-based solutions 	Solutions Journalism Network, 2023
Community-centered Journalism	<ul style="list-style-type: none"> - Utilize of frameworks of both engaged and solutions journalism - Promote community change 	Jenkins, 2021
Ethical Journalism	<ul style="list-style-type: none"> - Report on communities which have experienced harm or trauma - Be transparent 	Yahr, 2019

Funding Trends Towards Equity and Justice in the Journalism Field

Funders can serve as one potential solution to address the void of community-engaged and equity focused journalism. Specifically, in order for nonprofit news outlets to obtain philanthropic support, newsrooms need to show that their work strives to strengthen communities instead of just reporting on them (Zirulick, 2022). Thus, newsrooms can center their funding cases around efforts focused on diversifying newsroom staff, audience, and reach in addition to other community engagement efforts (America Amplified, 2022). This is especially important for newsrooms to prioritize considering that recent research, including Democracy

Fund's Engaged Journalism Lab, highlights the importance for funders to support equity in journalism (Trusty, 2020). Promoting equity in journalism entails that funders invest in journalism led by historically marginalized communities, support organizations who strive to shift their leadership and culture, and work to close historic resource gaps (Trusty, 2020). Research has shown that few newsrooms led by communities of color currently exist due to a lack of funding specifically dedicated to equity, diversity, and inclusion (Trusty, 2020). However, in order to help journalists address biases in their reporting and produce accurate stories that serve a diversity of communities' needs nationwide, funders need to prioritize their support to equitable and community-based nonprofit journalism (Trusty, 2020).

In order to receive the necessary funding to preserve local journalism, media organizations can implement funding models recommended by The Knight Commission on Trust, Media and Democracy (2019). Some of these models include: Community News Organizations, which cover topics of civic importance; Community Information Corporations, which focus on supporting and revitalizing communities who lack information; and Public Benefit Corporations, which commit to meeting the information needs of communities they serve (The Knight Commission on Trust, Media and Democracy, 2019). The Commission also suggests having at least one national venture philanthropy dedicated to funding Community News Organizations across the country in support of local journalism (The Knight Commission on Trust, Media and Democracy, 2019).

One example of a new project in venture philanthropy is the American Journalism Project (The Knight Commission on Trust, Media and Democracy, 2019). This project aims to fund families, corporations, and foundations that perceive the local news crisis as an important national problem (The Knight Commission on Trust, Media and Democracy, 2019). Additionally, the American Journalism Project seeks to invest in Community News Organizations that can serve as examples for future organizations and also strives to increase philanthropic support for local journalism by a factor of 10 in the next decade (The Knight Commission on Trust, Media and Democracy, 2019). This project prioritizes educating communities on the interconnectedness of democracy and local journalism, reframing local journalism as a public service, and advocating for local news as a philanthropic priority (The Knight Commission on Trust, Media and Democracy, 2019). Other examples of new funding approaches include for-profit ventures, crowdsourced funding from readers, partnerships between local and national newsrooms, increased contributions to public broadcasting, government funding, and donations from patrons (The Knight Commission on Trust, Media and Democracy, 2019). There are also journalism-support organizations and associations that support local reporting, such as the Institute for Nonprofit News and the Lenfest Institute for Journalism (The Knight Commission on Trust, Media and Democracy, 2019).

Another example of a philanthropic foundation which seeks to rebuild the local news ecosystem and tap into the potential power of journalism to promote democracy, inspire civic action, and uplift leaders of color is Democracy Fund's new Equitable Journalism Strategy (Stearns, 2022). Through this strategy, Democracy Fund invests in local newsrooms led by

historically marginalized individuals in order to promote democracy, equity, and justice as well as equip community members to enact change (Stearns, 2022). Democracy Fund created this strategy based on feedback from grantees about the necessity for funders to support local media in order to reverse both the past harm caused by the media and the historic perpetuation of inequities by philanthropic foundations (Stearns, 2022). The Democracy Fund's new strategy also focuses on transformational, instead of incremental, change in the field of journalism. Their strategy highlights the importance for change to be rooted in grassroots initiatives (Stearns, 2022). Thus, by being an innovative foundation in the field of philanthropy, Democracy Fund serves as an example of how funders can promote utilizing media to advance democracy, justice, and civic change.

Not only does recent research suggest the need for funders to invest in journalism that advocates for democracy, equity, and justice, but recent trends also emphasize the necessity for funds to support justice-centered environmental journalism. In the general environmental movement, funders have historically perpetuated oppressive systems by disproportionately supporting white-led and mainstream environmental organizations instead of BIPOC-led and grassroots environmental justice organizations (Taylor and Blondell, 2023). In fact, due to insufficient funding towards climate groups led by Black, Indigenous, Hispanic, Latinx, and other people of color, these groups may lack the capacity to pitch their stories to journalists (Wright et al., 2020). Thus, the media plays a critical role in uplifting the stories of environmental justice community leaders who may face barriers in sharing them.

Considering media's essential role in elevating the stories of typically underserved communities, philanthropic foundations have shifted their focus towards environmental media organizations that center frontline community voices (Trusty, 2020; Armour-Jones, 2020). This shift occurred in light of the disproportionate impact of the global crises of COVID-19 and climate change on historically marginalized communities (Trusty, 2020; Armour-Jones, 2020). One example of a media organization that received funding to bolster environmental justice reporting is Grist, which partners with frontline community groups to ensure accurate representation of communities' voices in their environmental news coverage (Armour-Jones, 2020). Overall, recent funding trends highlight the importance for philanthropic foundations to support journalism at the intersection of the environment, justice, equity, and diversity in order to uplift the stories of frontline environmental justice communities.

In the broader journalism field, journalism has seen an increase in philanthropic funding over the last five years (Bauder, 2023). Both for-profit and nonprofit news have cited an increase in funding and more funders have reported increased journalism grants (Bauder, 2023). The increasing importance of funding local news in order to support civic infrastructure has greatly contributed to the rise in philanthropic spending on journalism (Bauder, 2023). Additionally, funders have increased their allocation grants to news outlets that primarily serve communities of color (Bauder, 2023). Despite the overall rise in journalism funding, nonprofit news outlets only receive \$150 million per year (Bauder, 2023). However, these newsrooms need \$1.75 billion each year to stay afloat, which emphasizes the necessity for philanthropic foundations to increase

their scale of funding towards local news outlets in order to advance environmental justice, diversity, equity, and democracy (Bauder, 2023).

Existing Resources for Equitable Community Engagement

Many articles and guides have been designed for media organizations to learn about equitable community-based journalism. Many shorter articles provide newsrooms with great starter tips, without reading an entire report, for a general overview and/or specific strategies for community engagement work. For newsrooms who seek more in-depth suggestions, numerous toolkits and guides have been created by different journalism experts and media organizations in order to help newsrooms initiate the process of equitable community-based journalism. Despite the availability of toolkits and guides for media organizations to build an engaged newsroom, some gaps and limitations exist. The following section highlights some examples of resources and toolkits for community engagement, but is not exhaustive, as displayed in Table 2. We selected literature and resources based on the initial research topics of: (1) the best practices in newsrooms and for journalists to equitably engage with communities and (2) the history, framework, and impact of solutions journalism on readers and local communities. After an initial phase of literature review, we developed themes and identified key gaps. We assessed gaps based on the information missing and necessary for creating a community-based environmental media model. We focused our second phase of literature review on filling in the identified gaps if the literature existed. In our final phase of literature review, we reviewed and annotated resources recommended by our interviewees.

Brief Articles

Shorter articles provide easy to digest suggestions for use by newsrooms and journalists in order to initiate community engagement efforts. For example, Fox (2019) discusses six strategies, informed by staff from media organizations, for newsrooms to engage and give back to communities. These strategies for journalists include understanding communities' needs, inviting community members to participate in the reporting process, performing outreach to community members, partnering with community and ethnic media organizations, distributing information to communities through non-traditional channels, and creating reciprocal and long-lasting relationships (Fox, 2019). Similarly, Rivas-De Leon (2022) briefly discusses the current initiatives of newsrooms in North Carolina, which have centered both equity and community engagement, in order to help other newsrooms consider how they can initiate community-engaged action.

In addition to these more broad suggestions, other succinct articles discuss specific frameworks, approaches, or interventions for community engagement. Brandel (2021) discusses how community organizing tools can be used as a strategy to help journalists understand how to build community relationships. This article maps the community engagement process onto the community organizing process and principles (Brandel, 2021). Specifically, both community organizing and community engagement require media organizations to build relationships, bring

people together, vision and strategize, take action, and learn and evaluate (Brandel, 2021). In addition, Castellano (2020) provides suggestions on how media organizations can implement community advisory boards. Castellano touches upon the benefits of implementing community advisory boards, creating a diverse board, running effective board meetings, and demonstrating accountability to the board. Overall, Castellano emphasizes how community advisory boards can help newsrooms to advance diversity, equity, and inclusion (DEI) goals.

Brandel and Kho (2021) also discuss ways to increase DEI in the newsroom specifically through increasing both audience and internal newsroom diversity. This article stresses the importance of community engagement as a feedback loop, in which community members co-produce stories and newsrooms expand audience reach to ensure that historically excluded staff feel like they belong (Brandel and Kho, 2021). Arbee (2023) expands upon the necessity for diverse newsroom staff and reach by providing suggestions on how to improve news coverage of Black communities. After describing the historical misrepresentation of Black communities by the media, the article discusses quick suggestions on how journalists can ethically report on Black communities (Arbee, 2023). Arbee's recommendations include newsrooms giving platforms to Black journalists, being aware of savior complexes, and diversifying sources to include more Black people in everyday stories.

Overall, these short articles provide digestible overviews of different strategies, frameworks, and approaches for media organizations to learn more about ways they can increase community engagement practices. The common themes across these articles include the importance for media organizations to prioritize community needs, collaborate with communities in co-production, and advance diversity, equity, and inclusion both within newsrooms and externally to communities. Despite these recommendations, more specific and tangible information via comprehensive toolkits are necessary in order to aid newsrooms in feasibly implementing community engagement strategies.

Full Length Community Engagement PDF Toolkits

One set of current toolkits include online pdf documents of general strategies, tools, and advice to aid media organizations in fostering equitable community engagement in their practices. The following are examples of the most cohesive and extensive toolkits our team came across, but are not exhaustive of all the existing toolkits for equitable community engagement work in newsrooms. First, Bryant's roadmap (2019) discusses how newsrooms can address different components of the equitable inclusion framework. While Bryant incorporates some examples of media organizations that showcase aspects of the equity framework, many of the suggestions remain abstract and less tangible for newsrooms to feasibly implement. Rispoli and Morgan's toolkit (2016) for media organizations to build an engaged newsroom discusses the goals and benefits of community engagement, starter engagement ideas, and ways to sustain engagement. Similarly to Bryant's roadmap, Rispoli and Morgan's toolkit provides brief examples of media organizations who have implemented various strategies into their newsroom practices, but does not go in-depth on specific case studies.

Bell and Rispoli's (2022) guide, also an online pdf document, provides more concrete and in-depth case studies on how media organizations can actually achieve community engagement goals. This toolkit focuses on mechanisms that media organizations can use to build community power and practice equitable community engagement (Bell and Rispoli, 2022). Although Bell and Rispoli provide general strategies, this guide is more theoretical in nature as it is rooted in reflective questions. Despite the conceptual feel of this toolkit, it highlights case studies of media organizations which have successfully implemented different strategies for community engagement into their newsrooms (Bell and Rispoli, 2022).

Ross' playbook (2020) suggests ways for newsrooms to listen to and report on communities using the principles of participatory journalism. Throughout the playbook, Ross employs the case study of the Cap Radio's podcast and digital reporting project *Making Meadowview* as an example of different strategies, tools, and interventions. After laying out the principles of participatory journalism, Ross provides a step-by-step guide for media organizations to follow in order to implement participatory journalism in their practices. The incorporation of the case study, along with understandable steps, makes this toolkit concrete, tangible, and easy for newsrooms to use (Ross, 2020).

The online pdf form of these previously mentioned toolkits may make it difficult for newsrooms to interact with, as they cannot select different sections to learn more about. Another potential limitation of these three toolkits is a lack of specificity or applicability to different newsrooms with various starting points in terms of funding, capacity, and resources, and also various goals for utilizing these guides. Lastly, these toolkits do not specify how to implement community engagement strategies specifically for newsrooms focused on environmental reporting and how to equitably engage with frontline environmental justice communities.

Online PDF Toolkits for Reporting on Specific Communities

Expanding upon the previously discussed toolkits, other online pdf toolkits focus on recommendations for media organizations to engage with and report on specific communities (Yahr, 2019; Waterman, 2023). For instance, Yahr's toolkit (2019) discusses how ethical journalism can be used by journalists to navigate the ethical dilemmas that may arise when they report on communities who have experienced harm or trauma. In addition to utilizing many of the same strategies suggested in other toolkits, such as reporting on solutions, giving back to the community, and following up, Yahr also notes the importance for journalists to consider whether or not their reporting may negatively impact the community. Journalists should communicate these risks to the communities they report on before the story production process begins (Yahr, 2019). Overall, Yahr suggests that ethical journalism can only arise from restructuring the current business oriented news model. Although this guide provides strategies tailored to specific communities who have experienced harm, it lacks an interactive feature that could give newsrooms enhanced agency to learn and implement these strategies.

Waterman's toolkit (2023) provides recommendations for how to report on specific Indigenous communities in Canada. This guide recommends strategies on how to cover

Indigenous communities based on insights from Indigenous communities throughout Canada (Waterman, 2023). The three main categories of recommendations include content, training, and workforce, with quotations from journalists woven throughout (Waterman, 2023). Even though this guide provides many suggestions for journalists to report on Indigenous communities, the complex governance systems and varying cultural practices of Indigenous tribes may limit this guide's generalizability to other Indigenous tribes beyond Canada (Waterman, 2023). Additionally, similarly to all other toolkits discussed thus far, this guide may be difficult for newsrooms to interact with as it is merely an online pdf document.

Online Interactive Toolkits

Some toolkits are more interactive in nature, such as two guides created by the Learning Lab at Solutions Journalism Network. The first basic toolkit provides background on solutions journalism as well as a guide for newsrooms to implement solutions journalism into their journalistic processes (Learning Lab, 2023). This toolkit is in the form of an interactive interface where users can select which section they would like to learn more about (Learning Lab, 2023). Each section has a step-by-step guide to help media organizations implement solutions journalism (Learning Lab, 2023). Not only does this guide provide steps, but it also showcases videos, interactive exercises, and case studies (Learning Lab, 2023). Despite its highly interactive and user-friendly nature, this toolkit only provides recommendations for how solutions journalism, instead of for how other tools and frameworks, can help to foster community-engaged journalism.

The Learning Lab also developed another toolkit that provides strategies for newsrooms to implement solutions journalism in tandem with community engagement strategies (Learning Lab Engagement Toolkit, 2023). This toolkit can be used in multiple ways by users. First, users can complete a diagnostic that will guide them to various case studies that best fit their intended objectives (Learning Lab Engagement Toolkit, 2023). On the other hand, newsrooms can choose to self-select sections and subsequent case studies that they would like to learn more about (Learning Lab, 2023). Lastly, this toolkit provides a brief section on other best community engagement practices that can reinforce solutions journalism (Learning Lab Engagement Toolkit, 2023). This section also links in many other relevant resources to help newsrooms further educate themselves on various practical tools and strategies (Learning Lab Engagement Toolkit, 2023). It is important to note that this toolkit only focuses on how community engagement strategies can help advance the goals of solutions journalism instead of how community engagement can enhance other goals.

America Amplified's playbook (2022) is another more general community engagement toolkit that also provides an interactive experience for public media organizations. Although this toolkit does not specify how to report on and engage with specific communities, the interactive features of this guide make it easier for all newsroom staff to use (America Amplified, 2022). Specifically, the playbook provides step-by-step strategies for staff in public media stations to follow as they seek to advance their community engagement efforts (America Amplified, 2022).

Staff members can click on sections that pertain to their specific role and then learn step-by-step recommended actions on how to initiate and sustain the community engagement process (America Amplified, 2022). Furthermore, this playbook provides examples of media organizations who have successfully implemented these tools and strategies as well as links to additional relevant resources (America Amplified, 2022). Although this toolkit provides a great model of a user-friendly, step-by-step, and resourceful guide, it may not necessarily be applicable to the unique circumstances of different media organizations or for newsrooms reporting on environmental justice stories.

Table 2
Existing Resources for Equitable Community Engagement

Type of Resource	Author, Year	Recommendations for Newsrooms
<p><u><i>Brief Articles</i></u></p> <p>Criteria:</p> <ul style="list-style-type: none"> ● Short and succinct ● Intended for use by media organizations, easily digestible <p>Gaps:</p> <ul style="list-style-type: none"> ● Lack specificity ● Do not provide tangible implementation strategies 	<p>Fox, 2019</p>	<ul style="list-style-type: none"> - Employ engaged journalism - Cultivate reciprocal relationships between journalists and communities - Outreach to communities and build connections
	<p>Rivas-De Leon, 2022</p>	<ul style="list-style-type: none"> - Employ community-driven accountable journalism - Cultivate inclusive newsrooms
	<p>Brandel, 2021</p>	<ul style="list-style-type: none"> - Utilize community organizing tools as a tactic to build trusted community relationships - Share/build power between newsrooms and communities - Understand communities' needs
	<p>Castellano, 2020</p>	<ul style="list-style-type: none"> - Receive community feedback via community advisory/editorial boards and op-eds - Assess communities' information needs - Implement DEI initiatives in the newsroom - Create internal newsroom accountability mechanisms

	<p>Brandel and Kho, 2021</p>	<ul style="list-style-type: none"> - Increase internal and external DEI - Diversify audience - Meaningfully engage with communities - Create a community feedback loop in editorial meetings - Co-produce stories with communities - Track diversity of sources
	<p>Arbee, 2023</p>	<ul style="list-style-type: none"> - Become educated on media biases - Give platforms to Black journalists - Become aware of savior complexes - Diversify sources
<p><u>General PDF Toolkits</u></p> <p>Criteria:</p> <ul style="list-style-type: none"> ● Online pdf form about general community engagement strategies ● Intended for use by media organizations <p>Gaps:</p> <ul style="list-style-type: none"> ● Difficult for newsrooms to interact with ● Lack of applicability to varying newsrooms' circumstances ● Theoretical ● Lack of specificity to environmental justice reporting 	<p>Bryant, 2019</p>	<p>Implement equitable inclusion framework for newsrooms:</p> <ul style="list-style-type: none"> - Community service - Demonstrated respect - Mutual trust - Active inclusion - Meaningful participation - Shared power - Agency - Communities' concern - Journalism as a process - Accessible journalism
	<p>Rispoli and Morgan, 2016</p>	<ul style="list-style-type: none"> - Adapt organizing strategies - Outreach for community events - Utilize collaborative tools - Sustain community engagement
	<p>Bell and Rispoli, 2022</p>	<ul style="list-style-type: none"> - Build community power - Center communities' needs - Understand power imbalances - Utilize organizing model for

		<p>equitable engagement</p> <ul style="list-style-type: none"> - Build community leaders - Utilize case studies as examples
	Ross, 2020	<ul style="list-style-type: none"> - Utilize participatory journalism for regional newsrooms - Co-create with communities - Hold face-to-face events with newsrooms and communities - Assess communities' needs and recognize assets - Build community resilience - Build trust and long-lasting community relationships - Utilize organizing tools for equitable community engagement
<p><u><i>Online PDF Toolkits for Reporting on Specific Communities</i></u></p> <p>Criteria:</p> <ul style="list-style-type: none"> ● Online pdf form about how media organizations should engage with specific communities ● Intended for use by media organizations <p>Gaps:</p> <ul style="list-style-type: none"> ● Difficult for newsrooms to interact with ● Lack of applicability to varying newsrooms' circumstances ● Lack of generalizability beyond specific cultures/communities 	Yahr, 2019	<ul style="list-style-type: none"> - Employ ethical journalism - Be transparent - Address information gaps and report on solutions - Follow-up and give back to the communities covered
	Waterman, 2023	<ul style="list-style-type: none"> - Become educated on Indigenous communities - Build trust and meaningful relationships - Incorporate community feedback on stories - Develop trainings for reporting on Indigenous communities - Hire Indigenous media staff - Utilize alternative forms of media to serve communities' information needs - Make coverage collaborative - Follow through and uplift Indigenous voices

<p><u>Online Interactive Toolkits</u></p> <p>Criteria:</p> <ul style="list-style-type: none"> ● Interactive and user-friendly online toolkits about community engagement strategies ● Intended for use by media organizations <p>Gaps:</p> <ul style="list-style-type: none"> ● May not be applicable to specific newsrooms' circumstances 	<p>Learning Lab, 2023</p>	<ul style="list-style-type: none"> - Employ the 4 pillars of solutions journalism <ol style="list-style-type: none"> 1. Focus on response to social problem 2. Offer insight 3. Be upfront about evidence 4. Report on limitations - Follow best practices to bring solutions journalism into newsrooms - Follow step-by-step guidance to create solutions stories
	<p>Learning Lab Engagement Toolkit, 2023</p>	<ul style="list-style-type: none"> - Assess communities' needs - Utilize case studies as examples
	<p>America Amplified, 2022</p>	<ul style="list-style-type: none"> - Implement community engagement practices in all newsroom sectors - Build trust and co-produce with with marginalized communities - Increase diversity/equity

Existing Resources for Environmental and Climate Justice Reporting

In addition to the different styles of resources that newsrooms can utilize to learn about community engagement practices, journalists can also use existing toolkits and guides to become educated on environmental reporting. The following section provides examples of available resources that our team came across in our research focused on covering environmental and climate change issues with a justice and equity lens, as displayed in Table 3.

General Environmental Reporting

The Society of Environmental Journalists' Diversity Task Force produced a guide for a range of media organizations, with a general focus in the United States and North America, on how to increase diversity in environmental reporting (Oladipo and Nauman, 2013). This guide first educates media organizations on the environmental justice movement and then provides resources for newsrooms to learn more about how to increase diversity (Oladipo and Nauman, 2013). The guide suggests the essentiality for increasing diversity in both news coverage and among newsroom staff in order for environmental reporting to be culturally sensitive and

accurate (Oladipo and Nauman, 2013). Even though this guide focuses on how to increase diversity in environmental reporting in North America, it concludes with a section tailored for international environmental reporting (Oladipo and Nauman, 2013). Thus, this resource may be less applicable for local media organizations to use because it has more of a global, instead of local, focus. Additionally, this guide lacks actual tangible interventions for newsrooms to implement, as it mainly provides educational materials and resources.

The toolkit created by the International Journalists Network (2022) on how to report on global environmental stories includes six sections: covering the climate crisis, environmental justice reporting, covering major climate events, local perspectives, covering environmental crime, and managing risk in environmental reporting. Each part has a podcast series, called IJNotes, along with relevant articles (International Journalists Network, 2022). In part two of the toolkit about environmental justice reporting, the IJNotes podcast discusses environmental justice reporting by interviewing Yessenia Fues, the climate director at Atmos, which is a magazine focused on climate and culture (Rhoades, 2022). Fues emphasizes the value of environmental justice reporting amidst the climate crisis and stresses the importance of centering frontline environmental justice communities in media coverage (Rhoades, 2022). She also advises newsrooms to hire more environmental justice reporters and for both newsrooms and journalists to acquire a deep understanding of the environmental justice movement and the histories that have led to present day inequities (Rhoades, 2022). Many overlaps exist between the advice provided by Fues and some of the other community engagement toolkits for newsrooms, specifically building strong relationships with communities, supplying a platform for marginalized communities to speak out, and highlighting solutions instead of only the problems that communities face (Rhoades, 2022). Although this podcast provides advice and tips from an environmental justice reporter, it may not be applicable to more local newsrooms due to its global focus.

Climate Justice Reporting

Wright et al.'s online pdf document toolkit (2020) discusses how to equitably cover climate issues. This toolkit, produced in collaboration with journalists and editors and also endorsed by the Solutions Journalism Network, provides media professionals with ways to source, report, and write climate stories focused on equity (Wright et al., 2020). The first part of the toolkit lays out core values and key questions for media organizations to consider before they cover climate issues (Wright et al., 2020). Wright et al. then emphasizes the importance for journalists to frame stories in ways that highlight the systemic problems instead of blaming individuals. The next portion of this guide takes users through a set of common challenges that climate reporters may face when centering equity in their reporting process and provides corresponding strategies (Wright et al., 2020). The toolkit then suggests ways that newsrooms can track their progress to ensure that their clean-energy and climate stories actually center equity (Wright 2020 et al., 2020). The toolkit concludes by providing terms for journalists to use when reporting on climate stories as well as case studies of actual stories that media organizations

developed with an equity lens (Wright et al., 2020). Thus, this toolkit effectively lays out the process for how newsrooms can equitably report on climate issues, but may not necessarily reflect the unique needs of different media organizations. In addition, this toolkit focuses on climate and clean-energy issues and thus may not cover the whole array of intersectional environmental justice issues. Lastly, similarly to the other pdf community engagement guides, this toolkit format lacks a highly interactive form in which newsrooms are guided to sections based on their goals or needs.

Building upon existing guides for equitable climate change news coverage, Zirulnick (2022) utilizes KPCC/LAist – a Southern California Public Radio station – as a case study to demonstrate how journalists can cover climate change in a way that equips people to cope, understand, and prepare for the crisis. Specifically, Zirulnick describes how KPCC/LAist uses human-centered design research in order to devise a new framework to cover climate change issues, which involves journalists interviewing a variety of stakeholders to understand their needs, lived experiences, and information barriers. Some main principles from this framework include the essentiality for climate stories to center justice and equity, display the interconnectedness of issues in rural and urban communities, uplift community members as experts, and showcase individuals taking action (Zirulnick, 2022). Zirulnick provides an interview guide at the conclusion of this article, which serves as a great example for journalists to use when engaging in conversations about climate change with different stakeholders. Despite its focus on climate change, this interview guide can also be employed by journalists to report on other environmental justice stories.

Table 3
Existing Resources for Environmental and Climate Justice Reporting

Type of Resource	Author, Year	Recommendations
<p><u>General Environmental Reporting</u></p> <p>Gaps:</p> <ul style="list-style-type: none"> ● Lack of tangible interventions for newsrooms to implement ● May not be applicable to local newsrooms 	<p>Oladipo and Nauman, 2013</p>	<ul style="list-style-type: none"> - Increase diversity in environmental coverage and newsroom staff - Educate newsrooms about the environmental justice movement
	<p>Rhoades, 2022</p>	<ul style="list-style-type: none"> - Amplify undercovered environmental justice stories - Build connections with sources - Uplift solutions in the reporting process - Use environmental justice reporting in climate crisis

		<ul style="list-style-type: none"> - Increase environmental justice reporters - Increase education of newsrooms/journalists about the environmental justice movement and past histories
<p><u><i>Climate Justice Reporting</i></u></p> <p>Gaps:</p> <ul style="list-style-type: none"> ● May not be applicable to differing resource and capacity levels of newsrooms ● May not cover intersectional environmental justice issues ● Lack of interactive form for newsrooms to engage with 	Wright et al., 2020	<ul style="list-style-type: none"> - Prioritize funding towards BIPOC-led climate groups - Frame climate stories as systemic problems - Incorporate equity into climate stories - Build authentic community relationships - Understand history of communities - Track progress - Utilize case studies as examples
	Zirulnick, 2022	<ul style="list-style-type: none"> - Utilize human-centered design research to understand how to cover climate change issues and center justice and equity - Show interconnectedness of issues, individual actions, and benefits to economy - Help build resilience and coping strategies - Report for specific audiences - Utilize interview guide as an example

Gaps Filled by Our Toolkit

Our toolkit, intended for use by media organizations and journalists, seeks to fill in the major gaps of existing articles, toolkits, playbooks, and guides on community engagement strategies and environmental reporting. Specifically, our toolkit takes the form of a customizable guide in which media organizations and journalists can follow a set of reflective questions in the

supplementary toolkit workbook. The first set of questions prompt users to reflect on their organizational or individual mission. It also asks them to identify their two main priorities for the next two to five years from the following list:

1. Relationship with Audience
2. Advocacy and Accountability
3. Collaboration and Peer Learning
4. Fostering and Inspiring Change

After this first set of questions, newsrooms and journalists are asked to place themselves or their organizations on resource gradients for qualities including staffing, funding, and capacity/commitment. These placements will determine whether they fit within the low-medium or the medium-high resource designation. By utilizing this resource designation strategy, users will be able to select goals, strategies, and actions that are currently feasible for them and allow them to create a five year implementation strategy. Thus, our toolkit fills in the void of many existing ones as it guides newsrooms and journalists to recommendations most relevant to help them work towards organizational change. Second, our toolkit is informed by various stakeholders in the Great Lakes Region and nationwide, including community organization leaders, media organizations, funders, and experts, making it well-informed by diverse perspectives. Third, our toolkit is designed specifically for community-based environmental journalism by providing journalists and reporters with recommendations to equitably engage with and accurately uplift environmental justice communities' narratives.

IV. Methodology

Introduction

This study uses both primary data resulting from semi-structured interviews and secondary data sources on community engagement for media organizations. The following sections discuss our methodology for this research project, including literature review, community mapping and sampling technique, semi-structured interview protocols, and semi-structured interview data analysis. Our initial research began with literature review, which provided us with the foundation to develop our interviewee outreach contact lists and interview guides. We developed our interview protocols and guides as we simultaneously reviewed literature and reached out to various stakeholders. As we conducted interviews, our team also continued to review literature to bolster our contact list of potential interviewees and fill in any information gaps not addressed by the interviewees. At the culmination of interviews, our team compiled key themes within and between stakeholder groups to begin the data analysis process. We used these key themes to create a codebook that we utilized while thematically coding our interview findings. After coding, our team developed key findings, which we used to organize our interview data. This formed the initial outline of both our “Interview Results” section in our final report and our toolkit. We further developed these outlines to create our recommendations in our final report and toolkit.

Literature Review

To inform our primary research methodology and approach, our team conducted an in-depth literature review of existing research, toolkits, and recommended best practices oriented towards media organizations, journalists, funders, and scholars. During the initial phase of literature review research, secondary sources were selected and reviewed based on several preliminary areas of interest identified by the our team. These included equitable community engagement best practices for newsrooms and journalists; the history, framework, and impact of Solutions Journalism on audiences and local communities; drinking water and environmental justice issues in the Great Lakes Region; impacts of community-based media on perceptions of water quality in North America; and frameworks, methods and use cases of media impact evaluation. In the second phase of our literature review process, team members refined topics of inquiry based on conclusions drawn from the first phase of research, with an emphasis on (1) existing frameworks and toolkits for community engagement, (2) knowledge gaps within the journalism industry, and (3) affected communities’ perceptions of and experiences with the media. For the third and final phase of our literature review, team members reviewed resources recommended by interviewees. In total, our team included 43 sources within our final literature review.

Community Mapping and Sampling Technique

For our semi-structured interviews, we prioritized interviewing a diverse and representative sample of individuals and communities throughout the Great Lakes Region through a comprehensive research and outreach system. A semi-structured interview is pre-arranged and based on a prepared interview guide that consists of topics and questions to be covered (Newing, 2011). The interview guide is a checklist to ensure that the interviewer covers all key points, but could evolve during the course of the interview (Newing, 2011). To start the interview process, our team tapped into our advisor's existing connections to environmental justice organizations and conducted further background research in order to compile a list of potential interviewees.

We reached out to stakeholders in phases throughout the Summer of 2023, which allowed us to build upon existing connections, utilize referrals from snowball sampling, and tap into already existing communication networks. Snowball sampling is a type of recruitment method where a researcher asks interviewees to identify and possibly recruit any potential contacts that they feel would be relevant to the research project (Central Michigan University, 2017).

In phase one of our interviewee outreach, we reached out to community organizations in order to center their insights and lived experiences in the ultimate development of our key recommendations. These interviews also served as a launching point for snowball sampling across other stakeholder groups. In the second phase of interviewee outreach, we reached out to and interviewed media organizations and journalists throughout the Great Lakes Regions as well as the staff at Great Lakes Now. Many of the interviewees referred our team to other relevant stakeholders in the journalism and community engagement field and also provided us with resources to review. In the third phase of interview outreach, we reached out to and interviewed experts and funders in the field of journalism, the environment, and community engagement. We also used snowball sampling and received additional literature to review at the conclusion of many interviews.

After compiling a list of referrals from the interviews across all stakeholders, our team conducted extensive background research on referred contacts in order to determine who to prioritize outreach to. We were cognizant to ensure that our next phase of outreach represented different racial and ethnic groups and communities in the Great Lakes Region. We sought to interview and engage with not only diverse community organizations, but also diverse media organizations in order to learn about how the media covers underrepresented groups that typically have been misrepresented and/or undercovered in mainstream media coverage. After our first two phases of interviews, we realized that we had a large representation of Black-led community organizations based in Detroit as well as media organizations in the Detroit region. Therefore, we sought to diversify both our geographic range beyond Detroit to other parts of the Great Lakes Region and to include other underrepresented groups, including Asian, queer, Indigenous, immigrant, Latinx, refugee, and faith-based groups. Overall, we interviewed a diverse array of individuals in four key stakeholder groups: (1) community organizations, (2) media organizations, (3) Great Lakes Now staff, and (4) experts and funders in the field of

journalism, the environment, and community engagement. We conducted a total of 42 interviews with individuals representing 17 community organizations, 10 media organizations, 3 Great Lakes Now staff, and 12 expert and funding institutions.

Table 4
Geographic and Population/Role Breakdown of Interviewees

Stakeholders	Geographic Location	Population/Role¹	Total Number of Interviews Conducted
<i>Community Organizations</i>	New York, California, Indiana, Michigan, Minnesota, Ohio, Wisconsin, National	Asian, BIPOC Black, Disabled, Faith-Based, Immigrant/refugee, Indigenous, Latinx, Muslim, Queer, Women	17
<i>Media Organizations</i>	Michigan, Minnesota, New Jersey, Wisconsin	BIPOC, Black, Indigenous, Immigrant, Women	10
<i>Experts/Funders</i>	California, Illinois, New York, Ohio, Pennsylvania, Wisconsin, National	Academic Researcher, Advisory Board, Director, Associate Program Officer, Brand and Communication Director, Director, Executive and Creative Director, Media Producer, Newsroom Coordinator, Program Director, Senior Editor	12
<i>Great Lakes Now</i>	Great Lakes Region	Reporters, Producers,	3

¹ As described by the interview participant or organization’s website.

<i>Staff</i>		Development	
Totals:	10 states	N/A	42

Semi-Structured Interview Protocols

We adhered to very specific and thorough interview protocols for outreach, consent, and follow through rooted in the principles of environmental justice and centered around reciprocity and non-extractive work. Research based in many Western academic institutions tends to move at a fast pace with the main emphasis on efficiently producing final publishable products. However, our team sought to slow down and focus on the process of creating and cultivating trusted reciprocal relationships with our interviewees instead of just on the larger outcome. This entailed spending significant time planning each interview and also providing monetary reciprocity donations to recognize the generous contributions of community organizations to our project. For each group of stakeholders, we developed outreach, pre-interview protocols, and post-interview protocols as explained in the following subsections. These protocols served as guidance that were customized for each individual interviewee. Our interviewee outreach email templates used for each stakeholder group can be found in “Appendix A.”

To create our interview guides, we developed a set of questions for each stakeholder group before obtaining feedback from our advisor and client. After multiple phases of general edits, we customized the interview guides to each specific individual and also amended the guides accordingly after each interview occurred. Interview guides included a specific explanation of protections implemented to safeguard interviewees’ anonymity and confirmed their ability to stop the interview at any time. Interview guides also directed team members to obtain participants’ verbal consent to the use of recording software and note taking during interviews. The four sets of interview guides with example questions for each stakeholder group can be found in “Appendix B.”

Stakeholder Outreach and Pre-Interview Protocols

Our team took a targeted approach to initial outreach customized to each stakeholder group as follows:

1. Community organizations: In order to increase the likelihood of receiving a response, our advisor, Dr. Mike Shriberg, sent an initial introduction email to contacts at community organizations. Our team then initiated a follow-up outreach email after the potential interviewees responded in order to gauge their interest.
2. Media organizations: Individual team members sent initial outreach emails to contacts within this stakeholder group.
3. Great Lakes Now staff: Our client contact from Great Lakes Now, Gillian Gainsley, sent an initial introduction email to staff members at Great Lakes Now. Our team then initiated follow-up outreach emails after receiving responses from staff.

4. Experts and funders: Individual team members sent initial outreach emails to contacts within this stakeholder group.

For all stakeholder groups, initial outreach emails included a brief introduction about our team and the purpose of our project, and asked whether they would be willing or interested in participating in a one hour Zoom call. After we scheduled interviews, we provided a brief overview of the key topics included from the respective stakeholder group interview guide via email ahead of time. Key topics for each stakeholder group are as follows:

1. Community organizations: Community assets and informational needs; current relationship with the media; and desired improvements and outcomes related to how the media engages with their organization and community members.
2. Media organizations: Environmental story selection, development, and production processes; community engagement; future visions for community-based journalism; and dissemination of information to audiences.
3. Great Lakes Now staff: Environmental story selection, development, and production processes; community engagement; diversity, equity, justice, and inclusion initiatives; and dissemination of information to audiences.
4. Funders and experts: Current funding approaches and priorities; gaps and opportunities within their field of interest; and future visions within their field of interest.

Interview Protocols

The majority of interviews were conducted via Zoom, with a few held over the phone for the convenience of participants. If possible, we prioritized having at least two team members attending each interview, with one team member conducting the interview and the other taking notes. At the start of each interview, our team obtained verbal confirmation from participants that they consented to be recorded. All Zoom interviews were recorded and all interviews, regardless of communication mode, were also recorded and transcribed using Otter AI software. Team members also made sure to communicate that the interviewee could stop us at any point with any questions or if they wanted to end the interview.

At the conclusion of each interview, we asked the participant if they had any recommendations of other individuals who we should talk to for our project and if they would like to be further involved in our project's development process. Continuing to involve interviewees centers our team's commitment to the co-production of our final deliverables in partnership with participants and ensures that our work accurately reflects their insights and lived experiences. We once again reiterated our consent language and then concluded by thanking the interviewee. At the conclusion of interviews for the community organization stakeholder group, we also communicated that we would make a donation to their organization to thank them for their contributions. Donations were made to participating community organizations as a form of reciprocity to recognize and express our appreciation for their knowledge, expertise, and work. In accordance with ethics guidelines and to prevent any conflicts of interest, donations were not

made to interviewees in the media organizations, Great Lakes Now staff, and funders and experts stakeholder groups.

Post-Interview Protocols

Immediately following the conclusion of each interview, the team members who conducted interviews and took notes created a list of key takeaways gathered from the interview. In addition, team members reviewed and made necessary edits to the interview transcripts captured by Otter AI. We edited transcripts by attributing sections of the transcript to the correct speaker, correcting grammar, and updating any phrases or vocabulary improperly captured by the transcription. All transcripts were compared to the audio and Zoom recordings to ensure accuracy and fidelity, and prepare transcripts for coding.

Within 24 hours after each interview, the team member who led the interview sent the participant a customized thank-you email that expressed our gratitude for their participation. Thank-you emails to community organization stakeholders also included a receipt of the donation we made to their organization for transparency. All messages concluded by inviting participants to let us know if they would like to be involved in future phases of the project, and, based on their interest, informed them that our team would send a preliminary toolkit draft in the Winter of 2024 for their feedback.

Semi-Structured Interview Data Analysis

Analysis of semi-structured interview data was grounded in content analysis. Content analysis focused on interactions between community members and the media; coverage of environmental justice issues; objectives and corresponding strategies related to community engagement, DEI, environmental justice coverage, and related topics; and perceived gaps and desired improvements in how media organizations engage with the communities whose stories they report upon. Thematic grouping and coding techniques were used to analyze interview transcripts (Charmaz, 2006).

Throughout the course of our interview period, our team analyzed the generated lists of key interview themes to identify trends that emerged across the interview data of each respective stakeholder group. Using an iterative approach, we tracked the emergent themes for each stakeholder group in living Google Drive documents, which served as both a form of preliminary data analysis and formed the initial basis for our codebook. Over the course of several weeks, our team used these themes to develop a set of parent codes—each of which reflects either (1) an overarching objective or goal or (2) a problem or gap identified by interview participants—and corresponding child codes—each of which reflects a strategy or approach to achieving the objective/goal or addresses the problem/gap described by the parent code. Team members collectively developed a comprehensive description for each parent and child code, and identified a corresponding quote from our interview dataset to serve as an example of appropriate code application. One example of a parent code is *Relationship and trust-building*, with the child

code of *Sociocultural awareness*. Therefore, sociocultural awareness can serve as one strategy to cultivate the goal of trusted relationships. Our full codebook can be found in “Appendix C.”

Our team conducted two rounds of coding using Dedoose software, with each transcript being reviewed by two team members over the course of approximately two and a half months. To the best extent possible, we assigned team members to code transcripts that they did not participate in (either as interview leaders and notetakers) in order to reduce bias. While we coded, team members simultaneously compiled corresponding memos for each section of coded text in order to capture their analysis and preliminary findings, as well as to note any new themes that emerged over the first round of coding. In order to ensure intercoder reliability, team members coded their assigned transcripts independently and avoided discussion of specific findings until the conclusion of each active round of coding. In addition, team members each used an individual Dedoose profile to code and memo their assigned transcripts, and coded transcripts were hidden from the rest of the team to prevent bias. Our full coding process memo can be found in “Appendix D.”

At the culmination of coding, our team collectively identified nine key findings and corresponding strategies – or approaches through which to achieve their selected goal. We ultimately condensed our findings down to eight key findings in our final report (see “Interview Results”). In our final report, our eight key findings provide recommendations to media organizations and funders to advance more effective and equitable community engagement practices in the environmental journalism field. In our toolkit, these findings were adapted into goals, which refer to specific long-term objectives that media organizations and journalists can work to achieve. The goals were further refined to include corresponding strategies and actions – or actionable interventions that media organizations and journalists can implement in alignment with their chosen strategy.

To identify our recommendations in both our final report and toolkit, our team organized our 898 memos (which were categorized by parent codes and linked to transcript excerpts) into the most relevant goal and action. This document with goals, strategies, and corresponding quotes and analysis formed the initial outline of both our toolkit and “Interview Results” section of our final report. We shared our toolkit draft and final report with interested interviewees in late Winter 2024 in order to solicit their feedback and ensure that our toolkit and final report accurately reflected their ideas and lived experiences. We centered interviewees’ input and incorporated their feedback throughout an iterative development and production process, which are reflected in this final report and the corresponding toolkit.

V. Interview Results

Introduction

After our team conducted a thematic analysis of 42 interview transcripts, we developed eight key findings and corresponding recommendations. The following eight key findings were derived from our interview analysis and do not include literature review analysis. For a comprehensive discussion that focuses on examples of how to implement our recommendations based on both our interviews and literature review analysis, see the “Discussion” section of this report. Although the recommendations in findings 1 through 7 are geared towards environmental media organizations, we strongly suggest that funders invest in these recommendations in order to reduce any barriers that environmental media organizations may face in the implementation process. Since many of our outlined recommendations for environmental media organizations require additional expenses, individual newsrooms need to receive the necessary support to advance their own community engagement work that will eventually aggregate to ensure the thriving of environmental journalism in the future. We also highlight the financial incentive for environmental newsrooms to implement our recommendations, as doing so may foster increased community support, viewership, and revenue. Finding 8 consists of our concluding recommendations oriented towards philanthropic funders to advance the overall field of community-based environmental journalism. We provide a summary of our key eight findings and corresponding recommendations below:

1. Reflect and Assess: In order for environmental media organizations to initiate their commitment to community engagement work, they need to reflect on their current approaches and barriers. The main structural barriers to community engagement initiatives are a lack of capacity and resources, the mainstream journalism culture, and unequal power dynamics between journalists and communities. Newsrooms should also implement measures to hold themselves accountable for their presence in, interactions with, and coverage of communities.
2. Build Organizational Capacity for Community Engagement: At the onset of building organizational capacity, environmental newsrooms need to first define their community engagement goals and broaden their metrics of success. Other mechanisms by which newsrooms can bolster their organizational capacity include providing educational training for staff on environmental justice, equity, and different journalism techniques; increasing their staff diversity to better represent the communities they serve; and addressing internal unequal power dynamics and hierarchical workflows.
3. Cultivate Trust and Relationships: As a first step to build trust, environmental journalists should be transparent to the community about their commitments and challenges they face in the process of community engagement work. In order to build reciprocal and trusted relationships, journalists also need to understand the demographics, cultures, histories, and needs of the communities they serve and consistently immerse themselves

in communities without necessarily producing stories. Focusing on the process of building relationships directly counters the dominant media sense of urgency to produce a high quantity of stories in the most efficient manner.

4. Partner with Communities and Engage in Co-Production: Contrary to the dominant media model, in which journalists usually do not solicit feedback from community members before final publication, environmental media organizations need to center community members throughout the entire story production process. This entails that journalists understand communities' information needs, be transparent about the media process, treat community members as experts, allow community members to be storytellers and gatherers, and provide opportunities for community feedback. Journalists should also follow through with communities and be receptive to feedback before they publish the final story.
5. Implement Non-Extractive Storytelling Practices: Environmental media organizations need to transition towards non-extractive story production practices in order to accurately reflect the experiences, priorities, and perceptions of community members whose stories they cover. In particular, reporters need to be cognizant of how dominant media narratives shape public perception of communities in both positive and harmful ways. Considering that community members typically advocate against the use of trauma-centered or paternalistic narratives and parachute coverage, journalists need to highlight examples of local resilience and solutions while specifically identifying the systemic roots of environmental injustices.
6. Diversify Modes of Storytelling and Reach: In order to maximize their impact, environmental media organizations should tailor their storytelling approach to meet the diverse needs and interests of the communities that they serve. By regularly assessing community informational, resource, and cultural needs; incorporating disability- and language-inclusive best practices; disseminating stories across multiple mediums; and partnering with both peer news outlets and diverse institutions, news outlets can produce content that is both accessible and useful to the communities that they serve.
7. Utilize Journalism as a Tool for Community Change: Environmental media organizations can utilize journalism as a tool to promote community change through uplifting locally-based solutions, highlighting the interconnection of environmental justice issues across different communities, motivating community members to become change agents, and holding powerful interests accountable.
8. Transform Funding and Incentive Structures: Funders should increase their scale of funding towards environmental media organizations that center community engagement work, primarily serve marginalized populations, and are led by community members. They also need to ensure ease of access for environmental newsrooms to obtain grants in order to advance the field of community-based environmental journalism.

Key Findings and Recommendations

The following section provides recommendations, supported by direct insights and perspectives from interviews across all stakeholder groups, for each key finding. At the conclusion of this section, we include a summary of our eight key findings and corresponding action-oriented recommendations in Table 5.

Finding 1: Reflect and Assess

In order for environmental media organizations to initiate their community engagement work, they first have to reflect on their current practices. For example, one journalism expert expressed the importance for journalists to take the time to stop and reflect on what “[they] really need to do versus what... [they] keep doing” and recognize what does or does not work in their current newsroom operations. One specific community engagement metric that media organizations can reflect on is to critically assess community reach. Specifically, a journalist remarked that by “stepping back and addressing [the] community,” their newsroom can assess who in the community they “want to serve most and better” in order to “invite them to the table.” This requires media organizations to “not concentrate on the audience that they have, but on the community that they serve.”

Not only should environmental newsrooms reflect on their current community engagement initiatives, but they should also assess any barriers that may hinder their ability to equitably engage with the communities that they serve. Many media organizations reflected how the main barriers they experience when they commit to community engagement initiatives are a lack of capacity, the dominant journalistic model and culture, and power dynamics between journalists and communities. First, many media organizations expressed a lack of funding as a hindrance to engaging with communities when producing environmental stories. One producer for an environmental media organization describes how limited capacity serves as a hindrance for them to invest the necessary time and staff to equitably engage with communities and accurately cover environmental issues, such as agriculture:

“We just actually talk to somebody about a story that's related to agriculture and to really cover it right we would have to visit this experimental farm over and over again throughout an entire growing season. Can we devote those resources to this story? Not sure. Can we tell the story with fewer visits, you know, and or somehow [make] it cheaper?...that's something that we're sort of trying to figure out. And those are the puzzles that we're trying to solve a lot when we're figuring out...what we're going to cover in [the] Great Lakes.”

Since reporting on environmental issues may require longer timeframes, funders should provide environmental media organizations with the necessary support to equitably engage with affected communities and accurately uplift their narratives.

In addition to resource constraints, many media organizations attributed the dominant media model and culture as a barrier to community engagement work. As emphasized by one environmental journalist, the sense of urgency in the dominant journalism culture acts as a

barrier to equitable community engagement “because a lot of times [the media has] to...reach out very last minute and get...a last minute response,” which “puts stress on the person on the other end of that.” Additionally, as remarked by one expert in the journalism field, the “perfectionism inherent in journalism” serves as a barrier for community engagement work.

In addition to assessing barriers, media organizations need to develop ways to actively hold themselves accountable for the potential impacts and long-term consequences of their presence in, interactions with, and coverage of communities. One strategy for newsrooms to achieve this is to develop and use a standardized process to determine the allocation of journalists’ time and resources in accordance with communities’ needs and preferences as well as the potential impacts on community members. For example, a staff member at a local media organization described how they evaluate story leads using a “harm matrix” to determine the potential costs and benefits of covering issues that require longer time scales, such as environmental topics. This strategy enables newsroom staff to evaluate “how much harm the issue is creating” and the degree to which it affects individuals. In this way, media organizations can pursue stories “where the harm is only affecting a small group of people, but it's an extreme harm, or the harm is affecting a small group of people, but it's at the hands of the state.” The staff member concluded that “journalists have a specific responsibility to be watching out for” and covering these complex dynamics, which must be done in a thoughtful and intentional way. Overall, at the onset of community engagement work, environmental newsrooms have to take the time to reflect on their current practices, identify potential barriers, and create mechanisms to hold themselves accountable to communities.

Finding 2: Build Organizational Capacity for Community Engagement

Environmental media organizations have to build their organizational capacity for community engagement in order to sustain their initiatives. The first recommended action for environmental newsrooms to build their capacity is to establish community engagement goals that focus on the “process and not a product” and recognize that “there isn't necessarily an endpoint.” After media organizations define their community engagement goals, they need to implement mechanisms to see “how well [they’re] tracking to that goal along the way.” This can be accomplished by newsrooms broadening how they define and measure success beyond the “immediate results” of audience engagement and story generation in order to showcase incremental progress and benchmarks to reach their overall community engagement goals. One media organization recounted how their newsroom utilizes the community engagement metric of source diversity tracking, in which they “actually take accountability around whether or not” they “actually employ... diverse voices and perspectives” in their stories.

After environmental media organizations create goals and re-define metrics of success, they can further build their organizational capacity through providing educational training workshops for media staff on topics including, but limited to, environmental justice reporting, solutions journalism practices, and reporting on Indigenous communities. For example, one community leader described that “if the media decides that they are interested in environmental

justice or climate equity or climate change whatever the domains that they are interested in, that they should have their own committees.” Internal newsroom workgroups focused on various environmental topics, such as climate and environmental justice, will help journalists gain specialized knowledge on a particular environmental topic and thus help to fill the need for “more educated journalists, or educated editors and people all up and down the chain of newspapers.” Additionally, one journalist recounted their experience at a national journalism service program training session focused on solutions journalism. The journalist highlighted how the training session helped them “write better stories...that are solution based” and “not just presenting a problem in there...looking for possible solutions, from the community.” Although training workshops may require more funding, environmental media organizations should implement similar educational opportunities for their newsroom staff in order to cover environmental stories in an accurate and solutions-oriented manner. Thus, philanthropic foundations should sufficiently fund environmental media organizations to implement staff training opportunities needed to advance equitable environmental reporting.

Environmental newsrooms can also enhance their capacity for community engagement work by hiring diverse staff that represent the communities that they serve. This is especially important considering how “a lot of [media organizations] lack that representation, and that absolutely shapes the stories that you tell” and that “environmental issues disproportionately impact low income and people of color.” Thus, environmental media organizations need to create more opportunities for people of color to be hired into positions of power within organizations in order to best engage with and report on communities experiencing environmental injustices. Media organizations also stressed the importance of hiring and creating opportunities for Indigenous reporters to better represent the culture, traditions, and governance structures of Indigenous communities. One environmental media organization remarked how diverse “staffing is...definitely a huge issue” because “every news outlet and every nonprofit” has “got to be able to pay the money.” Thus, amidst the vulnerable and resource-limited state of the overall journalism industry, philanthropic foundations need to increase their scale of support towards environmental newsrooms to enable them to hire diverse staff that represent frontline environmental justice communities.

In addition to hiring diverse staff, environmental media organizations can also build their organizational capacity by addressing internal hierarchical workflows and unequal power dynamics. Media organizations need to ensure that their internal operations reflect their external commitments to community engagement work. For example, one media organization works to dismantle hierarchy within their newsroom by paying all newsroom staff equitably, regardless of position; fostering leadership development among their staff; and increasing entry level pay. However, without sufficient funding allocated towards environmental journalism, many newsrooms may struggle to equitably pay their staff, showcasing the importance of scaling up philanthropic support.

Finding 3: Cultivate Trust and Relationships

Environmental media organizations need to prioritize cultivating trusted community relationships rather than focusing solely on producing stories. The first step for media organizations to build the foundation necessary to foster trust with communities is to be transparent about their mission statement, community engagement approaches, and any challenges they encounter. For instance, one media organization cited how their newsroom publicizes their community engagement values and strategies in order to serve as a “public contract for how [they] plan to do community engagement” and to be held accountable by the community. Not only is it important for media organizations to publicly emphasize their practices, but it is also necessary for them to be transparent and open about the challenges they face in equitable community engagement work. This public transparency serves as a foundational stage to build the trust needed to cultivate sustained community relationships.

Second, in order to foster trusted community relationships, environmental media organizations need to understand communities’ demographic makeup, cultures, histories, and needs. Media organizations can seek to understand communities’ demographics through stakeholder mapping, which is when journalists identify key diverse community leaders and actively reach out to them to cultivate relationships. Spending time in communities is another mechanism through which journalists can better understand who they can speak to beyond just “community spokespeople” in order to seek out voices that may not be typically uplifted in stories, such as Indigenous elders. Not only does building community relationships entail that journalists understand communities’ demographic makeup, but it also consists of them becoming educated on the histories, cultures, languages, and traditions of the communities that they serve. For instance, journalists need to understand the cultural traditions and knowledge of Indigenous communities and queer ecologies in order to identify the larger and systemic factors that have contributed to environmental injustices.

Environmental journalists should also understand communities’ strengths, the issues they face, and how they receive news and share information. For example, one environmental journalist remarked how they seek to understand the ways in which communities receive news information in order to tailor their medium of dissemination. This journalist specifically prints out environmental stories and “actually hand distribut[es]” them, which “is another really useful tool that more newsrooms could be doing because almost no one has a print newspaper anymore.” Environmental media organizations can also understand the information and resource needs of the communities that they serve through different mechanisms including community forums, town halls, 211 systems, and survey assessments administered via text messaging. For example, one staff member at an environmental media organization stressed how community forums allow community members “to be able to talk and feel like they are being heard” and thus receive individualized answers to their questions about pressing environmental issues that impact public health, such as smoke from wildfires. Media organizations can also utilize town halls in order to understand “what [is] going on in their community” with regard to environmental issues and “actively invite people to share their thoughts with [them] in a physical

way.” Lastly, newsrooms can employ text messaging to administer a quick and easy “community information needs assessment.”

In addition to assessing and understanding communities’ needs, environmental reporters need to consistently show up in communities without the sole purpose to generate stories. Specifically, one environmental justice leader expressed their desire for journalists to show “up for things and sometimes maybe not with [their] journalist hat on but just [their] listening ear.” This is especially important in communities of color as “a demonstration of shared values” and as “demonstrated acts of centering the very communities” that the media seeks to produce stories about. Journalists also emphasized how they consistently attend in-person community events, co-host events, and table at events in order to check in with “their sources that they worked with in the past and then also continu[e] to develop relationships with sources that they know have unique experiences.” Despite the importance for journalists to embed themselves in communities in order to foster trust, one Indigenous media reporter cited how “part of the issue” of actually doing this in practice is funding because their newsroom has to expend extra resources to reach many tribes located in “isolated rural regions and reservations.” However, this reporter emphasized that if their newsroom receives a grant, their staff will be able to “stay up there for longer” and “[shadow] people, as they go wild rice harvesting... to connect people on a personal level.”

All of the previously outlined recommendations for environmental newsrooms juxtapose the dominant media model’s sense of urgency and instead emphasize the importance for journalists to work at the speed of trust to remediate the historic media legacy of harm and misrepresentation of marginalized communities. This is especially important considering how many environmental community organizations described the historic harmful media practices that contribute to their distrust of media, including parachute coverage, misrepresentation, retaliation against community members, and quoting out of context. For example, one community organization staff member described the burdensome demands that certain reporters place upon community members during the reporting and story-production process. Despite “demand[ing] a lot of help” from community members, such reporters may not actually publish a story or incorporate community members’ perspectives within an article. They characterized these experiences as “extremely disappointing” and “wasteful” given the amount of time and energy spent with little or no return on investment. Additionally, this community organization staff emphasized how many reporters “act out” due to a failing to understand the “consensus based decision making” of Indigenous tribes, which takes a “really long time.” In fact, reporters have told them that “if you don’t give me this information, I’ll go to the extractive company, to the mining company, for example, and get the information from them.”

In light of these past harmful practices, environmental newsrooms need to slow down and work on the process of cultivating trusted community relationships. One community leader expressed how their organization has developed a trusted relationship with a specific local newsroom over “years of working together,” which has made their community feel more comfortable to collaborate with journalists in the future to uplift their narratives. Environmental

newsrooms can also rebuild trust with community members by creating bridges with trusted community organizations before speaking directly to community members. One expert recounted how they “don’t parachute in” and instead “work with a trusted community organization first and foremost, because oftentimes ... community members don’t have any real reasons to trust journalists.” Working with community organizations before talking directly to community members takes time and is inherently different from the dominant media practice of parachuting into communities explicitly to generate a story. This approach also may require increased financial costs due to designating a staff member as a community liaison to foster trust with community members. Thus, funders have to support the endeavors of environmental newsrooms in implementing the necessary mechanisms to cultivate trust and uplift the narratives of frontline environmental justice communities.

Environmental journalists should also center reciprocity in their community relationships. For example, media organizations can provide monetary compensation or valuable resources to communities regardless of whether or not they produce stories. One community organization expressed a desire for there to be an “annual or quarterly give back” in order to foster a mutually beneficial relationship with media organizations. Additionally, a documentary filmmaker stressed how they “materially resourc[e] the people that [they work] with, especially when there’s a power imbalance.” This entails that they “pay people for not necessarily...their interview, but for their time and their labor.” Although the cultivation of reciprocal relationships takes time, additional funding, and may not initially generate high quantities of stories, funders should provide the needed support for environmental media organizations to build trust and help to remediate past harmful practices. Our recommendations for building trusted community relationships may also financially benefit media organizations, as fostering trust can strengthen community support, bolster community viewership, and subsequently increase newsrooms’ revenue.

Finding 4: Partner with Communities and Engage in Co-Production

Historically, the journalism industry has upheld a narrow definition of objective storytelling that strictly limits the ways in which reporters interact with communities. However, environmental media organizations should involve community members throughout the entire story production process in order to give them agency to create their own narratives. At the beginning of the co-production process, media organizations need to understand the current issues that communities face in order to best serve their information needs via media coverage. For example, journalists can tap into existing communication networks and hold “real conversations with the people who are most affected or impacted” in order to best understand the specific environmental justice problems that communities feel are most salient to them. Although taking the time to hold “real conversations” runs directly against the sense of urgency in the dominant media model, environmental journalists need to slow down in order to truly understand the environmental issues that communities face. Environmental stories need to serve communities’ needs, which can be accomplished by journalists reading community newsletters,

listening to community members who come directly to newsrooms with the issues they want to be covered, and seeking out stories that lack coverage elsewhere. These mechanisms for environmental journalists to understand communities' information needs in order to develop stories juxtaposes the tendency for journalists to dictate the stories produced under the dominant media model.

Environmental newsrooms should also be transparent about their media practices from the onset of the co-production process as this helps to rebuild trust with communities historically harmed by the media. For example, one local media organization explained how they provide a "media explainer doc" to help communities "get to that zero level where at least [they] get like a blank slate. And ... when [journalists] approach community members, they at least are open to talking to [journalists]." Additionally, one environmental journalist expressed how media organizations should provide "more education for community members about how the media works" in order to be transparent about the journalistic process. This environmental journalist also strives to be transparent about and respect the consent process especially when working with children. Slowing down to explain media practices counters the sense of urgency rooted in the dominant journalism model, but is necessary when journalists collaborate with communities to co-produce stories. This highlights the need for funders to provide sufficient funding for environmental media organizations to devote ample time and staff to openly communicate media practices to the communities that they serve.

Another paradigm shift that is necessary for media organizations to overcome as they commit to community engagement initiatives is to prioritize the expertise and lived experiences of community members throughout the story development process. This is essential given that many community members expressed their desire to be viewed as experts and have their perspectives and lived experiences centered when collaborating with media organizations. One environmental justice leader specifically emphasized their desire for media organizations to prioritize telling community members' stories in the "most genuine way possible. And to center community expertise...because everybody is an expert. If they're in their lived experience, they're able to tell that story best and to be respectful of that." Thus, this environmental justice leader would like journalists to center community expertise throughout the reporting process rather than "edit[ing]" community perspectives in order to advance "whatever angle the author is trying to tell the story from." One climate media organization has begun to fulfill many environmental justice leaders' desire by "always ...[looking out] for ways" to improve equity and center community narratives despite being "so data driven." The fact that this climate media organization, rooted in objectivity and scientific data, strives to commit themselves to prioritize community narratives, displays the beginning of a paradigm shift away from the dominant media model. Additionally, an expert expressed the need for media organizations to view community organizations as "partners" that they "spend a significant amount of time with," and that this relationship "isn't about just getting a quote." Journalists' view of communities as "partners," instead of merely as vehicles to obtain quotes, contradicts the dominant media model in which

journalists historically parachute into communities for breaking news and leave after they solicit the necessary quotes.

Not only should environmental media organizations view community members as experts, but they should also create opportunities to give agency to community members throughout the story development process. Specifically, media organizations can provide trainings and mechanisms for community members to gather and tell their stories as well as create hiring pipelines. First, as remarked by one producer at an environmental media organization, newsrooms should “[train] people to document their stories or to document the issues” that “they’re seeing in their communities” as this “allows them to be producers” and “publicists for their own stories, and that’s effective.” One program that allows community members to document and be paid for their stories is the Documenters program, in which community members attend public meetings and cover issues that “often go uncovered.” The implementation of Documenters type programs in newsrooms shifts away from the historic paternalism inherent in the dominant media model as these kinds of programs allow community members to have control over the narratives they co-produce. Additionally, environmental newsrooms can provide different platforms for community organizations to share their stories, such as through podcasts, which allow for “the intimacy of voice and the way that people can tell their stories at greater length.” Lastly, environmental media organizations can develop hiring pipelines as a mechanism to give community members the opportunity to share their stories. Specifically, one environmental media organization described how they strive to build a “pipeline for diverse... voices” in both journalism and in environmental journalism and express that this is “an area that like [they] would love to work more in depth on.”

In order to center community members’ narratives and expertise throughout the entire story production process, environmental media organizations also need to ensure that they provide mechanisms to receive community feedback. One strategy that media organizations can use to solicit feedback is through implementing community advisory boards, which can be effective if, as emphasized by one environmental justice community leader, they avoid being “exploitative, extractive, or exclusive” and instead “help people to feel like they [have] some form of ownership.” Another strategy that interviewees suggested is for newsrooms to use social media to obtain community feedback on stories and allow community members to be able to directly reach out to them. However, environmental media organizations can only “work more in depth on” implementing mechanisms to involve community members in the story production process if they receive sufficient funding. Thus, funders need to provide the necessary support for environmental newsrooms to engage in co-production with frontline environmental justice communities and help to strengthen the field of environmental journalism in the future.

At the culmination of the story development process, environmental media organizations need to follow through on stories and be receptive to feedback. In this way, journalists have to be willing to amend their stories before publication. One environmental justice leader expressed their desire for “robust follow through” before publication in order to give “that interviewer the expert that lived experience” the “opportunity to read” the story. This highlights the importance

for environmental newsrooms to shift away from the dominant media paradigm's perception of journalists as experts and instead towards a media model that views community members as experts. Another community organization described an appreciation for "when reporters are open to correcting their stories," which makes community members "feel super comfortable, even if they messed up the first time to come back to them again and again." As one media producer remarked, "robust follow through" is especially important when journalists report on vulnerable and sensitive communities, such as Indigenous elders. This producer emphasized how community members "get a final say in what and how they're portrayed" even though "a lot of media will not do that." Thus, media organizations should not only use a "rigorous fact checking process" and "make sure that the words are accurately reflected in every document," but also learn "how to take that critical judgment." Although taking the time to go back to communities with the final product before publication may slow down the turnover rate of story production, newsrooms need to follow through in order to ensure accurate representation of frontline environmental justice communities. Not only will our recommendations for co-production give agency to communities, but our suggestions may also facilitate increased media revenue through strengthening community connections, trust, support, and loyalty.

Finding 5: Implement Non-Extractive Storytelling Practices

Although the journalism sector has made recent strides to standardize the use of more inclusive and equitable practices, environmental newsrooms need to contend with the historic legacy of extraction and the ongoing harm experienced by communities at the hands of the media. While many media organizations have embraced this responsibility and adapted their approaches accordingly, interviewees across all stakeholder groups emphasized the importance to accelerate the industry's shift towards non-extractive models of story production and issue coverage. Interviewees specifically advocated for the incorporation of reporting practices that are intended to or perceived as minimizing potential harm to communities that may result from the story production process. This also includes practices that facilitate respect and responsiveness to the experiences, needs, and preferences of communities affected by the issue or story being covered.

Environmental newsrooms need to recognize how their storytelling shapes the public's understanding and perception of communities who have historically experienced harm by the media. This is important considering that many community members expressed their desire for media organizations to be cognizant of the heightened stakes involved in reporting on communities that "have been invisibilized" within the broader public imagination. Due to a lack of existing coverage or attention to frontline environmental justice communities, "there's [an] even greater danger of misrepresentation," in which a dominant "single story...becomes the one thing that people imagine" about the community being covered. As a result, dominant stories that advance inaccurate or sensationalized narratives can contribute to a disconnect between how communities perceive themselves and how they are perceived by others. This may cause additional harm to affected populations, and is especially prominent within frontline

environmental justice communities of color, who described their struggle to ensure that the media accurately portrays their lived experiences rather than presenting a “racialized narrative.” For instance, a community leader expressed their desire for media organizations to move away from narrative tropes of DACA recipients and the Latino community rooted in racism, hate, and fear, which perpetuate harmful and inaccurate views of these populations. Whether unintentional or not, the inclusion of narrative tropes within news stories may contribute to a skewed perception of marginalized communities, which can reinforce stereotypes and misconceptions. In light of communities’ experiences, journalists should engage in responsible and nuanced storytelling that accurately reflects community members, rather than perpetuating harmful narratives that further marginalize them.

Media organizations also need to resist the employment of sensationalized coverage and instead create stories that accurately represent community resilience and solutions to environmental justice issues. Many community organizations pushed back against the tendency of both mainstream and local media to utilize trauma-centered or paternalistic storytelling that fails to include community-based solutions. In particular, community leaders characterized stories that highlighted affected groups’ “trauma” as neither “a fair” nor effective way to “call out” the issues that “need to be fixed.” Rather than highlighting the root causes and potential solutions to environmental injustices, these types of narratives instead perpetuate a distorted view of the communities being covered. The use of sensationalized framing can further exacerbate distrust towards the media and dissuade community members to engage with journalists in the future. For example, a community organizer recalled feeling dismayed and frustrated by media coverage of a grocery store that she helped to establish in the neighborhood:

“When I went home to see the news [piece], they said... [it is] a blessing... [that we] got a grocery store... I'm like, ‘Well, what is the blessing?’ Every neighborhood should have a grocery store. I mean, it's called a convenience store because it's convenient... it's not a blessing. This is something that's supposed to be in every community.”

When her community organization was approached by another journalist interested in covering the store opening, they rejected the offer because they “don't know what [the journalist is] going to say” and whether the story would misrepresent them by “turn[ing] [their] words around.” This anecdote emphasizes the negative ramifications of employing sensationalized framing within storytelling, which not only may cause direct harm to community members by distorting their account of events, but may also jeopardize their willingness to engage with future reporters.

In addition to portraying communities in an accurate and asset-oriented way, environmental newsrooms need to identify the systemic roots and highlight the interconnection of environmental injustices across different communities. Many community leaders emphasized their desire for media organizations to pursue this type of in-depth coverage when reporting on their communities. For instance, one environmental justice advocate characterized news stories that “highlight a bunch of deaths” from environmental hazards without “highlight[ing]...the structural failures” responsible as “pervasive throughout [the] media.” This tendency towards surface-level reporting can result in news stories that may not reflect or address the root causes

that drive environmental harm and injustices experienced by communities. The executive director of a community-based organization highlighted this narrative gap, expressing that “no one’s writing” about “the environmental connection to socialization, classism, and racism” in a way “that is actually causing any equitable change to take place.” To combat this, interviewees advocated for reporters to more explicitly identify the “isms”– or forms of oppression – that perpetuate and exacerbate environmental harm. Similarly, a nonprofit communications staff member advised journalists to tell stories through specific lenses as a means of “exploring” and “strengthening certain frames of thinking” through their reporting. The staff member explained that journalists who frame issues around “under-discussed and undercovered” concepts, such as tribal sovereignty, can amplify these principles to a broader audience so that they are taken more seriously. Overall, community leaders emphasized the importance for environmental media organizations to identify interconnected environmental justice issues across different communities within environmental news coverage. As remarked by one interviewee, “so many of these issues are connected. The solutions would benefit so many groups and could potentially... [apply to] a number of different issues.” Rather than framing environmental justice issues as individual experiences or isolated instances, journalists need to investigate the structural causes of harm and publicize community-led solutions that can be replicated by other communities who face similar environmental justice challenges.

Lastly, environmental media organizations have to resist parachute coverage, in which reporters who lack experience or connections to a community are sent to cover major news events and then exit the community after they secure a story. A Michigan-based environmental justice community organizer described this phenomenon when discussing how, in the wake of the Flint water crisis, they were flooded with interview requests from “tons of media outlets from all over the world.” While this increased attention provided an opportunity to “make sure that [they were] getting [their] message out there” and raise public awareness about water quality and accessibility, “it was kind of crazy just managing the influx of people or outlets” who reached out. Once a community is no longer deemed ‘newsworthy,’ however, reporters have historically failed to maintain communication with affected individuals and cover issues that are meaningful to the community. For instance, the same Michigan-based environmental justice organizer experienced a similar influx of media requests during the COVID-19 pandemic. Despite this, reporters were “a ghost town” when community members reached out to journalists to cover “really important” issues that “[they wanted] to share” with the media. This specific example displays how media outlets may fail to maintain bidirectional, mutually beneficial relationships with community members. Instead, community members may be treated by journalists as merely sources of information, rather than as individuals with a tangible stake in how and which stories are covered. Thus, as emphasized by one environmental justice leader, journalists have the responsibility to “not... let the relationship die” and instead “work with [their] organizations to be able to keep the stories alive until [they] receive the equitable outcome that [they are] looking for, not just [during] that moment” of heightened public interest.

In response to the legacy of extractive media practices, newsroom and individual reporters should integrate strategies to ensure that environmental stories accurately reflect community members' experiences, identify the systemic roots of environmental justice issues, highlight community capacity and assets, and mitigate potential harm or burdens placed on communities. For instance, one local media organization leader and journalism educator described their development of a "solutions-oriented model that focuses on solutions and issues simultaneously." This model helps community members "see themselves as agents of change" by "show[ing] them people like them that have taken on [similar] issues." In addition, journalists have begun to approach their reporting process through the framework of representational justice, which seeks to shift power to individuals and communities to ensure that they are properly represented by others. This includes journalists treating community members as valued collaborators with their own individual agency, rather than simply as sources of information. One activist and documentary filmmaker pointed to bell hooks's writing on representational justice as informing their approach to work with community members. They describe how "bell hooks writes about the importance of people as subjects of their stories and not objects of their stories....in [our documentary], everyone that we interviewed is a collaborator, not just an interviewee." Using this approach, reporters can provide an opportunity for frontline environmental justice communities that have been historically undercovered or misrepresented to be heard and share their stories on their own terms. There is also a business case to be made for environmental media organizations to implement our recommendations for non-extractive storytelling practices. When frontline environmental justice communities see themselves accurately represented via media coverage, they may become more loyal and consistent supporters of their local newsroom.

Finding 6: Diversify Modes of Storytelling and Reach

In addition to co-producing accurate and in-depth environmental stories, media organizations should tailor their content and means of dissemination to best serve diverse communities' needs. First, environmental media organizations need to understand the cultural backgrounds, histories, and contexts of the communities whose stories they cover. An environmental justice communications specialist characterized the value of "know[ing] your audience and the type of media they consume" as a way for local media organizations to demonstrate that they respect and care about community members. By regularly assessing and incorporating these informational, cultural, and resource needs into content, media organizations can show communities that they "are cognizant of their needs when it comes to consuming media." One way for journalists to assess communities' needs is through holding listening sessions. For example, a staff leader in charge of stakeholder engagement for a local media organization described how their newsroom holds community listening sessions with the local Somali, Latino, and Hmong community. This approach can provide newsroom reporters with important insight into the community's relationship to and perception of the media, as well as new story leads requested by the community itself.

Assessing communities' needs enables media organizations to implement best practices to ensure their content is usable and accessible to diverse communities. Media content is often inaccessible to individuals with disabilities, whose specific needs may not be accommodated by conventional journalistic communications practices, as well as non-native English speakers, who may struggle to fully engage with content that is not in their primary language. To address this, environmental media organizations can implement disability-access best practices, such as ensuring that all websites are compatible with W3C Accessibility Guidelines and incorporating audio descriptions, image descriptions, closed captioning, and other disability-inclusive communication tools throughout audio, video, and written content. Similarly, environmental media organizations can translate their existing stories or produce innovative forms of content that reflect local spoken and written languages. For example, a media organization released translated "SMS based newsletters" in order to better serve the majority Somali and Afghan immigrant communities. The same organization also communicated news stories "in the form of voice notes" in order to serve community members' desire for "audio or visual formats" that better resonate with "oral cultures or languages like Somali and Hmong."

In addition, media organizations need to embrace the use of diverse modes of storytelling and dissemination mediums to engage new communities and expand their reach. This includes producing content across multiple forms of media such as print, audio, digital, and social media platforms. Many media organizations, reporters, and journalism scholars and experts reported leveraging new dissemination approaches to remove barriers to communication. Interviewees emphasized the importance for newsrooms to use diverse communication platforms in order to best reach the communities they serve, such as texting services, community events, and monthly gatherings. In addition, environmental newsrooms can utilize social media and in-person communication as modes of dissemination that can help democratize access to news and information. This is because both forms supersede many socioeconomic barriers to access that other forms of media cannot. As explained by an environmental justice leader,

"It is luxury to be able to get that [news] subscription... [People are] really relying on social media, they're relying on word of mouth, because it is free and easy... whereas a lot of those traditional publications that everyone was able to partake in are no longer financially feasible... [for] poor and working class people."

While many media organizations have started to transition towards multimedia content, journalists and producers may struggle to overcome the learning curve associated with effective communication of environmental justice stories through a new medium. In order to support the shift towards multimedia storytelling, journalists may need additional education and training about the best practices for adapting environmental justice stories across various forms of media. However, increasing staff education on multimedia storytelling and dissemination, as well implementing best practices for accessibility and usability, requires additional funding that may pose a barrier for already vulnerable and resource-strained environmental newsrooms. This highlights the need for funders to provide the necessary support for environmental newsrooms to expand their content reach and bolster the impact of environmental journalism.

Media organizations can also pursue partnerships with peer news outlets in order to enhance production quality and disseminate stories that best serve diverse communities' needs. Journalists reported finding immense value in “partnering with other newsrooms,” as this helped them avoid being “siloe” into a specific beat. Instead, cross-media partnerships enabled them to “collaborate” with other reporters and “produce better stories.” One environmental reporter directly attributed the success of such stories to the joint effort through which they were produced, explaining that “the story did really well because it was a collaboration.” Cultivating partnerships with media organizations across diverse geographic areas within a particular news ecosystem can also expand the reach and impact of media content. For example, a city-based news outlet collaborated with a larger media organization “to distribute” local stories “via text, via social media, [and through] in-person engagement.” This partnership facilitated the “spilling over” of city-specific stories “into the rest of [the state],” and therefore helped to connect communities across the region. Furthermore, media partnerships can enable journalists to tap into new networks of information and obtain additional feedback about the types of stories that communities are interested in. By engaging in peer learning across media organizations, journalists are better able to ensure “the residents that [they] serve are... setting the agenda” for which stories are prioritized, while “limit[ing] the amount of stories that just kind of come out of an editor's head” that may not be as impactful. Through utilizing media partnerships to enhance story quality and expand content reach, this may also broaden newsrooms' community support and viewership and subsequently increase their source of revenue.

Pursuing peer media partnerships can also enable the sharing of content, knowledge, and resources across newsrooms. For instance, environmental newsroom staff members expressed the importance for their newsroom to share their content “across the other media outlets in the [Great Lakes] basin” because journalists “can't be on the ground” in every community that they serve. Not only can media collaborations enable the sharing of stories, but they can also promote the sharing of knowledge about community engagement strategies. Specifically, one media organization emphasized the importance of learning community engagement strategies from other newsrooms of similar capacity to “make editorial judgments.” Another media organization highlighted how partnerships can also foster a more collaborative environment in which media organizations work together to receive substantial funding support for joint projects, rather than competing with other news outlets to obtain funding for their individual initiatives.

Journalists can also embrace alternative partnerships with diverse institutions in order to access new communities. This includes media organizations partnering with libraries, which have been “getting more and more involved in climate disaster preparedness and response work” and are therefore primed to support the production and dissemination of environmental justice content. For instance, an activist and documentarian credited their “great collaboration with the American Library Association” with “[providing them] with a donation that then allowed libraries across the US to screen” their film, which “led to over a dozen different screenings in some unlikely places” that they would not have otherwise reached. There is also potential for media organizations to collaborate with influencers in order to combat increased public distrust

towards mainstream media organizations and journalists. As a growing number of people turn to influencers to obtain news and information, these individuals can provide a platform for reputable reporting and reintroduce the media outlets to disengaged communities. Lastly, cultivating partnerships between media organizations and environmental community-based organizations can also help to incite public interest, identify common values, and foster a shared sense of identity around the environment and climate. By directly collaborating with and platforming community-based organizations, news outlets can raise awareness of environmental justice concerns and amplify locally-based solutions.

Finding 7: Utilize Journalism as a Tool for Community Change

Journalists should tap into the power of media to drive civic change via employing solutions-oriented reporting, recognizing and uplifting interconnected environmental justice issues, inspiring community members to become change agents, and holding powerful institutions accountable. Many community organizations expressed their desire for their locally-based solutions to be highlighted through media coverage. For example, one environmental justice leader remarked how “change in the nation comes from ordinary people” and that they “just assumed that there could be an investment in ordinary people's lives and standard possibilities.” Thus, if highlighting locally-based solutions “is not high order for...media, [they are] going to continue to see the same.” Additionally, another environmental justice leader expressed how media organizations should “broaden at least the reporting spectrum” to cover the efforts being led by communities to address and intervene in environmental justice issues. When media narratives solely focus on the problem, this can perpetuate the idea that “community groups... [are] only raising concerns and not raising solutions,” instead of highlighting the reality that “most of the solutions have come through [the] community.” Considering community leaders’ desires, media organizations should highlight locally-based solutions through mechanisms such as employing a solutions-oriented framework. One journalist emphasized the need for newsrooms to not only display the issues that communities face, but to also uplift how “there are solutions and things do exist... like good things are happening” and that it is “important for people to know that things can get better and people are working.” In this way, a solutions-oriented journalism framework can be used by journalists to help invoke civic change, especially among frontline environmental justice communities.

Another way that environmental media organizations can utilize journalism to promote community change is by recognizing and uplifting interconnected environmental justice issues that different communities face as a way to unify them to act in solidarity. In fact, one environmental justice leader stressed how air pollution and water pollution do “not understand a boundary or a state line,” which suggests the role that the media can play in uniting different communities who face similar environmental injustices. Additionally, a documentary filmmaker described how there are “decades of research about the increased exposure to environmental harms among Black, Indigenous and poor communities and increasingly now people with

disabilities as being some of the most vulnerable.” They “encourage media organizations to emphasize that there are LGBTQ+ people among all those groups that... [are] already considered vulnerable.” Another environmental justice advocate highlighted that due to a lack of recognition of the interconnection between climate and disability issues, the media should raise public awareness about the disproportionate impacts of climate change-induced hazards, such as heat waves, on disabled people.

Environmental journalists can also employ media to drive civic change through motivating community members to become change agents. As one community leader stated, the “media has a lot of power to shape [people’s] view of things that [they] don’t yet understand,” so they would like to see “a deep analysis of something so that [they] can... actually do the work.” In this way, newsrooms need to ensure that they utilize journalism as a civic service instead of solely as a business model focused on profit generation. For example, one media organization emphasized how they “articulate a progressive vision in the city” in their reporting, which helps to “identify issues that matter to people” and thus promote communities to take action towards a better future. Another media organization expressed their efforts to utilize journalism as a way to “help people avoid toxic environments...save people’s money...keep people safe [and] save people time.” This media organization tries “to help people leverage their power effectively, and in the way that they want to,” which makes their newsroom “very outcome driven” for “better off people.” Utilizing journalism as a tool to drive civic action may also benefit environmental media organizations financially. Once community members directly experience the power of media to motivate them to become civically engaged, they are likely to consistently seek out local media coverage for further inspiration. In this way, loyal community viewership of local media may increase newsrooms’ revenue generation.

Despite the widespread use of journalism to hold powerful institutions accountable, many media organizations still fall short of doing so in a way that advocates for community change. In fact, many community organizations strive to expose wrongdoings for environmental injustices by collecting data from public records, as seen by community advocates gathering records and mapping water shutoffs. However, the media largely neither reports on these local public data gathering efforts to hold powerful interests accountable nor do they gather or track this information themselves. Thus, environmental newsrooms should track and/or report on community efforts to expose public data in order to hold powerful interests accountable in a way that advocates for civic change.

Finding 8: Transform Funding and Incentive Structures

Considering that the previous recommendations will require additional expenses, philanthropic foundations need to support environmental newsrooms that cover underserved communities and focus on community engagement, diversity, equity, and environmental justice. This support is necessary to rebuild local journalism, promote democracy, and help the environmental journalism field to thrive in the future. Philanthropic funding for newsrooms committed to these values is needed in order to counteract the dominant trend of centralization,

corporatization, and defunding in the journalism industry. As one expert recounted, since funders have historically inequitably allocated their support for newsrooms, there is a “disproportionate amount of media funding” where she resides. However, the city still has pockets of “news deserts and news gaps...of communities that are just very poorly served by local journalism.” This emphasizes the void of local news sources in many communities, which displays the need for philanthropic foundations to more equitably distribute their funding to help promote local environmental journalism. In light of this historic disproportionate allocation of funds towards media organizations, philanthropic foundations should increase their scale of funding towards environmental newsrooms that serve underinvested communities. For example, one funder expressed how this increased support will help to “rebuild” the news model “in a way that just looks different” and “is more democratic...fair” and “more reflective of the communities that [they] represent.” This is also consistent with another funder, who described how their foundation looks for “organizations that have a proven track record in a community” and “for groups that work in racially diverse or economically challenged communities.” Additionally, a third funder highlighted the foundation’s desire to support “the leadership, the influence, [and] the power of people of color, people of low wealth, and... BIPOC-led, equity focused organizations organizing around climate change.” Their foundation also strives to support the capacity of communities as “change agents of the capacity of practitioners that are committed to climate action.”

Despite the need to increase their scale of support, philanthropic foundations have to remove funding barriers in the grant application process in order to aid environmental media organizations in reaching their community engagement, diversity, equity, and environmental justice goals. Funders need to allow media organizations to utilize the grants they receive in ways that best suit their specific needs, including for capacity building, instead of for specific projects tailored to fulfill the requirements of grants. One expert remarked how even the smallest grant has “a giant page of questions, some of which are going to be very difficult for...a grassroots operation to answer” and often have “requirements that are very challenging for any sort of...community based thing.” Due to the generally complicated and burdensome grant application process, funders need to simplify and increase accessibility of the entire process. Funders can provide “longer time windows” to ensure media organizations have support for longer durations necessary to sustain and advance community engagement efforts. Through the elimination of complex grant application processes, environmental media organizations will be better equipped to put their community engagement, diversity, environmental justice, and equity commitments into action.

Summary

Table 5

Summary of Findings and Recommendations

Findings	Recommendations
1. Reflect and Assess	<ul style="list-style-type: none">- Reflect on current organizational approaches to community engagement- Identify existing structural barriers to community engagement- Develop and implement organizational accountability protocols
2. Build Organizational Capacity for Community Engagement	<ul style="list-style-type: none">- Define community engagement goals- Develop and implement new metrics of organizational success- Provide staff education and training on environmental justice, equity, cultural competency, and non-extractive storytelling practices- Increase staff diversity and community representation within the newsroom- Address organizational power dynamics and hierarchical workflows
3. Cultivate Trust and Relationships	<ul style="list-style-type: none">- Openly communicate goals, progress, and challenges with communities- Understand communities' demographic makeup, cultures, histories, and needs- Embed journalists within communities- Work at the speed of trust- Develop reciprocal community relationships
4. Partner with Communities and Engage in Co-Production	<ul style="list-style-type: none">- Understand communities' information needs- Create processes for media transparency- Center local expertise- Develop mechanisms for community involvement throughout the story

	<p>production process</p> <ul style="list-style-type: none"> - Follow through and be receptive to feedback
5. Implement Non-Extractive Storytelling Practices	<ul style="list-style-type: none"> - Identify and mitigate potential harm to communities - Accurately reflect communities’ lived experiences and avoid narrative tropes - Highlight structural roots and interconnected nature of environmental injustices
6. Diversify Modes of Storytelling and Reach	<ul style="list-style-type: none"> - Assess communities’ informational, resource, and cultural contexts - Incorporate disability- and language-inclusive best practices - Customize storytelling and dissemination approaches - Develop media and institutional partnerships
7. Utilize Journalism as a Tool for Community Change	<ul style="list-style-type: none"> - Amplify communities’ strengths and solutions - Identify common environmental injustices and cultivate intercommunity solidarity - Inspire community members to take action - Hold powerful interests accountable
8. Transform Funding and Incentive Structures	<ul style="list-style-type: none"> - Increase the scale of funding towards environmental media organizations committed to community engagement, diversity, equity, and environmental justice - Decrease barriers to grant funding

VI. Discussion

Introduction

The following section integrates our interview results and literature review analysis into an in-depth discussion that focuses on examples of how environmental media organizations and funders can best implement our recommendations. Although we cite funding throughout this section as a major barrier for newsrooms to feasibly implement our recommendations, the final subsection, titled “The Role of Funders and Philanthropic Foundations,” focuses on ways in which funders can help environmental media organizations overcome these obstacles to advance the field of equitable and community-based environmental journalism.

Reflect On and Assess Barriers

Both our interviews and the literature suggest the importance for environmental media organizations to reflect on their current approaches and recognize barriers to community engagement work, such as a lack of capacity and power imbalances between themselves and historically marginalized communities. This recommendation is consistent with Bell and Rispoli’s toolkit (2022) that puts forth a set of reflective questions for newsrooms to use to assess their current practices. For instance, newsrooms can ask, “Does [our] strategy make equitable engagement a one-off project or a fundamental part of [our] ongoing news gathering process and infrastructure?” This question provides an example of how newsrooms can implement reflective practices into their current operations as a foundation for community engagement work. Bell and Rispoli, in alignment with our recommendations from our interviews, also stress the need for journalists to recognize and assess barriers, such as the power dynamics at play between themselves and the communities that they serve. Bell and Rispoli (2022) describe how power imbalances become expressed via journalism’s typical objective lens and its tendency to lack recognition of the systemic issues that cause marginalized communities to become silenced. Overall, reflective and assessment strategies build the foundation needed for environmental newsrooms to commit their mission and practices to sustained community engagement work.

Increase Organizational Capacity for Community Engagement

In order to build organizational capacity for community engagement work, newsrooms should begin by defining their core community engagement priorities and goals. For example, North Carolina’s WFAE first established that their core priority was to understand the communities that their newsroom served (Bell and Rispoli, 2022). This community engagement goal allowed North Carolina’s WFAE to develop a “strategic plan...to cement the organization’s and board’s commitment” to serving the community (Bell and Rispoli, 2022). In addition to creating new goals, environmental media organizations need to re-define and implement new ways to measure success. Both our interviews and the literature highlight how newsrooms need to devise new metrics of success that work towards achieving community engagement, equity, and diversity goals. One media organization that we interviewed utilized source diversity

tracking to ensure that their stories represent diverse perspectives. Wright et al.'s guide (2020) for how to equitably cover climate change stories bolsters this recommendation by discussing implementation strategies for newsrooms to track their progress towards reaching equity goals. Specifically, this guide highlights how newsrooms should first identify the metric they desire to track, such as the type of representation in their coverage that they strive to increase (Wright et al., 2020). In practice, this may entail that environmental newsrooms create a spreadsheet to record the number of people of color quoted across various stories (Wright et al. 2020). In addition to recording these metrics, Wright et al. (2020) also stress the need for environmental newsrooms to take the time to celebrate small successes as they work towards reaching their larger equity and community engagement goals.

As emphasized by both our interviews and the literature, other mechanisms that environmental newsrooms can implement to build their organizational capacity for community engagement work are to hire diverse newsroom staff and to provide staff educational training. First, both Brandel and Kho (2021), as well as Oladipo and Nauman (2013), highlight the need for newsrooms to increase diversity both among newsroom staff and in news coverage in order for their stories to be culturally sensitive and accurately represent communities. Second, environmental newsrooms should provide education for journalists on topics including, but limited to, Indigenous traditions and governance, the environmental justice movement, equity issues, and solutions journalism, in order for media coverage to accurately represent communities (Waterman, 2023; Oladipo and Nauman, 2013; Wright et al., 2020). Despite the essentiality of hiring diverse staff and increasing journalists' education, many environmental newsrooms may lack the funding and capacity to be able to implement these recommendations alongside continuing to perform daily operations. However, there are examples of staff education implementation strategies that are less resource intensive. For instance, Waterman (2023) suggests that as a mechanism to train newsroom staff on Indigenous culture, newsrooms can create discussion groups on readings, videos, podcasts, or documentaries relevant to this topic. Thus, there are strategies for environmental newsrooms of varying resource levels to employ to build their organizational capacity for community engagement work.

Cultivate Transparency and Assess Needs

In order to foster reciprocal and trusted community relationships, environmental media organizations need to be transparent, assess and understand communities' needs, and consistently show up in communities. The Knight Commission on Media, Trust and Democracy's report (2019) supports the importance of transparency by highlighting the essentiality for media organizations to adhere to "radical transparency" as part of their operations in order to rebuild the trust necessary for them to sustain community engagement work. In practice, "radical transparency" entails that newsrooms are honest about their operations, including community engagement work, editorial decision making, and business infrastructure (The Knight Commission on Media, Trust and Democracy, 2019). Greater newsroom transparency is especially critical considering that, as stated by New York University journalism professor Jay

Rosen, “trust, which used to be assumed by news organizations, now has to be earned through greater transparency” (The Knight Commission on Media, Trust and Democracy, 2019). There have been case studies of media organizations who have experimented with “radical transparency” by including information about “how [they] got the story” (The Knight Commission on Media, Trust and Democracy, 2019). For instance, ProPublica created a promising model to openly showcase the sources that their reporters relied on (The Knight Commission on Media, Trust and Democracy, 2019). A staff member at an environmental network that we interviewed also stressed the need for newsrooms to be transparent by exposing challenges they encounter when committing to community engagement work.

Both our interviews and the literature suggest the importance for environmental journalists to seek out community voices that the media may not typically uplift in order to assess and best serve their needs. The literature describes that for environmental reporting in particular, journalists need to search beyond strictly environmental-focused organizations to include groups that may not necessarily label their work as “environmental” (Oladipo and Nauman, 2013). For example, many social justice organizations consider their work to be intersectional and encompass both social and environmental justice issues, regardless of whether they explicitly consider themselves to be environmental- or sustainability-focused (Oladipo and Nauman, 2013). Thus, journalists need to expand their stakeholder mapping to encompass a broad range of diverse community organizations whose work both directly and indirectly encompasses environmental justice. Journalists can also consistently attend community events and gatherings to understand communities’ needs. Consistent immersion in communities takes time and requires journalists to slow down, work at the speed of trust, and focus on the process instead of solely on the end product of story generation. Under the typical sense of urgency in the dominant media culture, journalists may not have the capacity to immerse themselves in communities due to prioritizing their efforts on story production. Thus, the dominant fast-paced journalism culture may serve as a barrier for environmental journalists to focus on the process of building trusted community relationships.

Despite this barrier, there have been case studies of media organizations that have successfully implemented strategies to assess community needs. For instance, North State Public Radio assessed the information needs of residents in Chico, California during wildfire season (America Amplified, 2022). North State Public Radio designated staff members to conduct interviews and distribute a survey to Chico community members in order to understand current emergency communication and its gaps (America Amplified, 2022). In addition, This media organization delegated a specific reporter focused on fire recovery to spend time in the community (America Amplified, 2022). Some media organizations that we interviewed also employ similar strategies, such as surveys, community forums, and texting services, in order to create media content that best serves communities’ needs. For example, many media organizations examine data from 211 state systems – which provide assistance to community members on everyday necessities such as food, housing, employment, and utilities – in order to assess communities’ information needs and produce stories that provide communities with the

necessary resources. However, unlike North State Public Radio, which received support from America Amplified for community engagement initiatives, many media organizations we interviewed attributed a lack of funding and capacity as barriers to designate staff members to spend time in communities with the sole purpose to develop community relationships.

Community Members as Experts

Not only is understanding the unique demographics and needs of communities important for cultivating trusted relationships, but it is also necessary for co-producing stories with communities. Through perceiving community members as experts, journalists can center community members' perspectives and lived experiences in the environmental story production process. The notion of community members as experts runs directly against the historic legacy of paternalism in the dominant media culture, in which journalists tend to prioritize their agenda and knowledge over communities' lived experiences. However, media organizations need to provide agency to community members throughout the entire story production process, starting from gathering stories, to obtaining feedback, to ultimately reviewing the story before final publication. Much existing literature highlights City Bureau as a case study for how newsrooms can implement co-production strategies. City Bureau developed and employed the Documenters Program to train and pay community members to attend public meetings and document stories that are often undercovered (Bryant, 2019; Bell and Rispoli, 2022). Many media organizations that we interviewed expressed the desire to implement Documenters type programs in their practices in order to bolster co-production. However, many media organizations have not yet been able implement these types of programs due to funding and resource constraints.

Both our interviews and the literature also emphasize the necessity for environmental journalists to follow through and obtain feedback on their stories from community members before publication in order to ensure that communities are accurately represented. This is especially important when journalists report on sensitive and vulnerable communities, such as Indigenous communities (Yahr, 2019; Waterman, 2023). Although receptivity to community feedback and willingness to amend stories before publication may extend the story production timeline and run against journalists' predetermined agendas, journalists need to follow through in order to accurately represent historically misrepresented communities. Implementing community advisory boards, as suggested in both our interviews and the literature, is one specific strategy that environmental newsrooms can utilize to involve community members in the feedback process. In the literature, Castellano (2020) highlights how community advisory boards can help actively engage community members in the story production process and allow them to guide reporting, write op-eds, and provide feedback on reporting. However, implementing community advisory boards may require additional resources and funding, which could serve as a barrier for environmental newsrooms to put into practice.

Environmental Justice Story Framing and Coverage

Providing mechanisms to center community members in the story production process helps to avoid historic harmful media practices in which journalists may “parachute” into communities, perpetuate dominant narrative tropes, and fail to recognize the larger systemic issues that cause inequities. Rivas-De Leon’s article (2022) supports our interviews when describing how communities of color have historically experienced “parachute” coverage, in which the media largely covers unrest and tragedies instead of systemic causes. In this way, environmental media organizations should resist the employment of these historically harmful practices and instead implement reporting practices that highlight systemic issues, stress the interconnection of environmental justice issues across communities, and uplift the capacities and strengths of communities via long-term and consistent media coverage. The literature also supports the importance for environmental media organizations to center frontline environmental justice communities when reporting on complex issues, such as climate change, in order to highlight the intersection between climate and environmental justice issues across communities (Rhoades, 2022). Wright et al. (2020) and many environmental justice leaders that we interviewed bolster this recommendation by emphasizing the need for journalists to produce stories that uplift systemic issues instead of blaming individuals for the problems that communities face.

One example of a journalist who accurately framed and portrayed an environmental justice community organization via media coverage is Katie Pyzyk (Wright et al., 2020). As a journalist from *Energy News Network*, Pyzyk centered the agency of a Black-led community group, Black in Green, when she reported on the opening of a new community center located in an economically depressed area in Chicago (Wright et al., 2020). By placing Blacks in Green at the center of the story’s frame, Pyzyk highlighted this group’s innovation to not only advocate for the construction of the community center, but to also develop a self-sustaining community powered by clean energy (Wright et al., 2020). In addition to amplifying this community group’s locally-based solutions, Pyzyk also describes how systemic racism has largely excluded people of color from conversations about clean energy (Wright et al., 2020). To move beyond this historic exclusionary practice, Pyzyk portrays the community group as both leaders and innovators (Wright et al., 2020). Although Pyzyk had the knowledge to successfully cover and frame this climate justice story, many journalists may lack knowledge on the environmental and climate justice movements to accurately do so. Thus, newsrooms should implement strategies, such as holding workshops or providing educational materials, that enhance staff knowledge on environmental and climate justice and how to accurately report on these topics (Media Matters Staff, 2023).

Expand Accessibility and Reach of Stories

After producing environmental justice stories framed in an accurate and asset-based way, journalists need to ensure that their final products reach diverse communities in an accessible and usable manner. This entails that stories are accessible in terms of language and mediums of

dissemination as well as implement disability-access best practices. In order to increase accessibility, environmental media organizations need to take the time to understand the local traditions, cultures, languages, informational, and resource needs of communities. For environmental reporting in particular, journalists should keep up to date on ethnic, foreign language, subculture, and other niche news media in order to best understand the perspectives of communities that may not typically be represented via mainstream media coverage (Oladipo and Nauman, 2013). Journalists need to be aware that the corporate owned and centralized mainstream media may create an “homogenizing effect,” in which environmental coverage tends to be tailored to upper classes (Oladipo and Nauman, 2013). Thus, reading ethnic environmental media is one mechanism that journalists can employ to best understand how to tailor their content and uplift diverse communities’ perspectives on environmental issues (Oladipo and Nauman, 2013).

The literature is also consistent with our interviews regarding the necessity for environmental media organizations to utilize various platforms, such as social media, digital, audio, and print, when they disseminate stories in order to expand community reach and best serve the needs of diverse communities (Yahr, 2019; America Amplified, 2022; Bryant, 2019; Ross, 2020). While the literature lacks recommendations for newsrooms to implement disability-access best practices, our interviews help to fill this void by suggesting the need for media organizations to employ disability-access best practices across different modes of communication to ensure both accessibility and usability. Despite these recommendations, the journalism industry’s current capacity constraints may serve as a barrier for newsrooms to implement these accessibility strategies.

However, environmental newsrooms can overcome resource limitations to ensure both usability and accessibility of their content through partnering with other media organizations and institutions. These collaborations can help to diversify community reach, amplify media content, and share both resources and knowledge about the best community engagement practices. In fact, the Knight Commission on Media, Trust and Democracy report (2019) suggests that media partnerships can act as one way to rebuild local journalism. In practice, media organizations can partner with other newsrooms on a local-local, local-regional, or local-national level in order to enhance authentic local reporting (The Knight Commission on Media, Trust and Democracy, 2019). One example of an existing and successful local-national partnership is ProPublica’s local reporting network, in which ProPublica works with local news organizations on investigative stories and pays them to devote staff to cover local stories (The Knight Commission on Media, Trust and Democracy, 2019). As our interviews and the literature both suggest, a more collaborative media environment can also allow peer media organizations to share, instead of compete for, resources and staff amidst capacity constraints in the journalism industry (The Knight Commission on Media, Trust and Democracy, 2019). Thus, philanthropic foundations need to support collaborative media partnerships in order to enhance local reporting that serves frontline environmental justice communities’ needs (The Knight Commission on Media, Trust and Democracy, 2019).

Journalism as a Public Service

It is essential to rebuild local environmental journalism due to its power to promote civic engagement. Instead of solely perceiving journalism as a business model, local journalism should be reframed as a public service (The Knight Commission on Trust, Media and Democracy, 2019). Environmental journalists can use solutions-oriented reporting as a strategy to invoke community agency and civic change, as supported by both our interviews and the literature (Solutions Journalism Network, 2023). Specifically, Wenzel et al. (2016) found that marginalized residents in South Los Angeles, who have been historically distrustful of the media, appreciated how solutions journalism inspired them to become involved in their community to promote change. Wenzel et al.'s research is one of the few existing studies that examines the impact of solutions journalism on underserved communities. However, our interviews further support the positive impact of solutions-oriented stories on frontline environmental justice communities and how it can be utilized to cultivate community agency. Successfully employing solutions journalism requires media organizations to hire reporters from the communities they cover and/or for journalists to spend time immersing themselves in communities in order to foster trusted relationships (Wenzel et al., 2016). This suggests that solutions journalism may only effectively invoke civic change if environmental newsrooms receive the necessary funds to implement strategies to build trusted community relationships.

The Role of Funders and Philanthropic Foundations

Considering the power of journalism to promote community change, especially among underserved and communities of color, philanthropic foundations have increased their funding over the last five years to local newsrooms that serve communities of color (Bauder, 2023). Our interviews support this funding trend as philanthropic foundations expressed growing interest and initiation to support local media organizations that serve marginalized communities; are BIPOC-led; and are centered around environmental justice, equity, and community engagement work. Funders should increase their scale of support for these environmental newsrooms in order to ensure that the field of community-based environmental journalism thrives in the future (Stearns, 2022). Democracy Fund is an example of a philanthropic foundation who successfully implemented a new strategy to support journalism's role in promoting democracy, inspiring civic action, and uplifting leaders of color (Stearns, 2022). They created their new initiative, Equitable Journalism Strategy, based on feedback from grantees about the necessity for funders to support local media in order to reverse both the past harm caused by the media and the historic perpetuation of inequities by philanthropic foundations (Stearns, 2022). Under the Equitable Journalism Strategy, Democracy Fund strives to support leaders of color who utilize media to advance democracy, equity, and justice and to build local news networks that promote civic action (Stearns, 2022). Other funders can follow the lead of Democracy Fund by centering grantees' insights into developing new funding strategies that prioritize grassroots initiatives in order to advance community-based environmental journalism. Considering that funders are increasingly seeking out local environmental newsrooms committed to equity and diversity, newsrooms need

to center their grant proposals around internal and external diversity along with community engagement efforts (Stearns, 2022; America Amplified, 2022).

However, merely crafting grant proposals may not be enough for environmental media organizations to acquire sufficient funds due to barriers present in the philanthropic industry. In fact, Molly de Aguiar, the president of the Independence Public Media Foundation – a foundation that funds local news – describes the necessity for philanthropic foundations to make adjustments and remove factors that may limit the usability of grants for nonprofit newsrooms (Culpepper, 2024). These factors include grant lengths, amounts, purposes, restrictions, and reporting requirements (Culpepper, 2024). De Aguiar emphasizes how nonprofit newsrooms would especially benefit from unrestricted funding that they can utilize to build their organizational capacity (Culpepper, 2024). If philanthropic foundations remove these barriers, funding can be utilized to promote environmental justice, equity, diversity, and democracy in the environmental journalism field. However, despite our recommendations geared towards increased philanthropic support, it is important to note other other potential avenues in which newsrooms can obtain funding, such as via for-profit ventures, crowdsourced funding from readers, partnerships between local and national newsrooms, increased contributions to public broadcasting, government funding, donations from patrons, and journalism-support organizations and associations that support local reporting (The Knight Commission on Trust, Media and Democracy, 2019).

VII. Conclusion

Overall, our recommendations and corresponding implementation strategies can be utilized by environmental media organizations and philanthropic foundations to advance the field of environmental journalism and promote community change. As a first step to commit to community engagement initiatives, environmental newsrooms need to reflect upon their current practices, assess barriers, and implement measures that hold themselves accountable to the communities that they serve. In order to build organizational capacity for community engagement work, environmental newsrooms should first establish goals and re-define metrics of success before implementing other capacity-building mechanisms, such as hiring diverse staff and providing staff educational workshops. Internally building capacity for community engagement work is important before newsrooms externally cultivate community relationships. Environmental newsrooms can utilize several strategies to foster reciprocal and trusted relationships with community members, such as being “radically transparent,” immersing themselves in communities, and utilizing community needs assessment techniques including surveys and texting services. Cultivating trust builds the foundation necessary for co-producing environmental justice stories. Environmental newsrooms can employ strategies, such as training and paying community members to document undercovered stories, in order to actively involve and center community members' expertise throughout the story production process.

In addition to co-producing stories, environmental journalists should ensure accurate representation of frontline environmental justice communities via uplifting locally-based

solutions and community resilience as well as highlighting structural causes of environmental injustices. After developing stories, environmental newsrooms need to make sure that their content is accessible and usable to diverse communities. Media organizations can ensure accessibility and usability by implementing disability- and language-inclusive best practices and fostering media and institutional partnerships. Environmental journalists can further expand the impact of their content through utilizing reporting strategies that drive civic change, including amplifying locally-based solutions, highlighting interconnected environmental justice issues, inspiring community change agents, and holding powerful interests accountable.

Despite our recommendations and example implementation strategies tailored towards environmental media organizations, philanthropic foundations have an essential role to play in supporting the endeavors of environmental newsrooms committed to community engagement work. Not only should funders increase their scale of support towards environmental newsrooms, but they should also remove barriers to grant funding. Even though philanthropic funding is one important avenue to advance environmental journalism, it is important to note that environmental media organizations may also financially benefit from implementing our recommendations. Since many of our suggested actions for media organizations are likely to cultivate trust and strong community viewership, this may increase newsrooms' revenue and subsequently help to advance the field of environmental journalism. To conclude, we hope that our recommendations and implementation strategies can be used to accurately uplift frontline environmental justice communities' narratives and ultimately enable the environmental journalism and philanthropy sectors to advocate for community agency and change.

VIII. Limitations

This study has three major potential limitations. First, because this project was completed in fulfillment of the University of Michigan School for Environment and Sustainability Master of Science program requirements, our team worked within specific time constraints unrelated to the scope or needs of the project itself. As a result, the amount of time we spent on primary and secondary research, data analysis, and the development of our final report and corresponding deliverables was influenced by the deadlines set by our project advisor and the need to complete the project within a year and a half time period. Second, given our position as current graduate students with no previous experience as journalists and with varying academic and professional backgrounds, we utilized an iterative research process that involved substantial experimentation, trial and error, and refinement over time. While our team has detailed this process extensively in the methodology section, our research was ultimately completed as part of a learning experience and therefore requires further investigation and replication by additional scholars. Lastly, while our primary data collection was obtained from a large and diverse sample of participants, these findings reflect the unique experiences and expertise of a specific subset of stakeholders in a particular geographic area. In this way, it is critical that future research efforts build upon our work by including perspectives from additional geographic areas outside of the Great Lakes Region, as well as additional stakeholder groups who may have different relationships with the media and experience different environmental justice concerns.

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Appendices

Appendix A. Interviewee Outreach Email Templates

Initial Outreach and Scheduling Email

Dear [Interviewee Name],

As [referring contact] mentioned, my team and I are working with [client organization] to develop best practices for equitable engagement between media organizations and the communities they cover. We appreciate the opportunity to speak with you and look forward to hearing your insight on this topic!

If you'd like to participate in an interview, please let us know dates and times that work best for you for a 1 hour Zoom call.

Thank you again for contributing your expertise to our research project!

Follow-Up Outreach Email to Non-Responsive Contacts

Dear [Interviewee Name],

I hope you had a good start to your week! I'm writing to follow up regarding your participation in an interview with my student team at the University of Michigan. If you are still interested, we'd love to schedule a brief Zoom call whenever works best for your schedule. We are excited about the opportunity to speak with you and hear your perspective on how local and regional media organizations can better engage with communities on environmental justice issues.

Please let me know if you have any questions. We look forward to meeting with you and thank you in advance for your time!

Follow-Up Scheduling Email

Dear [Interviewee Name],

I hope you've been doing well! I'm writing to follow up regarding your participation in an interview with my student team at the University of Michigan. If you are interested and have time, we'd love to schedule a brief Zoom call whenever works best for your schedule. We are excited about the opportunity to speak with you and hear your perspective on how local and regional media organizations can better engage with communities on environmental justice issues.

Please let me know if you have any questions. We look forward to meeting with you and thank you in advance for your time!

Interview Confirmation Email

Dear [Interviewee Name],

Thank you for taking the time to meet with us! Our team looks forward to speaking with you via Zoom at [interview start time] on [interview day and date]. For context, we are especially interested in hearing your insight on community assets and informational needs, current relationship with the media, and desired improvements and outcomes related to how the media engages with your community.

Feel free to reach out if you have any questions or concerns. We're excited to connect with you then!

Post-Interview Thank-You Email

Dear [Interviewee Name],

Thank you for taking the time to meet with us! It was great to learn more about [topic discussed during the interview] / I appreciate you sharing your experience with [topic discussed during the interview] / Your insight into [topic discussed during the interview] was..., etc.

We will keep you updated as we develop our toolkit and be in touch regarding future opportunities for collaboration. We have made a donation of \$150 on behalf of our team to your organization to thank you for your time and recognize the purposeful work that your organization is doing. The receipt of our donation is attached to this email.

Thank you so much again for supporting our project!

Referral Request Email

Dear [Interviewee Name],

I hope you've been doing well since our interview! Thank you so much again for taking the time to share your perspective on how local media can improve their environmental justice coverage and more equitably engage with communities throughout the reporting process. Our team learned a great deal from speaking with you, and are excited to integrate your insights into our toolkit.

During our interview, you offered to connect us with/recommended that we speak to [Referred Contact Name]. We would love to learn more about [area of expertise, reason

why they were recommended, etc.], and would appreciate the opportunity to set up an interview if they are available and interested.

Thank you so much again for your contributions to and support of our project.

Appendix B. Interview Guides

Community Stakeholders

Introduction

Hi, my name is [X] and I am a master's student at the University of Michigan School for Environment and Sustainability working with Great Lakes Now, which is part of Detroit Public TV, a viewer-supported member station of PBS. Thank you so much for taking the time to speak with me today. As mentioned during our initial scheduling email, my team and I are interested in understanding how Great Lakes Now and other media organizations can more meaningfully involve communities, when reporting on concerns and stories, in the form of increased coverage and a deeper understanding of your lived experiences. We will be using this information to develop best practices for equitable engagement between media organizations and the communities they cover. We are also hoping that this will be an opportunity to “tell your story,” with your permission of course, as a potential result of our conversation. As the [position] at [community organization], we are eager to hear your insight on this topic, and thank you for sharing your experience with us.

Before we begin, do I have your consent to record this interview?

This recording will only be used to help with data collection and will not be shared with anyone outside of my research team and advisor without your permission. Any identifiable information from this interview will be anonymized and remain confidential unless you provide explicit consent to share.

Great, thank you so much. Before we begin, do you have any questions for me? *[If yes, answer questions]*. Feel free to stop me at any time if you have any other questions or concerns, and/or if you'd like to end the interview.

Getting to Know You

I would first love to learn more about your journey to working at this organization.

- Why did you decide to work for this organization?
- How did your professional path take you to [X organization]?

Community Assets and Information Needs

Thanks for sharing about your journey thus far. I am now curious to better understand the unique assets of your community, however you define it. I would also like to learn about how your community receives news information.

- What do you consider to be the biggest strengths or assets of your community?
- How does your community receive and share news stories?

- I.e. Community groups, local faith organizations, town halls, coffee shops, newspapers, family/friends, media outlets, etc.

Current Relationship with Media

This is very helpful to better understand your community's strengths and how they receive information. I am now interested to hear more about how the media engages with your community.

- In what ways, if any, have media organizations sought out your organization/community's input on news stories about your community?
- Can you tell me about how or if the media covers [specific issue/solution community organization focuses on] within your community?
 - Do these narratives accurately reflect community members' experiences?
 - Can you tell me about any problems and local solutions in your community that you think deserve increased attention from the media?
 - Has this media coverage had any impact, either positive or negative, on your community?

Desired Improvements/Outcomes

Thank you so much for sharing this with me. I would now like to hear more about how media outlets can better engage with your community when covering environmental issues.

- IF NO COVERAGE: Can you tell me about any issues, solutions, or stories that you want to see uplifted by the media?
- IF COVERAGE: Advocates and researchers have promoted the use of solutions journalism, which highlights solutions and progress rather than focusing solely on issues, in order to more effectively cover community stories. Do you think that increased reporting on solutions like the ones your organization is implementing would help your organization achieve its goals?
- IF COVERAGE: Another approach for media to equitably engage with communities is to foster collaborative partnerships between journalists and communities so that stakeholders have agency over how their experiences are covered. What are your thoughts about co-producing news stories with media organizations? What do you think this process should look like?
 - Examples: pop-up newsrooms, issue forums, community listening, community advisory board, accountability conversations, etc.

Wrap-Up

- Is there anything else that you would like to share that we have not discussed yet?
- Do you have any additional questions for us?

Closing

Thank you for your time and effort in sitting down to talk with us today! Before we end, do you have any other suggestions for other community organizations or members that we should connect with for our project?

As I mentioned at the start, we will use your opinions, experiences, and insights to create a toolkit for the equitable engagement of communities concerning environmental justice issues. Along with highlighting solutions and positive stories, we hope that this toolkit will help ensure reciprocity between communities and the media.

Per our discussions at the beginning of our interaction, any identifiable information from this interview will be anonymized and remain confidential unless you provide your explicit consent to share the stories that you would like covered by the media.

Our next step in this project is to begin compiling our interview findings into a toolkit— if you are interested in being involved in the toolkit development process, please let us know!

Thank you so much again for taking the time to speak with us and contribute your insight into our project. We'd love to make a donation to [organization] to show our appreciation and recognize your time and commitment to the work you are doing. We are excited to support your organization's meaningful and impactful work!

Media Organizations

Introduction

Hi, my name is [X] and I am a master's student at the University of Michigan School for Environment and Sustainability, working with Great Lakes Now, which is part of Detroit Public Television, a viewer-supported member station of PBS to create a more equitable, community-engaged media model. Thank you so much for taking the time to speak with me today. As mentioned during our initial scheduling email, my team and I are interested in understanding how media organizations can more meaningfully involve frontline communities when reporting on environmental justice stories. We will be using this information to develop a toolkit of best practices for equitable engagement between media organizations and the communities they cover as well as an implementation plan for Great Lakes Now. We plan to disseminate this toolkit via a website and publicly accessible training that will aid other local and regional media organizations in also implementing equity-focused community-based journalism models into their newsrooms. As the [position] at [media organization], we are eager to hear your insight on this topic, and thank you for sharing your experience with us.

Before we begin, do I have your consent to record this interview? This recording will only be used to help with data collection and will not be shared with anyone outside of my research team and advisor without your permission. Any identifiable information from this interview will be anonymized and remain confidential unless you provide explicit consent to share.

Great, thank you so much. Before we begin, do you have any questions for me? *[If yes, answer questions]*. Feel free to stop me at any time if you have any other questions or concerns.

Environmental Story Development Process

I would love to learn more about your newsroom's process of choosing and developing environmental stories.

- Can you elaborate a bit more on the environmental justice story production process, specifically starting with seeking out community stories through deciding which stories to ultimately cover?

Community Engagement

This information is very helpful in understanding the process your newsroom uses in producing environmental stories. I am now curious to explore how your organization engages with the communities you cover.

- How would you describe the community engagement approach of your organization?
 - *Examples: Co-producing stories with communities, co-planning community engagement events, attending community events/town halls, etc.*
- How does your organization receive input from the communities you cover?
 - *Examples: Community advisory board*

Future Visions for Community-Based Journalism

Thank you for your insights about how your media organization engages with the communities that it serves. I am curious to hear your opinions on improvements and future goals for community-based journalism.

- What is your perception of solutions journalism?
 - Do you believe that solutions journalism could be beneficial for local and regional media organizations?
- What strategies or interventions would you ideally desire to implement in [media organization] in the future in order to further foster equitable community engagement?
 - What resources or tools are needed to achieve this goal and overcome any obstacles that your organization may face?

Dissemination of Information

At the culmination of our work, my team and I plan to distribute our toolkit to local and regional media organizations nationwide and aid in their implementation process via some form of training. We are hoping to wrap up by gaining insights into your experience with distributing information from your media organization to others.

- In your experience working at [X] media organization, what do you think are the most effective mechanisms to disseminate knowledge between local media organizations?
 - Online platforms, such as websites or blogs? Training programs? Conferences? Video tutorials? Google doc with bookmarks? Or another mechanism?

Closing

Thank you for your time speaking with us today. Before we close, do you have any recommendations for other local media outlets or community organizations that you think we should connect with for our project?

As I mentioned at the start, we will use your opinions, experiences, and insights to create a toolkit of best practices for equitable engagement with communities specifically regarding environmental justice issues. We hope this toolkit will help ensure community and media reciprocity.

Experts

Introduction

Hi, my name is [X] and I am a master's student at the University of Michigan School for Environment and Sustainability working with Great Lakes Now, a regional environmental media organization that is part of Detroit Public TV, a viewer-supported member station of PBS. Thank you so much for taking the time to speak with me today. As mentioned during our initial scheduling call/email, my team and I are interested in understanding how local and regional media organizations can center stakeholders within the journalistic process through collaboration and co-production of stories. We will be using this information to develop a toolkit of best practices for equitable engagement between media organizations and the communities they cover. We especially want to hear from experts like yourself to better understand how the academic/research community views the relationship between community engagement, journalism, environment, and justice. As the [position] at [organization], we are eager to hear your insight on this topic, and thank you for sharing your experience with us.

Before we begin, do I have your consent to record this interview? This recording will only be used to help with data collection and will not be shared with anyone outside of

my research team and advisor without your permission. Any identifiable information from this interview will be anonymized and remain confidential unless you provide explicit consent to share.

Great, thank you so much. Before we begin, do you have any questions for me? [*If yes, answer questions*]. Feel free to stop me at any time if you have any other questions or concerns.

Getting to Know You

I would first love to learn more about your background and interest in [focus area].

- Can you tell me about how you came to be involved in this work?
- How did your career path take you to [X]?

Research Approaches and Priorities

I know that you/your organization has done a lot of great work in the environment/journalism/ justice/equity space. I am interested to learn more about your/your organization's current areas of focus, priorities, and approach to these issues.

- I'd love to hear about any current research initiatives related to environment/journalism/justice/equity that you/your organization is especially excited about.
- I am curious to hear more about any related frameworks, theories, or themes that you have utilized or found through your research?
- Can you tell me more about why you/your organization has chosen to prioritize these topics/issues, and the impact you hope to achieve through your work?

Gaps and Opportunities

As a key expert in this field, I would love to hear more about any pressing gaps that you/your organization have identified within current research trends.

- When you think about the state of environment/journalism/justice/equity research today, what issues or strategies do you believe deserve more attention?
- What, if anything, do you view as the most significant barriers to effective environment/journalism/justice/equity research?
 - What resources do you think are needed to overcome these barriers?

Future Visions

As you mentioned, you/your organization views [restate research gaps] as a key gap that should be addressed right now. I'm curious to learn more about you/your organization's vision for the future of environment, journalism, justice, and equity.

- Can you tell me about any long-term research trends or goals that you believe will be especially important in the future with

Wrap-Up

- Do you have any final thoughts, or would you like to discuss something I didn't ask about?
- Do you have any questions for us?

Closing

Thank you for your time speaking with us today. As I mentioned at the start, we will draw upon your opinions, experiences, and insights to create a toolkit of best practices for equitable media engagement with communities facing environmental justice issues. We hope this toolkit will help ensure community and media reciprocity.

Funders

Introduction

Hi, my name is [X] and I am a master's student at the University of Michigan School for Environment and Sustainability working with Great Lakes Now, a regional environmental media organization that is part of Detroit Public TV, a viewer-supported member station of PBS. Thank you so much for taking the time to speak with me today. As mentioned during our initial scheduling call/email, my team and I are interested in understanding how local and regional media organizations can center stakeholders within the journalistic process through collaboration and co-production of stories. We will be using this information to develop a toolkit of best practices for equitable engagement between media organizations and the communities they cover. We especially want to hear from funders like yourself to better understand how the philanthropic community views the relationship between community engagement, journalism, environment, and justice. As the [position] at [organization], we are eager to hear your insight on this topic, and thank you for sharing your experience with us.

Before we begin, do I have your consent to record this interview? This recording will only be used to help with data collection and will not be shared with anyone outside of my research team and advisor without your permission. Any identifiable information from this interview will be anonymized and remain confidential unless you provide explicit consent to share.

Great, thank you so much. Before we begin, do you have any questions for me? *[If yes, answer questions]*. Feel free to stop me at any time if you have any other questions or concerns.

Getting to Know You

I would first love to learn more about your background and interest in [focus area].

- Can you tell me about how you came to be involved in this work?
- How did your career path take you to [X]?

Funding Approaches and Priorities

I know that you/your organization has done a lot of great work in the environment/journalism/ justice/equity space. I am interested to learn more about your/your organization's current areas of focus, priorities, and approach to these issues.

- I'd love to hear about any current funding initiatives related to environment/journalism/justice/equity that you/your organization is especially excited about.
 - *Can you tell me more about why you/your organization has chosen to prioritize these topics/issues?*
 - *What impact do you/your organization hope to achieve through grantmaking?*
- I am curious to hear more about your organization's grant application and selection process. Can you begin by explaining the grantmaking process and your organization's role throughout this process?
 - *What do you look for in potential grant applications?*

Gaps and Opportunities

As a key supporter of this field, I would love to hear more about any pressing gaps that you/your organization have identified within current funding trends.

- When you think about the state of environment/journalism/justice/equity funding today, what issues or strategies do you believe deserve more funding?
- What, if anything, do you view as the most significant barriers to effective environment/journalism/justice/equity funding?
 - *What resources do you think are needed to overcome these barriers?*

Future Visions

As you mentioned, you/your organization views [restate funding gaps] as a key gap that should be addressed right now. I'm curious to learn more about you/your organization's vision for the future of environment, journalism, justice, and equity.

- Can you tell me about any long-term funding trends or goals that you believe will help advance the environmental, journalism, justice, and equity fields?

Wrap-Up

- Do you have any final thoughts, or would you like to discuss something I didn't ask about?
- Do you have any questions for us?

Closing

Thank you for your time speaking with us today. As I mentioned at the start, we will draw upon your opinions, experiences, and insights to create a toolkit of best practices for

equitable media engagement with communities facing environmental justice issues. We hope this toolkit will help ensure community and media reciprocity.

Great Lakes Now Staff

Introduction

Hi, my name is [X] and I am a master's student at the University of Michigan School for Environment and Sustainability, working with Great Lakes Now to create a toolkit for the equitable engagement of communities concerning environmental justice issues and also an implementation plan specifically for Great Lakes Now. Thank you so much for taking the time to speak with me today. As mentioned during our initial scheduling call/email, my team and I are interested in understanding how Great Lakes Now can involve communities more fully when reporting on environmental stories. As the [position] at [GLN], we are eager to hear your insight on this topic, and thank you for sharing your experience with us.

Before we begin, do I have your consent to record this interview? This recording will only be used to help with data collection and will not be shared with anyone outside of my research team and advisor without your permission. Any identifiable information from this interview will be anonymized and remain confidential unless you provide explicit consent to share.

Great, thank you so much. Before we begin, do you have any questions for me? *[If yes, answer questions]*. Feel free to stop me at any time if you have any other questions or concerns.

Getting to Know You

- I would first like to learn a bit about why you chose to work at Great Lakes Now.
 - What aspects of Great Lakes Now attracted you to work for the organization?

Environmental Story Development Process

I would love to learn more about GLN's process of choosing and developing environmental stories, starting from initially seeking out stories through ultimately deciding which ones to cover.

Community Engagement

I am interested in learning more about your perceptions on current and future visions for community engagement at Great Lakes Now. As Gillian may have shared with you, our team is designing a toolkit for use by local and regional media organizations and reporters as well as a specific implementation plan for GLN. We want to make sure that this deliverable is usable by local and regional media organizations and as a result, would love your insights on equitable community engagement and what facets of a toolkit might be most useful for GLN to ultimately implement.

- How would you describe the community engagement approach of your organization?
 - *Examples: Co-producing stories with communities, co-planning community engagement events, attending community events/town halls, etc.*
- What unique challenges do you face as a reporter/producer while trying to engage with the communities you cover?
- What is your perception of solutions journalism?
- What strategies or interventions would you ideally desire to implement in GLN in the future in order to further foster equitable community engagement?
 - *Examples:*
 - *pop-up newsrooms: journalists go into community to invite community to become part of work - ex: setting up a tent in park*
 - *issue forums: live events, journalists interact with residents in two-way conversations, explore solutions-oriented journalism, community members share their own perspectives about what is needed*
 - *community advisory board: newsrooms invite community members to share their feedback on stories and their opinions of the issues they want covered, residents voices can be heard and helps to build trust, meetings should be in-person and can be in newsrooms or in community spaces*

DEIJ Initiatives

Thank you for your insights about Great Lakes Now's current and future community engagement. I would now like to hear about the DEIJ initiatives at GLN and your future visions.

- How do you view GLN's current commitment to DEIJ initiatives?
 - *If needed: What do you envision as the future for DEIJ initiatives at your organization?*

Dissemination of Information

At the culmination of our work, my team and I plan to distribute our toolkit to local and regional media organizations nationwide and aid in their implementation process via some form of training. We are hoping to gain insights into your experience with distributing information from Great Lakes Now to other local and regional media organizations.

- In your experience working at Great Lakes Now, what do you think are the most effective mechanisms to disseminate knowledge between local media organizations?

- *Online platforms, such as websites or blogs? Training programs? Conferences? Video tutorials? Google doc with bookmarks? Or another mechanism?*

Wrap-up

- Is there anything else that you would like to share that we have not discussed yet?
- Do you have any additional questions for us?

Closing

Thank you for your time speaking with us today. Before we close, do you have any recommendations for other local media outlets or community organizations that you think we should connect with for our project?

As I mentioned at the start, we will use your opinions, experiences, and insights to create a toolkit of best practices for equitable engagement with communities specifically concerning environmental justice issues. We hope that this toolkit will help ensure reciprocity between communities and the media.

Appendix C. Codebook

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Relationship and trust-building	Practices or approaches that are intended to or perceived as (1) establishing positive relationships and/or (2) a sense of trust between community stakeholders (including individual community members, community-based organizations, etc.) and media organizations (including the media organization as a whole, individual reporters or staff members, etc.).	Consistently showing up for community	Journalists/media orgs approach community members as partners and actively seek to support communities.
		Co-host/participate in	Journalists attend/host community events and
		Transparency	Media engages in practices that promote transparency and accountability, such as being transparent about mission statement, newsroom production process, funding, etc.
		Sociocultural awareness	Tailoring activities and approaches to reflect specific community's cultural and social contexts, such as spoken languages, holidays and cultural celebrations, etc.
		Accessible language	Media ensures their content is tailored to communities' unique linguistic needs.
		Assessing community information needs	Media covers stories and topics based on community's preferences, and needs, interests
		Reciprocity	Media organizations recognize the value of community members' lived experience, local knowledge, and participation in the story generation and production process, and have practices in place to materially or practically acknowledge these contributions
		Stakeholder mapping	Media assesses the unique demographic makeup of areas that they seek to cover and actively approach and seek to serve the needs of historically marginalized communities.
		Working at the speed of trust	Media organizations and journalists work at a pace conducive to trust-building instead of working towards high rates of story production.
		Community media literacy	Educating and informing communities of media protocols and practices beforehand and obtaining informed consent at every stage of story production.
Offering resources/support	Offering additional resources and support to communities beyond reciprocity for contributions to story generation and production. This can include volunteering at community events, connecting individuals to public services during times of emergency, etc.		

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Co-production and community partnership	Reporting or organizational practices or approaches that are intended to or perceived as (1) providing opportunities for the indirect or direct involvement of affected community members in story selection, information gathering, and/or reporting processes, (2) facilitating shared decision-making between media organizations and communities regarding which and how stories are covered, and/or (3) collaborating with communities to advance their goals or meet their needs.	Mechanisms for community feedback/input	Providing a space for community members to give feedback and input via mechanisms such as Community Advisory Boards, texting services, feedback forms, etc.
		Free, prior, and informed consent	Asking for consent, clarification, and allowing community members to withdraw consent through the entire story production process
		Embedding media in community	Distributing news stories throughout the community the newsrooms serve in accessible ways
		Community members as story gatherers/story tellers	Providing outlets for community members to gather and tell their stories, such as via Op-Eds, Letters to the Editors, and the Documenter's Program (community members trained to take notes during public meetings and help to co-produce stories)
		Updates and retractions	Journalists and media organizations are receptive to community feedback and willing to amend their media products before publication
		Solicitation and prioritization of community input	Journalists solicit and/or center community members' expertise, lived experiences, and perspectives throughout the story production
		Uplifting community organizations' media	Media organizations amplifies media produced by community organizations via mechanisms such as posting to their social media pages, posting on their website, etc.
		Training and hiring pipelines	Media organizations create and support a pipeline of community members from interns to becoming full-time staff
		Stories produced serve community's needs	Journalists and local and regional media organizations need to understand community's needs through having conversations with community members and directly centering their insights

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Non-extractive EJ story production/coverage (product)	Reporting practices or approaches that are intended to or perceived as (1) considering and seeking to minimize the potential harm to communities that may result from the story production process, and/or (2) respecting and being responsive to the experiences, needs, and preferences of communities affected by the issue or story being covered	Accessible to community being covered and the broader public	Barriers such as the medium utilized for story dissemination, language, or lack of internet affect communities' ability to meet information needs collectively and individually.
		Serves community information and communication needs	Media covers stories and provides resources/information that are relevant to community needs and that address existing information gaps.
		Avoids narrative tropes	Media uplifts the voices of historically marginalized communities not typically heard and tells their stories without relying on stereotypes or popular assumptions
		Recognition of interconnection of EJ issues, stories, and experiences across communities	Media creates stories that highlight communities facing similar issues instead of depicting community stories in isolation
		Raises public awareness of EJ issues and solutions	Media serves as a mechanism to educate the public about environmental justice issues and locally-based solutions
		Highlights community capacity and strengths (rather than victimization)	Media portrays community members through an asset-oriented, not deficiency, perspective and works to describe individuals agency.
		Identifying systemic roots of issues	Media looks beyond surface-level issues to explore systemic issues, such as structural racism, colonization, white supremacy, etc.
		Holding powerful institutions/entities accountable	Media frames stories in ways that hold corporations and institutions accountable instead of only blaming specific individuals or affected communities.
		Audience calls to action	Media provides resources, community organization website links, and ways for the public to become involved in the EJ movement and/or to advance community organizations' goals
		Consistent and long-term coverage	Media continues to cover communities' stories beyond just one breaking story or quote
		Narrative accurately reflects community members' lived experiences	Media organizations center the feedback of community members in their stories to ensure accurate presentation of their lived experiences

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Solutions Journalism	Practices or approaches that (1) align with the framework of Solutions Journalism as developed by the Solutions Journalism Network, and/or (2) participants identify as or associate with solutions-oriented journalism.	Showcasing community-designed solutions	Integrates and centers community-designed solutions within narratives created by media.
		Amplifying community resilience and strengths	Describes community strengths, assets, and uniqueness consistently rather than focusing solely on struggles or trauma
		Response	"A solutions story focuses on a RESPONSE to a social problem — and how that response has worked or why it hasn't." (Solutions Journalism Network, 2020)
		Insight	"The best solutions reporting distills the lessons that makes the response relevant and accessible to others. In other words, it offers INSIGHT." (Solutions Journalism Network, 2020)
		Evidence	"Solutions journalism looks for EVIDENCE — data or qualitative results that show effectiveness (or lack thereof). Solutions stories are up front with audiences about that evidence — what it tells us and what it doesn't. A particularly innovative response can be a good story even without much evidence — but the reporter has to be transparent about the lack, and about why the response is newsworthy anyway" (Solutions Journalism Network, 2020)
		Limitations	"Solutions stories reveal a response's shortcomings. No response is perfect, and some work well for one community but may fail in others. A responsible reporter covers what doesn't work about it, and places the response in context. Reporting on LIMITATIONS, in other words, is essential." (Solutions Journalism Network, 2020)
		Accountability journalism	Media narratives hold institutions in positions of power accountable for systemic issues

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Structural barriers to equitable community engagement (problems/gaps)	Systemic practices, processes, or norms that are perceived as hindering equitable engagement between media organizations, reporters and staff, and the communities whose stories they cover.	Burdensome grant application and reporting process	Philanthropic processes and norms that are time-consuming, laborious, or otherwise burdensome to grantseeking organizations. This includes formal grant application, selection, and reporting processes, as well as informal norms perceived as essential to securing funding and maintaining positive relationships with donors.
		Underresourcing	Lack of financial capital, staff, education, knowledge, or similar resources necessary for media organizations to equitably engage with communities
		Nonrepresentative newsroom	Media organization staffing does not reflect the demographic or cultural characteristics of the community being reported on
		Incompatibility between journalistic process and community engagement process	Practical or ethical constraints that limit or impede journalists from engaging or interacting with community members. These constraints can be specific to the culture and practices of a specific media organization or norms that are broadly accepted by the industry in general, such as top-down story selection processes, both-sidesism, etc.
		Structural and institutional racism	Values and norms within both broader society (in this case, the US) and individual institutions (in this case, particular media organizations, philanthropic organizations, etc.) that uphold and perpetuate the marginalization of Black, Indigenous, People of Color
		Cultural disconnect	Lack of understanding of a community's cultural norms by media organizations and staff
		Legacy of distrust and historic marginalization	Negative community perceptions of media organizations or the media industry at large caused by past harm associated with these institutions

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Organizational resistance and transformation (solutions)	Practices, processes, or norms that are perceived as (1) facilitating equitable engagement between media organizations, reporters and staff, and the communities whose stories they cover, and/or (2) challenging or countering the conditions that hinder equitable engagement.	Shifting mission to align with EJ/DEIJ commitments	Newsrooms building and modifying their internal operations and values around principles of EJ and DEIJ
		Hire more diverse staff/journalists of color	Increasing staff diversity including but not limited to factors including race, ethnicity, cultural, and religious in order to broaden the perspectives represented within an organization.
		Opportunities for community involvement	Newsrooms creating processes and programs to attract and support the informal and formal integration of community members into the media organization (i.e. internships, hiring initiatives, education programs, etc.)
		Dedicated community engagement staff/program	Newsroom hiring a specific community engagement role or developing a community engagement program to center these practices within the larger organization
		Role of journalism to promote community change	Journalism provides resources and opportunities to get engaged in community causes
		Making grant-making process more accessible and nonrestrictive	Funders aid the potential grantees throughout the entire process to make it less complicated and allow newsroom to use funds in ways they see fit (capacity-building)
		Decolonial practices	Practices rooted in EJ principles instead of legacies of colonization/structural racism
		Newsroom structural/cultural change	Shifting newsroom structure and culture away from white supremacy and structural racism to one that embodies decolonial and EJ ideals
Internal accountability	Putting mechanisms in place in the newsroom, such as staff to staff accountability, that make sure all staff members uphold mission statement and commitment to systems change		

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Harmful paradigms and practices	Journalism culture, reporting practices, approaches, or norms that cause or perpetuate harm to (1) communities and/or (2) journalists and media organization staff.	Profit over people	Media focuses on generating maximum revenue over centering community needs and perspectives in their stories
		Numbers over narratives	Media seeks to gather data from communities above understanding and representing their lived experiences in their coverage
		Parachute coverage	Journalists come into a community to cover "breaking news", but immediately leave after covering the story and do not follow up
		Quoting out of context	Journalists only use one quote from a community member out of context in a way that misrepresents their lived experiences
		Sensationalizing coverage	Dramatizing an event or experience in order to generate clicks or revenue without considering how this may impact affected individuals or communities
		Trauma porn	Media focuses on reporting on community trauma and stories which uphold victim and perpetrator narratives
		Victimization and blaming	Media portrays communities as lacking agency and blaming them for their problems instead of drawing attention to a larger system of oppression
		Paternalization	Not considering community members' knowledge, lived experience, and perspectives as valid expertise and providing them unsolicited advice on how to approach issues they are facing.
		Underresourcing	Media organization staff lack adequate support, resources, and/or compensation.

Parent Code (objective/goal or problem/gap)	Parent Description	Child Code (strategy to reaching objective/goal or components of problem/gap)	Child Description
Communication and dissemination of information	Practices that are intended to or perceived as facilitating the spread of facts, knowledge, or content to communities.	Local language and translation	Having an understanding of what the commonly spoken language is in a community and whether or not there is a need for translation services during events/interviews or other interactions and then making these accessible as needed.
		Assessing community information needs	Inquiring about individuals and groups within a communities information needs through mediums such as community forums or listening sessions to better understand how journalistic work can address these needs
		Face-to-face interactions (conferences, community meetings)	Attending community events in person- not just hosting events for community but also attending events held by community for reasons beyond strictly information-gathering
		Mediums of communication (print, digital, audio, video, text, etc.)	Offering information through diverse mediums in order to appeal to individual needs and maximize the sharing and usability of data in community communication networks
		Disability access	Ensuring that written media is accessible in audio formats, that visuals are described, that figures and visuals are accessible to those with color blindness or visual impairment among others.
		Partnerships with other media organizations	Broadening existing community networks through partnerships in order to diversify coverage and reach wider audiences
		Social media	Employing social media to expand the reach of stories and connect individuals and communities separated by geography.
		Youth engagement	Engaging youth in story telling efforts particularly within their communities and providing them with the resources and learning opportunities to become change agents by utilizing and engaging with media

Appendix D. Coding Process Memo

Uploading Transcripts

- Open the transcript in Otter.ai (double-check that the transcript has been edited)
- Follow these instructions to export the transcript as a txt file
 - For Step 4, select the following options: Show speaker names, Combine paragraphs of the same speaker, Show timestamps
 - Name the file using the following template: “[Interviewee Name]_[Organization Name]”
 - If person sat for multiple interviews, use the following format: “[Interviewee Name]_[Organization Name]_[Interview Date]”

Coding

- Coding: the process of identifying, organizing, and capturing qualitative analysis of data by applying codes to excerpts (sections of text) to denote key themes or findings
- Parent Codes: aka root codes; in our coding approach, parent codes are used to denote (1) the goal or desired outcome of the practices, frameworks, and approaches (referred to as the strategy) used by media organizations, or (2) the problem or gap identified as causing or contributing to a lack of equitable community engagement
- Child Codes: aka sub codes; in our coding approach, child codes are used to denote (1) the strategy used to reach the goal or desired outcome, or (2) components of the problem or gap identified; nested within Parent Codes
- How to code in Dedoose:
 - Dedoose Help Center
 - Make sure that the padlock icon in the upper left-hand corner is locked before you start to code (if the icon shows an unlocked padlock, the transcript text will be editable)

Memos

- Memoing: used to document the researcher’s analysis in real time as they code; for our project; we will use memos to explain and document how our analysis of the data can be translated into practical recommendations to be included the toolkit; think of memos as the brainstorming phase of the writing process, which will eventually become the basis of our toolkit outline
- Excerpts are the evidence > Codes are the general themes > Memos are the analysis and recommendations for newsrooms
- Memos should be added to the Memo Group corresponding with the Parent Code applied to the excerpt
- Memos can be linked to multiple excerpts in multiple transcripts that can also be used as evidence for the analysis and recommendations included

Refining/Updating Codebook

- Only if needed: If you identify an excerpt that does not clearly align with a specific child code:
 - 1) Code the excerpt with the most relevant Parent Code
 - 2) Code the excerpt with the Parent Code titled “New Code?”
 - 3) Write a memo explaining your reasoning and/or ideas for why a new child code is needed, suggestions, etc. (optional)