CITY OF OCEANSIDE

OCEANSIDE DIGITAL EQUITY PLAN

JULY 2022

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ACKNOWLEDGEMENTS

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- Melanie Nutter, Principal
- Katherine Lee, Senior Associate
- Ananya Raghavan, Research Fellow

Letter from the City Manager

Dear Oceanside community members,

I am pleased to announce the release of Oceanside's inaugural Digital Equity Plan. This plan was developed through a community-wide effort to address the digital divide that affects thousands of people in the Oceanside community who have experienced challenges accessing and using the Internet.

Throughout the pandemic, the persistent consequences of the digital divide in Oceanside were felt even more strongly. Students and families who needed to learn and work from home experienced challenges with connectivity and affordable Internet access. Members of vulnerable communities were not all able to access needed services like healthcare and public services through online channels. The City of Oceanside recognizes that access to high-quality, affordable Internet has become a basic necessity for everyone to fully and equitably participate in jobs, housing options, education, and more.

Oceanside has taken initial proactive steps that provide the foundation for this digital equity initiative. Through our Public Library and Resource Centers, residents can access free public WiFi and computers for use during the day. With a library card, community members are able to borrow hotspots and computers free of charge and access free classes to improve their digital skills. Families of the Oceanside Unified School District received over 500 hotspots to help students adapt to the remote learning environment during stay-at-home pandemic requirements.

Whereas this investment has increased access for some community members, there are still gaps that create barriers for everyone to access digital resources and opportunities. The Digital Equity Plan has investigated and uncovered those gaps and provides an actionable roadmap for the City and its partners to address challenges and create opportunities for digital equity. Through continued collaboration, our City can ensure that all members of the Oceanside community have equal access to the opportunities of the 21st century.

Sincerely,

Jonathan Borrego
City Manager

EXECUTIVE SUMMARY

Our world has become increasingly digital with all types of services from health care, to job applications, to education being offered online. While access to the Internet in the early days used to be considered "nice to have", the COVID-19 pandemic made it clear that digital access is no longer a luxury, but an essential resource for equal participation and opportunity. In today's modern society, achieving digital equity is critical to creating fairness and positive outcomes across education, employment, healthcare, entertainment, social connection, and more. In Oceanside, the digital divide affects residents across the community; approximately 13,055 (7.5%) Oceanside residents do not have an Internet subscription, and 7,658 (4.4%) residents do not own any type of digital device.[1]

Digital access can transform the lives of people living and working in Oceanside. To lead a community-wide vision for digital equity, the City of Oceanside initiated this Digital Equity Plan to strategically advance the three pillars of digital equity: access to the Internet, access to digital devices, and digital literacy skills. As the community grows and the technology workforce expands, Oceanside is working to ensure that digital equity is embedded, so all residents have access to opportunities and the necessary support.

Through the City's ongoing General Plan Update "Community Vision, Organizing Themes, and Guiding Principles", the City and community expressed their priorities for the future of Oceanside. One of the main themes that emerged is "Physical, Social, and Digital Connections" which focuses on improvements to the City's physical and digital infrastructure, including community broadband connections and smart city technologies. Under this theme, one of the priorities is to "Bridge the Digital Divide," recognizing that access to the Internet is now a basic need.

To realize the vision of "Onward Oceanside" in the General Plan Update and meaningfully address inequity in the community, the City of Oceanside launched a digital equity initiative. The project team reviewed City plans, programs, policies, and data on the digital divide to gain a deeper understanding of the community's digital equity needs and priorities. To gather community perspectives, the project team conducted 14 stakeholder interviews and held an in-person Digital Equity Community Workshop in the Oceanside Public Library Community Rooms. This engagement and analysis process provided key insights into existing challenges and opportunities to bridge the digital divide that informed the final plan.

The Digital Equity Plan establishes five goals, nine objectives, and 34 strategic actions to address Internet access, device access, digital literacy skills, and community engagement. This strategic plan outlines a roadmap for the City and its partners to achieve digital equity and inclusion so that all individuals have the digital resources and capacity for full participation.

A VISION FOR DIGITAL INCLUSION

Known for its beautiful beaches and action sport events, the City of Oceanside is a coastal community in northern San Diego County. With over 174,000 people, Oceanside is the third-largest city in San Diego County, neighboring Carlsbad, Vista, and Camp Pendleton. The Oceanside economy has diversified over the last three decades, with industry growth in retail, healthcare, education, tourism, and manufacturing. Aligned with the community's growth, the City has pursued smart city and digital equity initiatives to improve service delivery, efficiency, quality of life, climate action, and economic opportunities.

One of the priorities of the City's vision for improvement is to bridge the digital divide. Defined by the National Digital Inclusion Alliance, the digital divide is "the gap between those who have affordable access, skills, and support to effectively engage online and those who do not."[2] As technology adoption continues to increase across all sectors, the digital divide prevents equal participation and opportunities for work, education, and community connection. The digital divide disproportionately affects people of color, Indigenous peoples, low-income households, people with disabilities, rural residents, seniors, and other disadvantaged communities.

To address these disparities, the City of Oceanside is working to advance digital equity and inclusion. Digital equity is "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy."[3] Achieving digital equity requires digital inclusion, "the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs)."[4]

Joining the San Diego Association of Government's (SANDAG) Regional Digital Divide Taskforce was one of the first steps that the City of Oceanside took to advance digital equity. SANDAG created this Taskforce to bring together regional public agencies, broadband providers, and nonprofit organizations to advance digital equity in the region. The Taskforce assisted in the development of the guiding principles for the Regional Digital Equity Strategy and Action Plan and engages with SANDAG's ongoing efforts to address the digital divide.

Prior to the COVID-19 pandemic, the Oceanside Unified School District's Chief Technology Officer proposed a technology plan, named the "Future Ready Framework", to provide digital devices to each student over the next 3 years.[5] This ambitious plan aims to provide grade 3-12 students with a Chromebook and K-2 students with tablets.[6] In response to the transition to distanced learning, the School District distributed 534 no-cost Internet

hotspots to serve over 380 families to help bridge the digital divide in December 2020. Additionally, the Oceanside Public Library provides free digital literacy courses, tutoring, free loaned devices, and other resources. In 2020, the Public Library also began offering free online skill-development courses to help unemployed, furloughed, or part-time workers re-enter the job market.[7]

While the school district has made some significant investments in ensuring access to devices and to the Internet for its students and the City made strides in this realm, more needs to be done to deepen and expand digital equity in the community. This plan aims to uncover where those needs still exist with specific strategies to tackle the challenges.

DIGITAL EQUITY IN ACTION

STATE AND REGIONAL POLICY LANDSCAPE

The State of California is leading the way in digital equity with its Broadband for All Initiative, aiming to transform the lives of the state's 39 million residents by ensuring everyone has access to affordable and reliable broadband. In August 2020, Governor Gavin Newsom signed Executive Order N-73-20 which addresses broadband and digital equity strategies across mapping and data, funding, deployment, and adoption, while also establishing a minimum broadband speed goal of 100 Mbps.[8]

In addition, the Executive Order called for the development of California's Broadband for All Plan completed in December 2020. The Plan sets the vision for California's three central digital equity goals: 1) High-performance broadband available at home, schools, libraries, and businesses; 2) Access to affordable broadband and necessary devices, and 3) Access to training and support to enable digital inclusion.

Aligned with this vision, California passed SB 156 in July 2021, which provides $6 billion for broadband infrastructure development, including $2 billion for last-mile infrastructure projects at the county level and a $750 million Broadband Loan Loss Reserve dedicated to assisting local governments and nonprofits in financing broadband service projects.[9] This historic funding opportunity can help California deliver equitable, affordable access to high-speed internet service to all residents affected by the digital divide. To accelerate digital equity priorities beyond broadband, the State passed AB 2570 in February 2022, directing the Department of Technology to create a state digital equity plan in partnership with the public, the Public Utilities Commission, and the California Broadband Council. The plan will identify barriers to digital equity, key stakeholders, and measurable objectives, with a specific focus on underserved communities including impoverished households, seniors, incarcerated individuals, veterans, individuals with disabilities, individuals with language barriers, minority populations, and rural residents.[10]

Aug 2020	Dec 2020	Jul 2021	Feb 2022
Executive Order N-73-20	**California's Broadband for All Plan**	**CA AB/SB 156 Passed**	**CA AB 2570 Passed**

In alignment with state goals, the San Diego Association of Governments (SANDAG) Board of Directors adopted a resolution in January of 2022 to support increased broadband access to bridge the digital divide and direct the development of a Digital Equity Strategy and Action Plan. Completed in December 2021 with the support of SANDAG's Regional Digital Equity Taskforce, the Plan includes a regional digital equity data analysis and strategies to increase access and adoption of broadband throughout San Diego County.[11]

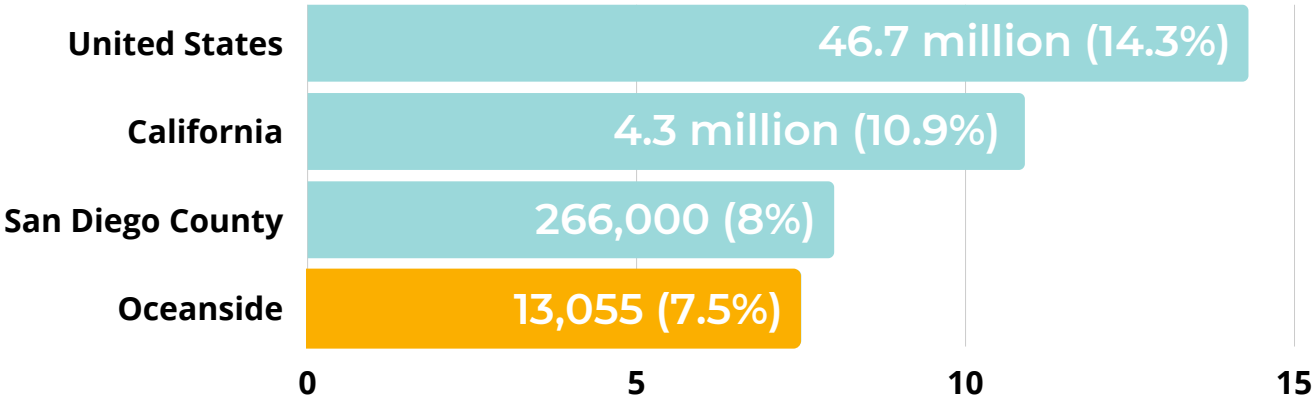
THE DIGITAL DIVIDE ASSESSMENT

STATE AND REGIONAL CONTEXT

How Oceanside Compares with the United States, California, and San Diego County

Lacking Internet Access

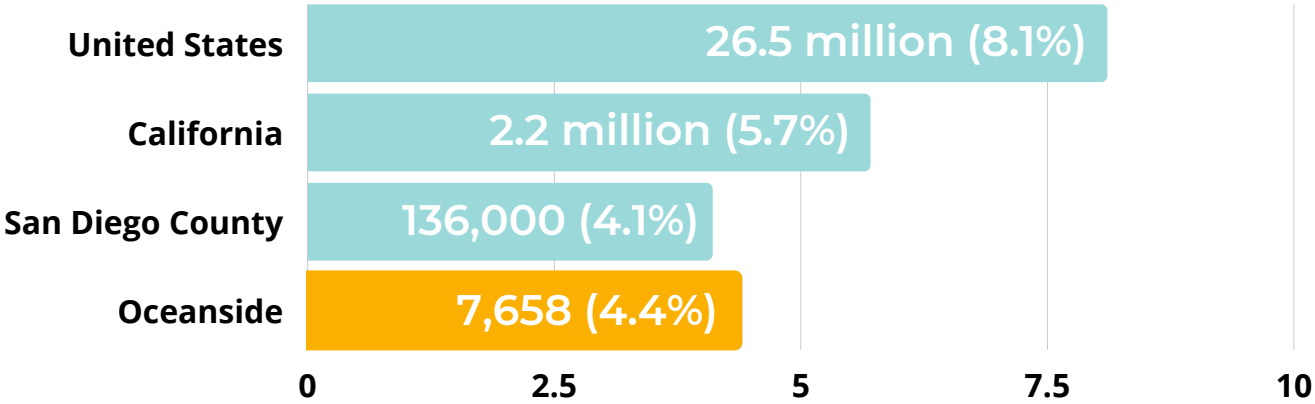
Number of residents without an Internet subscription



Data Source: US Census Bureau 2020 American Communities Survey 5-Year Estimate

Lacking Device Access

Number of residents without a computing device



Data Source: US Census Bureau 2020 American Communities Survey 5-Year Estimate

In 2021, the San Diego Association of Governments (SANDAG) released a Regional Digital Equity Strategy and Action Plan that includes an assessment of the digital divide in San Diego County. Through this assessment, SANDAG identified key digital equity issues and specific disparities affecting underserved communities.

Prominent Digital Divide Issues and Impacts in San Diego County

- **Urban/Rural Divide:** 94% of people in the region's urban areas have access to fixed broadband service, compared with only 66% of people in the region's rural areas
- **Low-Income Disparity:** There are high concentrations of low-income households without a broadband subscription in certain neighborhoods, including Barrio Logan/Logan Heights (21%), National City (18%), San Ysidro (17%), and City Heights (16%), across San Diego
- **Impacts to Business:** 39% of businesses and 42% of employees reported connectivity issues during the pandemic that affected their ability to do their jobs
- **Impacts on Seniors:** 17% of seniors age 65 and older in San Diego County do not have a broadband subscription
- **Impacts on Students:** 20% to 40% of students in many local districts do not have a broadband subscription

From this data, it is clear that underserved communities, including low-income households, rural areas, seniors, and students, have lower access to Internet connectivity throughout the San Diego region. This lack of access is exacerbated by a lack of affordability and availability.[12]

UNDERSTANDING OCEANSIDE'S DIGITAL DIVIDE

The digital divide, characterized by the "gap between those who have affordable access, skills, and support to effectively engage online and those who do not", affects Oceanside residents across the community.[13] The COVID-19 pandemic exacerbated the existing impacts of the digital divide, disproportionately affecting disadvantaged communities and preventing equal participation and opportunity. In order to develop an effective strategic plan, the City of Oceanside conducted a Digital Divide Assessment, collecting and analyzing available data related to the digital divide in the community.

Internet Access in Oceanside

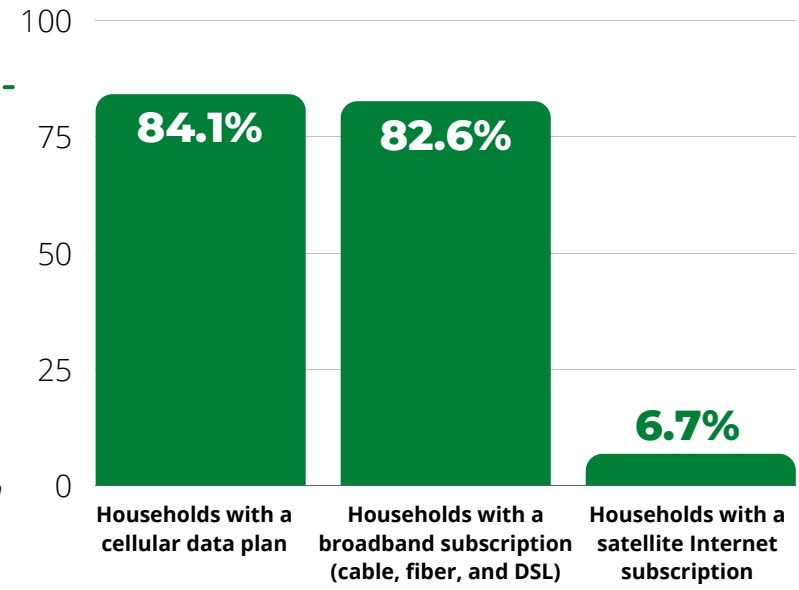
92.5%

Households with any type of Internet subscription

7.5%

Households without an Internet subscription

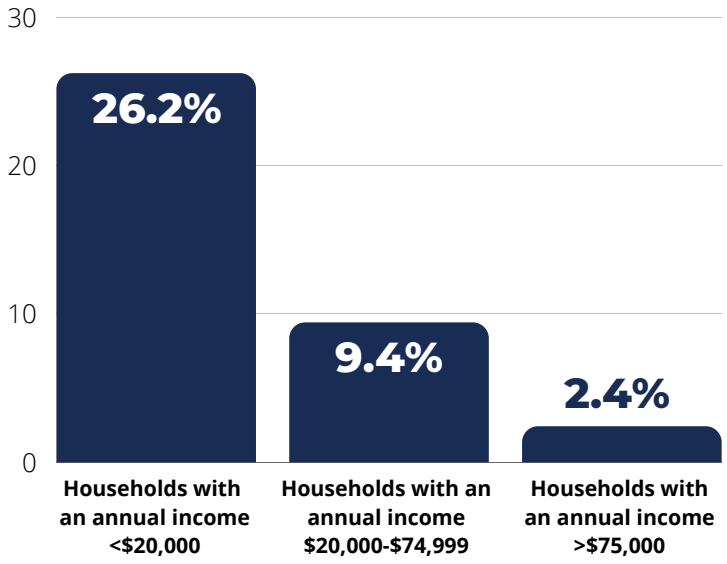
Data Source: US Census Bureau 2020 American Communities Survey 5-Year Estimate



According to 2020 data from the US Census Bureau, approximately 7.5% or 13,055 Oceanside residents do not have any type of Internet subscription.[14] In addition, 7.3% of households with a cellular data plan have no other type of Internet service. With data and speed limitations, reliance on a cellular Internet connection can limit the ways that individuals can use the Internet.[15]

Oceanside Households Without An Internet Subscription *By Income*

Data Source: US Census Bureau 2020 American Communities Survey 5-Year Estimate



Internet accessibility also varies by income level. Households with an annual income of less than $20,000 have the lowest rate of Internet subscriptions. These income disparities demonstrate the challenge of Internet affordability in Oceanside and a lack of Internet access compounds other inequities. These trends align with findings from the SANDAG report that lower-income households were correlated with less broadband subscriptions than higher income households.

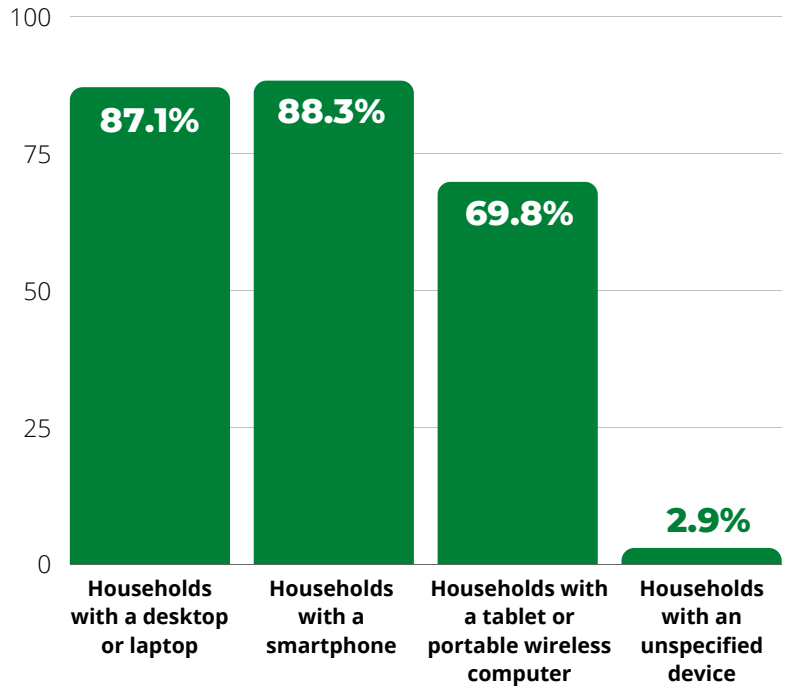
Device Access in Oceanside

95.6%

Households with one or more types of computing devices

4.4%

Households without access to any digital devices



Data Source: US Census Bureau 2020 American Communities Survey 5-Year Estimate

Across the Oceanside community, approximately 4.4% or 7,658 residents do not have access to any type of digital device.[16] In addition, 4.4% of smartphone users do not have access to other types of digital devices.[17] For those who only have access to a smartphone, it can be difficult to access services, since not all websites are mobile-friendly. It can also be challenging to complete work or school-related activities on a smartphone because of the limited applications and screen size.

Digital Maps Reveal Gaps in Access for Vulnerable Populations

The following set of maps reveals disparities in access to broadband subscriptions and digital devices across the Oceanside community. Rates of access compound with other equity issues, resulting in lower rates of digital access for low-income households, minority communities, and seniors.

The Oceanside Digital Equity Plan includes images from the California Interactive Broadband Map provided by the California Public Utilities Commission (CPUC). The CPUC collects data from broadband providers throughout California and validates the data. For additional maps, please view Appendix D.

Wireline Infrastructure Availability Across Oceanside

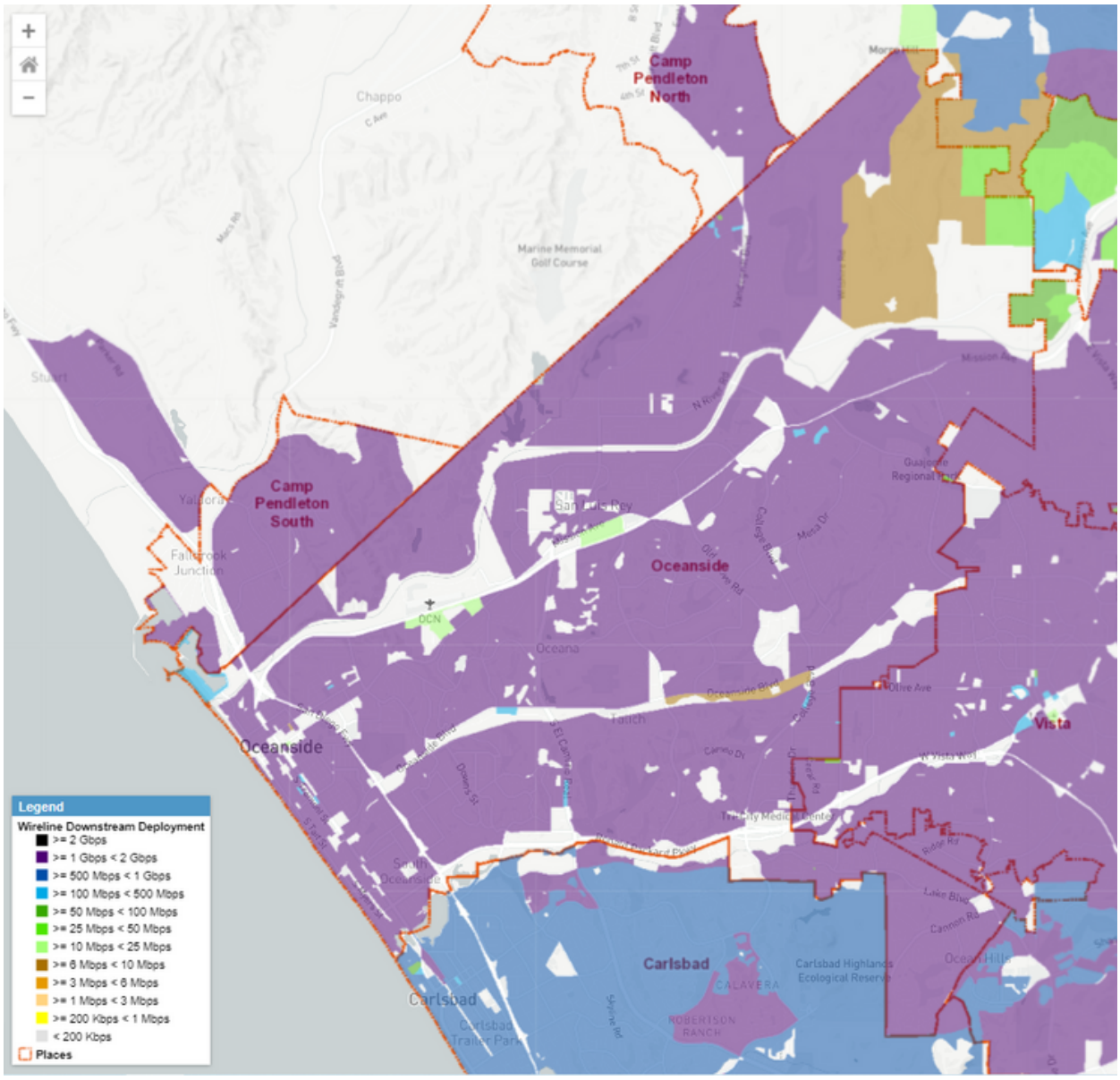


Figure 1: Wireline Downstream Deployment

Figure 1 shows the wireline served status and download speeds in Oceanside. Most of the community has wireline service that reaches downstream speeds between 1 Gbps and 2 Gbps. There are pockets of the community that do not currently have access to wireline service or have slower speeds of connectivity. Though this map demonstrates that a majority of the community has high-speed connectivity, it only reflects the service available, not the number of households that have subscribed to the Internet. Challenges such as affordability and technology access have limited people's ability to get high-quality residential Internet service.

In addition to the mapping resources provided by the CPUC, the San Diego Association of Governments (SANDAG) created an ArcGIS portal to visualize the digital divide in San Diego County. These mapping assets were created using data from the California Public Utilities Commission, FCC Form 477, American Communities Survey, and BroadbandNow.[18]

Low-Income Households in Oceanside Have Fewer Broadband Subscriptions and/or Digital Devices

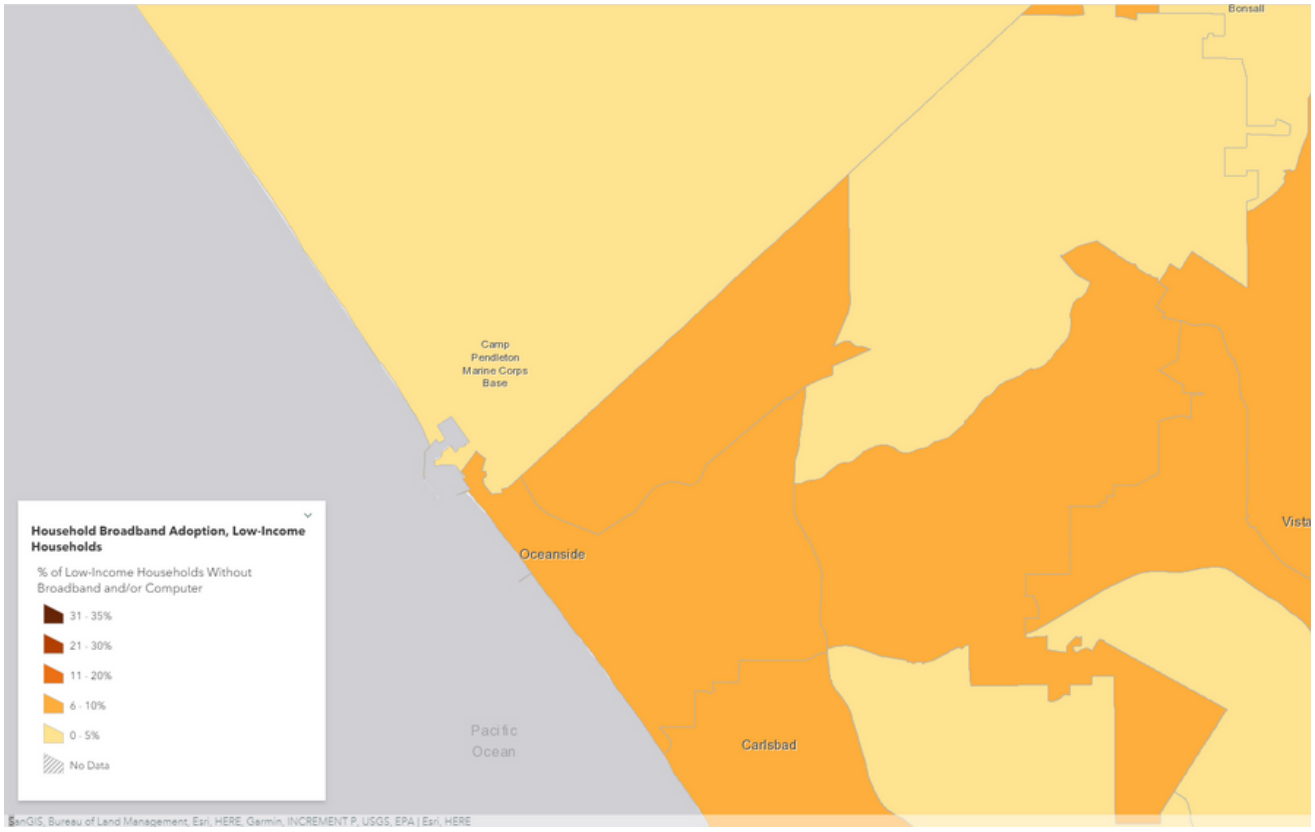


Figure 2: Low-Income Households Without Broadband and/or Computer

Figure 2 demonstrates the percentage of low-income households without broadband and/or a computer. Among the low-income households that exist in Oceanside, anywhere from 6-10% of these households do not have broadband subscriptions or digital devices. Low-income households have a greater cost burden for home Internet subscriptions.

It makes sense that low-income households have fewer broadband subscriptions than higher income households due to the higher cost. For instance, fiber Internet subscriptions from AT&T can range from $55-180/month, which may be difficult for low-income households to afford.

Lack of Broadband Subscriptions and/or Computers Among the Minority Population in Oceanside

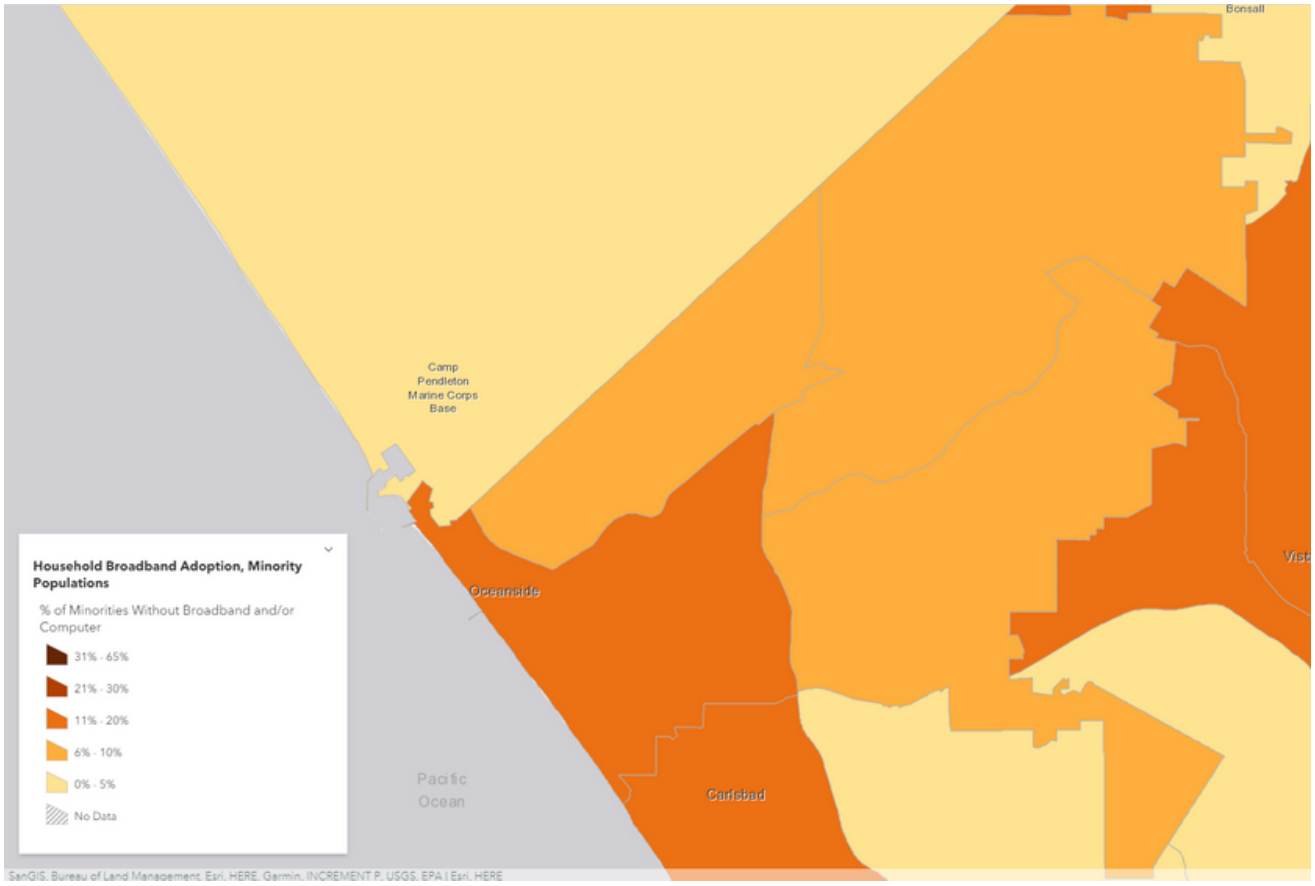


Figure 3: Minority Populations Without Broadband and/or Computer

Based on the City of Oceanside demographics, the community is 45.3% White, 37.8% Hispanic or Latino, 7.0% Asian, 4.2% Black, 0.6% Native Hawaiian and Other Pacific Islander, and 0.4% American Indian.[19]

Out of the 32% of non-White households that live in Townsite, South Oceanside, Loma Alta, and Fire Mountain neighborhoods near the coastline in Oceanside, anywhere from 11%-20% do not have access to broadband and/or computers.[20] Of the minority populations living farther inland, anywhere from 6%-10% do not have broadband subscriptions and/or computers.

Racial equity issues compound the impacts of the digital divide, resulting in lower rates of access for minority communities. To achieve digital equity across the Oceanside community, it is critical that digital inclusion efforts are focused on ensuring that all disadvantaged communities have access to opportunities.

Senior Populations in Oceanside Are Significantly Impacted by Lack of Broadband Subscriptions and/or Computers

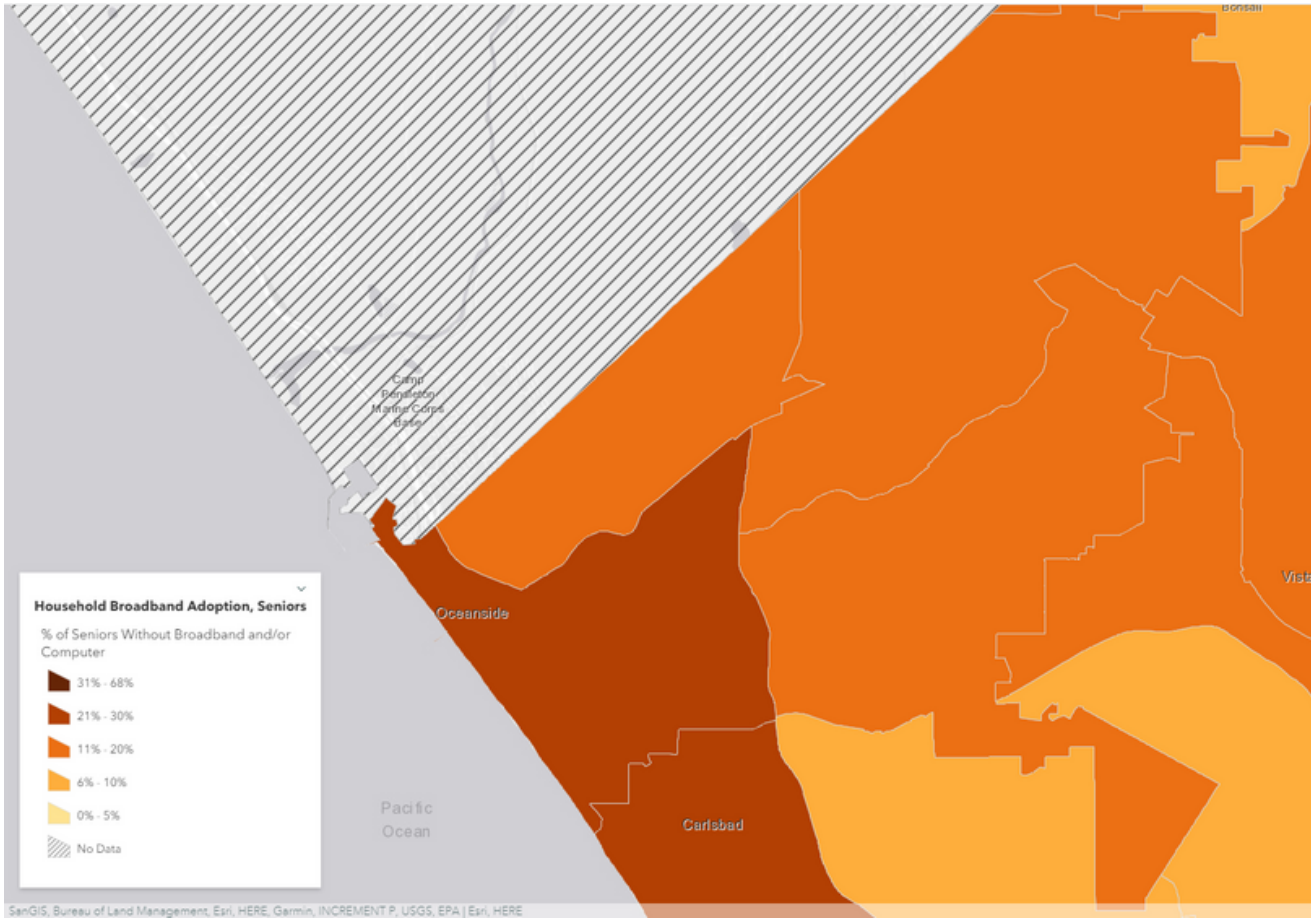


Figure 4: Senior Populations Without Broadband and/or Computer

Figure 4 displays the percentage of seniors over the age of 65 without broadband and/or computer access. Based on the City of Oceanside demographics, 15.6% of the community is over the age of 65. Out of the 10% of seniors that live in Townsite, South Oceanside, Loma Alta, and Fire Mountain neighborhoods, anywhere from 21-30% do not have access to broadband and/or computers.[21] Of the senior residents living farther inland, anywhere from 11-20% do not have broadband subscriptions and/or computers.

Lower rates of technology adoption amongst older residents is likely due to a lack of digital literacy skills, unfamiliarity with technology applications, and financial constraints due to the cost of broadband. However, the pandemic showed the importance of digital connectivity for seniors to access telehealth, mobility services, communications, and social services.

This digital equity plan lays out the pathways for lower income households, minority households and seniors to overcome the barriers to digital inclusion.

OCEANSIDE'S DIGITAL EQUITY PROJECT

In September 2021, the City of Oceanside began an initiative to develop a digital equity plan, aimed at understanding and addressing the digital divide in the community.

To build a deeper understanding of the digital divide in Oceanside, the City developed a Digital Equity Benchmark Analysis which consisted of data collection on Internet and device access throughout the community and an analysis of where gaps exist.

In addition, the City engaged internal and external stakeholders in one-on-one interviews to gain insights into the unique challenges, barriers, and opportunities related to digital equity. These stakeholders, representing City staff, regional agencies, community-based organizations, and local educational agencies, shared insights into the community's current digital divide challenges related to the digital divide and the ways that their organizations are working to provide services to address these challenges.

To gather feedback from the community, the City of Oceanside hosted an in-person Digital Equity Community Workshop on March 3, 2022. This workshop brought together City staff, community leaders, and members of the public to provide feedback on the digital equity planning initiative. At this event, the City shared our findings with the community, including the takeaways from the digital equity benchmark analysis and stakeholder interviews. We engaged participants in interactive, small-group discussions on who is most impacted by the digital divide, what barriers there are to realizing digital equity, and which opportunities are best suited for the unique needs of the Oceanside community. Finally, participants were asked to rank a select number of strategic recommendations addressing Internet access, device access, and digital literacy in order to better understand the community's priorities in advancing digital equity.

Leveraging the data analysis and feedback from the community, the City of Oceanside created the final Digital Equity Plan that establishes a path forward for the City and its partners to improve access to the Internet, digital devices, and digital literacy training for all members of the community.

A COORDINATED EFFORT: CITY PLANS REVIEW

To develop the Digital Equity Plan, the project team reviewed key City goal-setting documents related to digital equity and community growth. The plans reviewed include the *Oceanside Climate Action Plan*, the *Energy Climate Action Element*, and the *Onward Oceanside: Draft Community Vision, Organizing Themes, and Guiding Principles*.

Integral to the community's digital equity priorities is the *Onward Oceanside: Draft Community Vision, Organizing Themes, and Guiding Principles* released in 2021 which outlines the community's priorities for the City's General Plan update. There are six Organizing Themes and 18 Guiding Principles that represent the community's vision for its future, developed through a comprehensive engagement program that included a citywide survey and several community workshops.

Building Physical, Social, and Digital Connections

One of the Organizing Themes is "Physical, Social, and Digital Connections" which focuses on improvements to the City's physical and digital infrastructure, including community broadband connections and smart city technologies. Under this theme, one of the guiding principles is to "Bridge the Digital Divide." Oceanside acknowledges that access to the Internet has "become a basic need, linking people to vital resources, such as jobs, education, healthcare, sustenance, and information."[22] By improving access to high-quality Internet, particularly in underserved areas, Oceanside can help to ensure equal access to information and opportunity while addressing quality of life issues such as safety, convenience, health, environmental quality, social connectedness and civic participation, jobs, and the cost of living.

Building on this vision for digital equity, the project team uncovered insights into key connectivity challenges that the Oceanside community faces. Understanding these challenges lays the foundation for the guiding principles of the Oceanside Digital Equity Plan, as well as targeted strategic recommendations to bridge the digital divide in Oceanside.

COMMUNITY CHALLENGES

Through feedback collected in stakeholder interviews and the Digital Equity Community Workshop, community leaders and members of the public identified key challenges facing Oceanside residents' ability to access the Internet, digital devices, and digital literacy.

Affordability: Cost is one of the primary factors in digital access. Current Internet service offerings available are cost-prohibitive for some residents, though the Internet is still a greatly needed service. Affordability not only limits an individual's ability to maintain Internet service but also restricts the quality of service that affects download speeds and data use.

Lack of choice: Limited choices between residential Internet service providers can lead to higher costs. Residents may also have limited choices for Internet plans that meet their cost and service needs.

Lack of access to quality connectivity: Service gaps can restrict residents from accessing high-quality connectivity in their homes. Without quality, affordable Internet at home, individuals need to leave their homes, which can limit the safety of Internet services used elsewhere.

Limited access to free public WiFi: Though the City provides WiFi at the libraries and community centers, limits on location and hours of operation can restrict access, especially for people who need to work full-time or have transportation barriers. Internet speed at current public facilities also varies and can be slower if people are using personal devices rather than onsite devices.

Intersecting barriers or needs: Barriers related to mobility, financial security, housing, education, and employment compound with the digital divide. As one example, individuals struggling with poverty and other financial challenges have a greater cost burden for Internet service plans.

Limited human touchpoints: Residents with limited digital literacy skills have difficulty accessing online resources, which was exacerbated by the digitization of services during the pandemic. To access these services and build digital skills, some residents need human touchpoints to effectively navigate online resources.

Lack of consumer protection: Some residents have experienced difficulties in their interactions with Internet service providers. Challenges of service disruption with unclear resolution timelines, unforeseen Internet service costs, and changing providers interfere with schoolwork, work, and other online activities.

VISION AND GUIDING PRINCIPLES

Through the Digital Divide Benchmark Assessment, stakeholder interviews, and community workshop, the City developed a comprehensive understanding of the needs and challenges related to the digital divide facing the Oceanside community. Residents shared their personal experiences with connectivity, along with the challenges that they face in accessing the Internet, devices, and digital literacy resources that they need. These conversations with City staff, community stakeholders, and members of the public framed the vision and guiding principles that will guide Oceanside's path forward on digital equity.

VISION STATEMENT

All members of the Oceanside community have equitable access to affordable Internet, well-functioning digital devices, and the skills necessary to improve quality of life and thrive economically.

GUIDING PRINCIPLES

- Availability: All Oceanside residents have access to high-quality Internet in their households and in multi-user environments.
- Affordability: All Oceanside residents have access to affordable digital devices and the Internet that meet their digital needs.
- Equity: All Oceanside residents have access to digital technologies and opportunities, especially in disadvantaged communities.
- Partnership: The City and its public, private, educational, and nonprofit partners collaborate to work toward a shared vision for digital equity.
- Security/privacy: All Oceanside residents have a right to data privacy and the City will take proactive steps to help protect data security in municipal data applications.
- Necessity: Access to the Internet, technology, and digital services is treated as a necessity to fully participate in society and opportunities for growth.
- Opportunity and Access: All Oceanside residents have the skills to access opportunities for education, employment, services, and social connection.
- Basic Utility: Like access to electricity and water, Internet service is considered a basic utility for modern society.

THE ACTION PLAN

Goal 1: Champion community connectivity	
Objective 1.1	Explore opportunities to expand public WiFi and champion affordable Internet efforts
Objective 1.2	Help communities in need access affordable Internet programs

Goal 2: Facilitate device access	
Objective 2.1	Increase access to free or low-cost digital devices for vulnerable communities
Objective 2.2	Provide publicly available digital devices to the community

Goal 3: Invest in digital learning and skills	
Objective 3.1	Develop opportunities for the community to advance their digital literacy skills

Goal 4: Foster a culture of digital inclusion	
Objective 4.1	Raise community awareness of digital equity resources
Objective 4.2	Create centralized resources for convenient, equitable access to resources

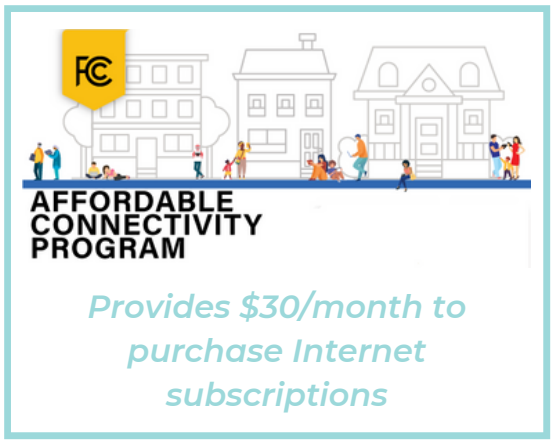
Goal 5: Embed digital equity in City government	
Objective 5.1	Formalize City leadership on digital equity
Objective 5.2	Identify funding opportunities to accelerate digital equity programs

GOAL 1

Champion community connectivity

Access to high-quality, affordable Internet service is a necessity for all Oceanside residents to thrive. Internet access allows users to connect to education and employment opportunities, online services, and communications. Though free public WiFi is available to the community to help bridge the connectivity gap, affordable connection at home is critical for residents to fully leverage these opportunities so that they can go online in a safe location at their convenience.

From 2020 Census data, 92.5% of households in Oceanside have an Internet subscription. 84.1% have a cellular data plan, 82.6% have a broadband subscription (including cable, fiber, and DSL), and 6.7% have satellite Internet service. However, 7.3% of households have cellular data plans with no other type of Internet subscription.[23] Through community engagement in the development of this plan, Oceanside residents reported that affordability and lack of access to quality connectivity are the primary barriers to gaining Internet access at home. In addition, affordability can limit the amount of data and speed of connectivity even for those who can afford a subscription, which reduces the quality of service. These challenges are reflected in residents' Internet access; for households with less than $20,000 of annual income, 26.2% do not have an Internet subscription. This figure decreases to 9.4% for households with $20,000 - $74,999 and 2.4% for households with over $75,000 of annual income.[24]



Through the Bipartisan Infrastructure Law, the federal government created the Affordable Connectivity Program (ACP) that provides $30 per month for income-qualifying households to purchase Internet subscriptions. As of May 2022, the Biden Administration has secured commitments from 20 Internet Service Providers (ISPs) to offer high-speed Internet plans for $30/month or less, including AT&T and Cox who serve the Oceanside community.[25]

In May 2022, the Oceanside City Council approved a right-of-way encroachment agreement with SiFi Networks. Through this agreement, SiFi Networks will install fiber in every public street at no cost to the City over the next 3-4 years. Once the system is complete, every home and business that fronts on a public street in Oceanside will have access to Gigabyte-speed Internet service. SiFi also operates an affordable Internet program called FiberCity Aid that offers Gigabyte speed Internet for $30/month to qualifying households.[26]

Residents in Oceanside can access free public WiFi at both Oceanside Public Library branches and at four Community Resource Centers.

Image: Crown Heights Community Resource Center

The Oceanside Unified School District also provides free virtual learning hotspots for students and families in need of home Internet access. Additionally, through SD Access 4 All, the County provides public WiFi at select County facilities and cellular hotspots available to rent at some library locations. Building on these resources, the City of Oceanside hopes to expand opportunities for residents to access high-quality, affordable Internet services.

More information on these programs may be found in *Appendix B: Oceanside Digital Equity Resource Matrix*.

OBJECTIVE 1.1

Explore opportunities to expand public WiFi and champion affordable Internet efforts

Ensure all residents of Oceanside have access to fiber-speed broadband

The City continues to explore opportunities and partnerships with local Internet Service Providers to ensure that all residents of Oceanside have access to fiber-speed broadband. With high-speed broadband connectivity, residents can leverage a wide range of education, employment, and entertainment resources. To this end, the City Council approved an agreement on May 4, 2022 to allow the installation of a citywide fiber communications system. This will represent an approximate $200 million investment in Oceanside and will provide significant public benefit. Once the network is complete, every property on a public street in Oceanside would have access to Gigabyte-speed internet service and would greatly enhance connectivity for residents and businesses.

Explore opportunities to improve the quality of WiFi connectivity at public libraries and Resource Centers

The City provides free public WiFi at Oceanside Public Library branches and Resource Centers. However, users have reported that the speed and consistency of the connection vary due to number of users. The City will work to identify ways to improve the quality of connectivity so that residents without personal Internet access can effectively leverage digital opportunities at public facilities.

Consider implementing digital kiosks in public locations to provide WiFi and expand access to online services

Digital kiosks can provide public services, such as free WiFi, device charging, wayfinding, ticket purchasing, and access to online City services. Strategic deployment of digital kiosks in high-traffic public areas can support residents and visitors in accessing digital services. The City will explore key kiosk features, financial models, and priority locations for implementation.

Expand free public WiFi at locations, such as parks, plazas, and other places where the community gathers

Free public WiFi can provide Internet access for many community groups, especially those without a home Internet connection or those with limits to cellular data for mobile connection. Though public WiFi is available at the Oceanside Public Library branches and Resource Centers, there is an opportunity to expand connectivity to locations that meet the community where they gather. The City will work to develop local partnerships to expand public WiFi at community locations. In addition, the City will partner with other institutions and organizations to prioritize locations to provide support to underserved communities.

Raise digital equity solutions in franchise agreements and other contract opportunities with telecommunications providers

In discussions with telecommunications providers, the City of Oceanside will elevate digital equity solutions as a priority. The City will raise challenges that residents face, including affordability and service quality, to solicit solutions from local telecommunications businesses. Through these discussions, the City hopes to strengthen partnerships and encourage providers to increase their digital equity offerings.

OBJECTIVE 1.2

Help communities in need access affordable Internet programs

Gather annual data on Internet and device access by embedding digital equity questions into other City surveys

Since some of the other publicly-available data is reliant on reported service from Internet service providers, there is a gap in information on actual rates of Internet access and device ownership in Oceanside. The City of Oceanside can gather additional data on digital equity specific to the community by embedding questions related to Internet access and device access into other surveys. In doing so, Oceanside can gain detailed information on digital equity in the community in a cost-effective manner.

Work through social service providers to promote enrollment in broadband service subsidy programs and related digital equity services

Social service providers engage the community to increase awareness of public programs and support eligible applicants in enrollment. The City of Oceanside will work with social service providers to increase the visibility of digital equity offerings, including the Affordable Connectivity Program.

Encourage regional agencies and partners to incorporate subsidized broadband programs into other public benefits applications

Regional agencies also serve Oceanside residents and support applicants to public benefits programs. The City will work with its partners to ensure that subsidized broadband programs are incorporated into engagement materials.

Work with Internet Service Providers to expand awareness of low-cost Internet programs by providing enrollment information at community centers and through City communications

Although Internet Service Providers (ISPs) serving the Oceanside community offer low-cost Internet programs, residents reported uneven awareness about these programs. The City will work with ISPs to publicize low-cost Internet programs through online and offline communications channels to ensure that all residents in need can enroll in affordable Internet service.

GOAL 2
Facilitate device access

Digital devices include a variety of digital tools used to access the Internet, including smartphones, tablets, laptops, and computers. Access to one or more digital devices is a necessity for residents to access opportunities online. In Oceanside, 95.6% of households have one or more types of computing devices. 87.1% have a desktop or laptop, 88.3% have a smartphone, 69.8% have a tablet or portable wireless computer, and 2.9% have another unspecified device. Notably, 4.4% have a smartphone with no other computing device and 4.4% of households overall do not have access to any devices, amounting to approximately 7,658 individuals.[27]

4.4% of Oceanside households do not have access to any digital devices

While smartphone adoption is high, individuals who exclusively use smartphones may experience barriers in education and work due to the limited functionality of mobile devices. Increasing access to large-screen devices, including tablets, computers, and laptops, can improve outcomes for telehealth, close the homework gap, and support members of the workforce.

In Oceanside, residents cited affordability as the primary barrier to accessing personal digital devices. Disadvantaged population groups also struggle with finding publicly-available charging sources at accessible locations throughout the community. For those without access to personal devices, individuals access devices for rent or free use at the Oceanside Public Library, Resource Centers, and other community-based organizations. However, transportation limitations and hours of operation can restrict accessibility for marginalized populations and those who work full-time.

In addition to loaning devices at Oceanside public facilities, devices are available for rent at libraries throughout San Diego County. Students of Oceanside Unified School District and Vista Unified School District can access laptops, tablets, and Chromebooks to use at home for educational purposes. By expanding opportunities to access affordable refurbished devices, devices for rent, and no-cost publicly available devices, the City of Oceanside can support residents in utilizing technology for success.

OBJECTIVE 2.1

Increase access to free or low-cost digital devices for vulnerable communities

Partner with regional stakeholders to promote digital accessibility tools and digital literacy support for people with disabilities

SANDAG found that people with disabilities are twice as likely to be unconnected or under-connected. The City of Oceanside will build partnerships with regional agencies and community-based organizations to provide support for people with disabilities to access the Internet and digital accessibility tools.

Identify and secure a local partner for device refurbishment and establish a structure for redistribution to community-based organizations that offer digital equity programming

Device refurbishment programs can increase the number of low-cost or no-cost devices for individuals in need. The City will work to identify a local partner that can refurbish devices in a secure manner and create a pipeline for residents to request devices. There are a number of community-based organizations that provide device refurbishment to the San Diego region, including Computers2Kids San Diego and the San Diego Futures Foundation.

Encourage agencies, community-based organizations, and businesses to donate retired technology assets for refurbishment

Once there is an established pipeline for device refurbishment and distribution, the City of Oceanside will evaluate any aging assets to develop a protocol for device donation. In addition, the City will work with local organizations and businesses to encourage donations to the future device refurbishment program.

OBJECTIVE 2.2

Provide publicly available digital devices to the community

Encourage programs to increase access to loaned devices, including refurbished computers and WiFi hotspots

Residents of Oceanside can currently borrow digital devices, including laptops, and hotspots, from the public library at no cost. Since these devices are in high demand, the City will explore opportunities to increase both the number of devices and the number of locations where those devices are available, as well as support similar programs operated by community-based partners. By increasing the availability of rental devices, individuals that cannot afford personal digital devices can still access computers, laptops, hotspots, and other devices for online access.

Explore opportunities to expand or shift the hours of operation for computer labs at Community Resource Centers

The Oceanside Community Resource Centers offer computer labs where residents can access Internet-connected computers. The computer labs are a popular resource; however, residents reported that the hours of operation may prevent use for people who work full-time. To address this challenge, the City will explore funding and staffing options to increase or shift the hours of operation to better serve the community.

Explore opportunities to provide publicly-available phone, tablet, and computer charging stations

Through community engagement, participants indicated that publicly-available device charging stations are needed for underserved groups. Vulnerable groups, including people experiencing homelessness and marginalized youth, have limited access to charging. Technology providers have developed charging stations that integrate solar panels into public infrastructure, such as light posts, that can reduce energy costs to the City. The City of Oceanside will evaluate potential solutions and funding opportunities.

GOAL 3

Invest in digital learning and skills

In addition to access to the Internet and digital devices, it is critical that residents have the digital literacy skills to effectively utilize digital tools. Experts anticipate that over the next decade, "50% of tasks across all industries are expected to go digital, eliminating as many as 39 million jobs—and by 2030, at least two-thirds of jobs will require some level of digital skills." [28] Digital skills, described as "the skills associated with technology that enable users to find, evaluate, organize, create, and communicate information", are critical to ensure that all members of the community can access opportunities.[29] Through digital literacy training, residents can learn basic tools, from turning on their devices and using email, to advanced job skills, ranging from utilizing Microsoft applications and coding, that can expand job opportunities in the digital economy.

Oceanside residents reported that though the youth population has advanced digital literacy skills, other marginalized populations need support to increase their digital literacy skills. Gaps in digital literacy skills can prevent vulnerable populations from accessing key services. For example, the Oceanside community reported that some seniors have limited digital literacy skills, which can inhibit their ability to access telehealth, mobility services, and communications tools. In addition, parents with limited digital literacy skills may have difficulty assisting students with homework and online education.

Through the Oceanside Public Library, patrons can access a suite of online tools to increase their digital literacy skills and access digital services, including Coursera, an online skills development platform. Residents can also access in-person training through the READS Learning Center, which offers one-on-one tutoring and adult classes for the GED, job applications, and technology skills. The City offers Granny's World Technology Education courses for Oceanside seniors to learn how to use digital devices and access services to improve quality of life.

Coursera for Workforce Recovery:

Image: Coursera program page on the Oceanside Public Library webpage

Partners of the City of Oceanside, including MiraCosta College, San Diego Futures Foundation, and the Veterans Association of North County, offer courses for a wide audience to improve their digital literacy skills for education, employment, and personal goals.

OBJECTIVE 3.1

Develop opportunities for the community to advance their digital literacy skills

Encourage community-based partners to expand digital literacy coursework

The City of Oceanside and local organizations currently offer courses and workshops for residents to build their digital literacy skills. However, in stakeholder interviews and the community workshop, residents identified continuing gaps in digital literacy throughout the community. To meet these needs, the City will coordinate with partners to collaborate on programming to address gaps in digital literacy.

Provide resources and support for City staff to become designated as Oceanside Digital Navigators

The National Digital Inclusion Alliance has developed a model for digital navigators, individuals who can support community members through the entire digital inclusion process for home connectivity, devices, and digital skills. City staff members at public libraries, Community Resource Centers, and other public-facing roles are already providing this support informally for community members in need. The City of Oceanside can supplement this work by providing resources and training opportunities to help staff members and volunteers with these requests.

Expand and formalize a Digital Ambassador Program that recruits knowledgeable members of the community to provide additional small group or one-on-one digital literacy training

Digital ambassadors are staff members or volunteers that provide digital literacy training for community members. The City wants to develop a process for interested volunteers, such as students and tech-savvy residents, to participate in a Digital Ambassador Program to expand training at public facilities.

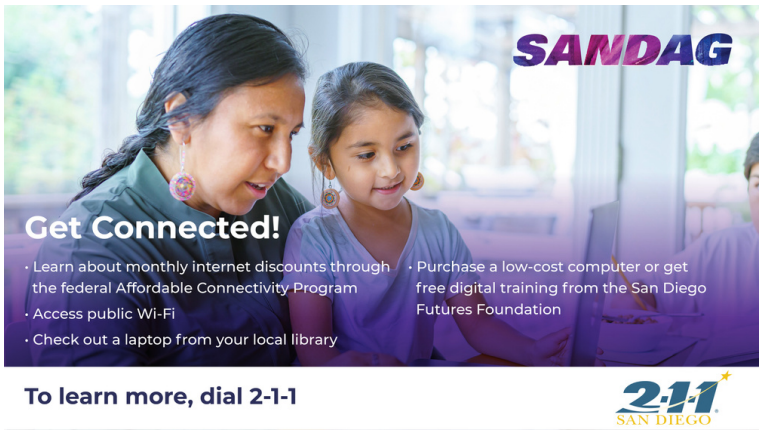
GOAL 4

Foster a culture of digital inclusion

Community engagement and information-sharing is key to ensuring that all existing and future digital equity resources are accessible to all members of the community. Through stakeholder interviews and the community workshop, Oceanside residents reported that there are gaps in awareness of digital equity resources that could help individuals access low-cost Internet and digital device programs available today.

SANDAG
CONNECTING THE SAN DIEGO REGION

In June 2022, the San Diego Association of Governments (SANDAG) launched a 'Get Connected' outreach campaign, aimed at expanding awareness of affordable, high-speed Internet resources including the Affordable Connectivity Program. Through a partnership with 211 San Diego, the County of San Diego, and the City of San Diego, the Get Connected campaign provides an online toolkit for partners, including the City of Oceanside, to share information about digital equity resources in the region. The toolkit includes resources like fliers, posters, FAQs, and presentations translated into 8 different languages.[30] The City of Oceanside has begun to utilize these resources in online and offline community engagement around digital equity.



Images: Resources from the SANDAG Get Connected Toolkit

The City of Oceanside plays a critical role in increasing the visibility of programs and resources throughout the community, elevating the services that the City and its partners provide. Oceanside offers multiple online tools for communications, including a monthly e-newsletter, the My Oceanside smartphone app, online City Council meetings, social media, and a GIS Mapping Portal. In addition, the City utilizes mailed and printed materials to communicate with residents about resources. By leveraging online and offline communications channels and translating materials into multiple languages, the City can support all residents in accessing digital equity opportunities.

OBJECTIVE 4.1

Raise community awareness of digital equity resources

Host a Digital Inclusion Fair to increase awareness of digital equity resources

Communities have hosted digital inclusion events that bring together solutions providers, including ISPs and refurbished device distributors, to provide a one-stop shop for community members to access digital equity resources. By centralizing resources at an event held at the public library or other places the community gathers, the City can raise awareness of digital equity resources and enroll qualifying residents for services.

Develop a digital equity package for staff to distribute at other community engagement events

The City and its partners host regular community engagement events throughout Oceanside. The City should develop a digital equity package for staff members to distribute at these events. The package can include resources, such as informational flyers on how to apply for the Affordable Connectivity Program, the Oceanside Digital Equity Resource Matrix (Appendix B) which contains available digital equity resources and programs in the county, or engagement materials from the SANDAG Get Connected toolkit.

Leverage community partners' networks to promote digital inclusion resources

There are a number of community-based organizations that serve diverse residents, including a variety of underserved communities. In addition, the City has strong partnerships with regional government agencies, like San Diego County, and businesses, such as SDG&E, that serve the Oceanside community. Through these partners' networks, the City of Oceanside can increase community awareness of digital inclusion resources.

Ensure digital inclusion program outreach materials are offered in Spanish and other prominent languages in Oceanside

Though the City regularly translates communications materials into Spanish, the City wants to ensure that digital inclusion resources are translated as well. SANDAG found that households where Spanish is the primary language (65%) are even less connected than average. By ensuring that digital equity materials are translated, the City can improve equitable access.

OBJECTIVE 4.2

Create centralized resources for convenient, equitable access

Develop a network of Digital Inclusion Hubs to promote digital equity resources and provide access to the Internet and devices for the community

Through the public library branches and Community Resource Centers, the City of Oceanside offers loaned devices, public computer labs, and free public WiFi. The City is exploring ways to brand facilities that offer digital equity resources as Digital Inclusion Hubs. By developing this program, the City can create targeted communications and elevate these facilities as resource centers for digital equity services, making it easier for residents to locate support. The City may also centralize resources at these locations, offering communications materials, assigning Digital Ambassadors to help patrons, and supporting staff in training as Digital Navigators.

Develop a structure for community-based organizations to become certified as Oceanside Digital Inclusion Hubs

Once the City has developed the foundational structure for the Digital Inclusion Hub program, the City may develop criteria for other facilities to become certified as Hubs. These criteria may include the availability of public computers, free public WiFi, and/or device rental programs. For community-based organizations that have facilities that meet the criteria, the City can offer a structure to become certified as an Oceanside Digital Inclusion Hub and become integrated into the network and communications.

Create an online page for the Oceanside Digital Equity Resource Matrix, including a searchable digital catalog, online map, printable version, and a form for organizations to submit their programming for inclusion

The Oceanside Digital Equity Resource Matrix (Appendix B) is a centralized resource cataloging programs for Internet access, device access, digital literacy, and digital services. The City plans to create an online page for the Matrix so that residents and service providers can easily access information for interested residents. In addition, this page will feature a form for organizations to submit their related programming to be included in the Matrix.

GOAL 5

Embed digital equity in City government

To meet its goals for community-wide digital equity, the City of Oceanside is committed to developing programs, policies, and partnerships to meet the needs of the community. The National Digital Inclusion Alliance has coined the term Digital Inclusion Ecosystem which describes the "combination of programs and policies that meet a geographic community's unique and diverse needs."[31] By engaging community-based organizations, local businesses, foundations, regional agencies, and educational institutions, the City can work with these partners in an ecosystem that addresses all aspects of the digital divide.

Over the past decade, the City of Oceanside has adopted technology and data tools to improve efficiency, effectiveness, and public service delivery. As the City continues to utilize technology and pursue connectivity investments throughout the community, Oceanside is committed to centering inclusion into the backbone of this effort to ensure that digital initiatives are accessible to all.

The City of Oceanside has identified internal policies and public-facing programs that the City can provide to improve digital equity in the community. However, to fully realize these goals, the City is seeking the support of its partners to communicate community needs, expand digital equity service offerings, and increase the visibility of digital equity initiatives. Through collaboration, the City believes that these partnerships can support a digital inclusion ecosystem that provides opportunities for all residents to achieve their goals.

OBJECTIVE 5.1

Formalize City leadership on digital equity

Inventory City broadband assets and make this data publicly accessible

Cities have created mapped inventories of their broadband assets to identify potential connectivity solutions. Oceanside can create an inventory of its assets and engage public and private partners to find opportunities for programs that can expand affordable Internet to communities in need.

Leverage and implement where possible SANDAG's regional resources around fiber sharing, best practices, and standards

Through its Regional Digital Equity Initiative, SANDAG is creating resources for regional stakeholders to advance digital equity, such as permitting standards, conduit licensing and fiber sharing templates, and dig once policies. As a member of the SANDAG Regional Digital Divide Taskforce, Oceanside will continue to leverage these resources to improve our digital equity offerings.

Pass a resolution that establishes broadband as an essential service, adopts a 100/20 Mbps broadband definition, and makes a commitment to addressing the digital divide

Similar to resolutions passed by SANDAG and the City of Seattle, the City of Oceanside can pass a resolution that establishes broadband as an essential service, adopts a 100/20 Mbps broadband definition, and commits to addressing the digital divide. This reflects the community's perspective that Internet service is an essential home utility. In addition, the 100/20 Mbps definition aligns with the State of California's new standard for broadband.

Raise the topic of broadband and digital equity at Directors' Meetings to incorporate initiatives into cross-departmental planning processes

In order to significantly advance digital equity, city departments need to collaborate on a cross-sector approach. By raising broadband and digital equity as priorities at the Directors' Meetings, departments can identify opportunities to integrate these priorities into other City plans.

Catalog online City services and identify opportunities to expand the number of online city services and to improve accessibility for all digital skill levels

By making City services accessible online, the City has alleviated some of the transportation or time-related challenges to accessing services at City Hall and made internal processes more efficient. However, this also means that barriers have shifted to those affected by the digital divide. As the City continues to digitize its services, it will evaluate the user experience to ensure that online services are navigable for all digital skill levels. Meanwhile, all City services remain open for walk-in assistance.

OBJECTIVE 5.2

Identify funding opportunities to accelerate digital equity programs

Assess opportunities to include digital equity funding into future Oceanside City budgets

To implement the strategies included in this Digital Equity Plan, the City will evaluate future budgets for opportunities to allocate funding for digital equity initiatives.

Work with partners to regularly assess digital equity funding opportunities at the federal, state, and regional levels

There are many opportunities for digital equity funding created by the Infrastructure Investment and Jobs Act, state legislation, and SANDAG's Regional Digital Equity Program. The City will work with partners at the local, state, and federal levels to identify digital equity programs for competitive grant opportunities.

Create partnerships with community-based organizations to collaborate on potential funding opportunities for digital equity projects

The City will work with community-based partners and regional agencies to design digital equity projects and collaborate on grant applications. By developing partnerships, the City will increase competitiveness for potential grant funding.

Engage regional and national philanthropy organizations to identify shared priorities and potential funding for digital equity initiatives

Foundations from the local to national level are expanding their investments in digital equity, especially following the COVID-19 pandemic. Organizations including the San Diego Futures Foundation and the Oceanside Community Foundation already support local initiatives to improve the quality of life and expand opportunities for the community. The City will continue to engage these foundations to identify shared priorities and implementation pathways to improve digital equity in the community.

CONCLUSION

The City of Oceanside is committed to bridging the digital divide to ensure that all residents have access to opportunities. The City understands that Internet access has become a necessity for many aspects of life, including work, education, service access, mobility, social interaction, entertainment, and more. While the City and its partners provide needed digital equity resources, this Digital Equity Plan serves as a roadmap for policies, programs, and partnerships to increase access to the Internet, digital devices, and digital literacy across the community.

Understanding that needs and technology change, the City of Oceanside will utilize the Digital Equity Plan as a foundational, living document, building on the goals and strategic implementation to meet community needs. To ensure the success of the digital equity initiative, the City seeks the continued engagement and support of the public, local partners, and regional bodies. Through collaboration and leadership, Oceanside can achieve its goal to be a digitally inclusive and equitable community.

APPENDICES

APPENDIX A: FEDERAL AND STATE FUNDING OPPORTUNITIES

These funding opportunities were gathered from California's Broadband for All Funding Opportunities page. This resource is continuously updated with information on state and federal funding to support broadband deployment, adoption, and digital literacy planning and implementation.

State of California

Agency	Fund	Description
CPUC Communications Division	California Teleconnect Fund	The California Teleconnect Fund (CTF) program provides a 50% discount on advanced communications services (including Internet access and broadband services) to qualifying K-12 schools, libraries, community colleges, government-owned hospitals/health clinics, and community-based organizations.
California State Library	California State Library High-Speed Broadband Grant	The goal of this grant is to bring high-speed broadband to all California public libraries by connecting them to the California Research and Education Network (CalREN). The funds are intended to enable libraries to connect to high-speed broadband and purchase the necessary network equipment to enable those connections to be utilized by library patrons.

Federal Opportunities

Agency	Fund	Description
US Department of Commerce, NTIA	Digital Equity Competitive Grant Program	The Infrastructure Investment and Jobs Act allocated funding for a $1.25 billion discretionary grant program to be distributed via annual grant programs over 5 years to implement digital equity projects.

Agency	Fund	Description
US Department of the Treasury	New Markets Tax Credit (NMTC)	The NMTC Program attracts private capital into low-income communities by permitting individual and corporate investors to receive a tax credit against their federal income tax in exchange for making equity investments in specialized financial intermediaries called Community Development Entities (CDEs). CDEs include nonprofits, government entities, and others who provide subsidized financing to benefit low-income households. There is flexibility in the types of business and development activities that NMTC investments can support.
US Department of Housing and Urban Development	Section 108 Loan Guarantee Program	The Section 108 Loan Guarantee Program provides Community Development Block Grant (CDBG) recipients with the ability to leverage their annual grant allocation to access low-cost, flexible financing for economic development, housing, public facility, and infrastructure projects. CDBG loan funds can be used for broadband and telecommunication projects, digital literacy classes, and economic development grants and loans to businesses that focus on broadband internet access and technology.
US Department of Housing and Urban Development	PIH Operating Fund	Public Housing Agencies (PHAs) may use Operating Funds to provide computer internet services to residents of public housing both in their units and in common areas. HUD has allowed PHAs to use Operating Funds to cover costs of computer internet services for computer labs and for PHA operation and management.
US Department of Commerce, NTIA	State Digital Equity Capacity Grant Program	The Infrastructure Investment and Jobs Act created a $1.44 billion formula grant program for states and territories distributed via annual grant programs over 5 years to implement digital equity projects and support the implementation of digital equity plans. Though this funding is not available for local governments, cities may be implementation partners in California's State Plan.

APPENDIX B: OCEANSIDE DIGITAL EQUITY RESOURCE MATRIX

The Oceanside Digital Equity Resource Matrix is a centralized list of digital equity programs related to device access, digital literacy, digital services, and Internet access available to Oceanside residents. This matrix represents research from a point in time upon publication of the Oceanside Digital Equity Plan. The Digital Equity Resource Matrix is meant to be a living resource, updated regularly to provide information on the full scope of resources available to the community. If you have additional resources that could be included, please contact the City of Oceanside.

DEVICE ACCESS RESOURCES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
Government Supported Cell Phone Service	Federal	LifeLine Landing	This Government Supported Home and Wireless Telephone Service provides a free cell phone and free monthly minutes to those who qualify for this service.	USAC (Universal Service Administration Company)	Free	https://www.lifelinelanding.com/
In-Person Library Resources	County	San Diego County Library	The San Diego County Library offers on-site computer use at all 33 branches.	None	Free	https://www.sdcl.org/services/
Low Cost Computer Program	Nonprofit	San Diego Futures Foundation	Income-qualified people can access to afforable low-cost computers to bridge the digital divide.	The Penant Alliance, Peraton, Kiwanis, the County of San Diego, Verizon	Price varies	https://sdfutures.org/for-individuals/
Devices for Students	Educational Institution	Oceanside Unified School District	Students can access devices such as laptops, iPads, and Chromebooks to use at home for educational purposes	California School Boards Association	Free	https://www.oside.us/domain/48
Devices for Students	Educational Institution	Vista Unified School District	Chromebook, hotspot, and charging adapters can be borrowed to use at home for educational purposes	None	Free	https://vhs.vistausd.org/student_life/chromebooks_devices

Last updated June 2022

DIGITAL LITERACY RESOURCES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
Brainfuse HelpNow	City	Oceanside Public Library	Brainfuse is an online portal that offers live tutoring sessions, skills development, LEAP Learning Platform diagnostic test center, and collaborative technology for skills sharing.	Brainfuse	Free	https://www.brainfuse.com/highed/helpNow.asp?a_id=C2F15199&ss=&r=
Coursera	City	Oceanside Public Library	Coursera is an online platform where people can develop job skills across a variety of topic areas. Residents with an Oceanside Public Library card can access Coursera for free.	Coursera	Free	https://www.ci.oceanside.ca.us/gov/lib/adults/coursera.asp
Granny's World: Technology Education	City	City of Oceanside	Granny's World is a free training service for Oceanside seniors to learn to use electronic devices to improve their quality of life.	None	Free	https://www.ci.oceanside.ca.us/gov/ns/parks/senior/grannys_world.asp
READS Learning Center	City	Oceanside Public Library	The Oceanside READS Learning Center one-on-one tutoring as well as classes to help adults accomplish a few key goals, including improving technology skills, searching and applying for jobs, studying for the GED, and more.	Northstar	Free	https://www.ci.oceanside.ca.us/gov/lib/adults/literacy/default.asp
Digital Literacy Training	Nonprofit	San Diego Futures Foundation	The San Diego Futures Foundation offers classes and open office hours to learn computer and technology skills.	The Penant Alliance, Peraton, Kiwanis, County of San Diego, Verizon	Free	https://sdfutures.org/digital-literacy/

Last updated June 2022

DIGITAL LITERACY RESOURCES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
Adaptive Technology	Nonprofit	San Diego Futures Foundation	San Diego Futures Foundation offers one-on-one instruction to get individuals ready for the job market through integrating adaptive technology with commonly used applications, programs, and operating systems.	The Penant Alliance, Peraton, Kiwanis, the County of San Diego, Verizon	Free	https://sdfutures.org/adaptive-technology/
Noncredit ESL Program	Educational Institution	MiraCosta College	The Noncredit English as a Second Languauge (ESL) Program provides seven levels of ESL classes, as well as citizenship, conversation, computer and digital literacy, and reading and writing skills-based classes.	Oceanside Public Library	Free	https://www.miracosta.edu/academics/continuing-education/esl/index.html
Cox Digital Academy	Private Sector	Cox	Cox's Digital Academy is an online platform for digital literacy training with educational videos, tutorials and games in categories that include: computer basics, educational games, educational resources, social media, online safety, financial wellness.	None	Free	https://www.cox.com/residential/internet/connect2compete/digital-academy.html

Last updated June 2022

DIGITAL SERVICES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
BiblioLabs	City	Oceanside Public Library	BiblioLabs offers users access to open source resources through local libraries, schools, cultural institutions and organizations. In addition, BiblioLabs provides a community engagement tool; with BiblioBoard Creator, librarians, patrons, organizations and community members can seamlessly publish their own multimedia digital exhibits directly onto BiblioBoard.	BiblioLabs	Free	https://library.biblioboard.com/home
California Digital Newspaper Collection	City	Oceanside Public Library	The California Digital Newspaper Collection contains over 1,500,000 pages of significant historical California newspapers published from 1846-present	California Digital Newspaper Collection	Free	https://cdnc.ucr.edu/
Chilton Library	City	Oceanside Public Library	Chilton Library offers a variety of resources for education, lifelong learning, and academic research. Through an Oceanside Public Library membership, users can access peer-reviewed articles; full-text magazines, newspapers, and eBooks; primary source documents; and videos or podcast.	Gale	Free	https://link.gale.com/apps/CHLL?userGroupName=oceanpl_main&authScheme=
Link+	City	Oceanside Public Library	Link+ is a service that allows Oceanside Public Library members to search and request books from other libraries to be sent to an Oceanside library branch.	Link+	Free	https://www.ci.oceanside.ca.us/gov/lib/services/linkplus.asp

Last updated June 2022

DIGITAL SERVICES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
Mango Languages	City	Oceanside Public Library	Through an Oceanside Public Library membership, users can log onto Mango Languages and access an interactive database that provides step by step lesson plans for 38 different languages.	Mango Languages	Free	https://www.ci.oceanside.ca.us/gov/lib/services/db.asp
NoveList	City	Oceanside Public Library	NoveList provides an advanced recommendation engine to help users find new books based on their interests. NoveList can also be a useful tool for librarians looking to provide recommendations to visitors or post articles to engage with the community.	NoveList	Free	https://www.ci.oceanside.ca.us/gov/lib/services/db.asp
TumbleBooks Library	City	Oceanside Public Library	TumbleBooks Library offers digital resources for kids, including ebooks, read alongs, videos, language learning, and puzzles & games.	TumbleBooks Library	Free	https://www.tumblebooklibrary.com/Home.aspx?categoryID=77
VetNow	City	Oceanside Public Library	VetNow offers digital resources for veterans, including live tutoring, live job coaching, resume assistance, career resources, skills building, writing labs, and foreign language support.	Brainfuse	Free	http://main.oceansidevet.ca.brainfuse.com/authenticate.asp

INTERNET ACCESS RESOURCES

Program Title	Type	Lead Organization	Summary	Other Partners	Cost	Website
Public WiFi	County	San Diego County Library	There is public WiFi available 24/7 at the San Diego County Library's 33 branches. WiFi can usually be accessed with personal devices outside of the branch.	None	Free	https://www.sdcl.org/services/
Public WiFi	City	Oceanside Public Library	There is free, publicly accessible WiFi at both library sites (Civic Center and Mission Branches) and at mobile libraries.	None	Free	https://www.ci.oceanside.ca.us/faq/categoryqna.asp?id=34#631
Virtual Learning Hostpots	Educational Institution	Oceanside Unified School District	Parents or guardians can request learning hotspots for home internet access by contacting the school community advisor.	None	Free	https://www.oside.us/ousd
Cox Connect 2 Compete	Private Sector	Cox	Cox Connect2Compete provides low-cost devices and high-speed Internet services for qualifying families with students in grades K-12. Low-cost Internet is $9.95/month and includes in-home wifi, free installation, and a modem. To qualify, families must meet the criteria: 1) A child in K-12 school, 2) Participate in one of more of the following subsidy programs National School Lumnch Program, SNAP, TANF, and/or Public Housing.	None	$9.95/ month	https://www.cox.com/residential/internet/connect2compete/faq-low-cost-internet.html
Access from AT&T	Private Sector	AT&T	Through Access from AT&T, income-qualifying families can receive low-cost Internet service for $30/mo or less.	None	Varies	https://www.att.com/internet/access/

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APPENDIX C: GLOSSARY OF TERMS

Term	Definition
Broadband	The Federal Communications Commission (FCC) defines broadband as an internet service with a download speed of at least 25 megabits per second (Mbps) and an upload speed of 3 Mbps. Broadband provides internet access via a variety of wired and wireless networks.[32]
Broadband Network	The broadband network is made up of first, middle, and last-mile. • The first mile consists of a very high-capacity fiber-optic backbone that transmits large amounts of data over long distances; • The middle mile links the backbone to the internet service providers (last mile) access network; The last mile brings the connection to a home or business. The last mile can be provided using different transmission media such as Digital Subscriber Line (DSL), Cable, Fiber, Wireless, and Satellite.[33]
Cable	Cable is a broadband connection provided over the same coaxial cables that deliver cable television service. Cable is the most prominent broadband technology in densely populated areas.[34]
Digital Divide	The digital divide is the gap between those who have affordable access, skills, and support to effectively engage online and those who do not. As technology constantly evolves, the digital divide prevents equal participation and opportunity in all parts of life, disproportionately affecting people of color, Indigenous peoples, households with low incomes, people with disabilities, people in rural areas, and older adults.[35]
Digital Equity	Digital Equity is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.[36]

Term	Definition
Digital Inclusion	Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes 5 elements: 1) affordable, robust broadband internet service; 2) internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration. Digital Inclusion must evolve as technology advances. Digital Inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.[37]
Digital Subscriber Line (DSL)	DSL provides broadband connection over telephone lines.[38]
Fiber	Fiber transmits the fastest broadband connection and can handle vast amounts of data.[39]
LTE	Long-term evolution (LTE) is a wireless broadband communication standard for mobile devices. 4G refers to the fourth generation of mobile connectivity. Although different specifications, the terms 4G and LTE are often used interchangeably to refer to the standard signifying multiple speed, quality, and functional improvements over its 3G or third generation predecessor.[40]
Megabits Per Second (Mbps)	The speed of how fast data is transferred is typically measured as a megabit per second, or Mbps, which equates to one million bits per second. Mbps can be used to measure both internet download and upload speeds. For example, 25/3 Mbps refers to a 25 megabits downstream speed and 3 megabit per second upstream speed.[41]
Satellite	Broadband connections use radio waves directly from satellites orbiting the earth to a fixed device typically mounted on the roof or side of a home. Satellites delivering home broadband can be in medium earth orbit (MEO) or low earth orbit (LEO).[42]

Term	Definition
Wireline Broadband	Wireline broadband refers to transmission technologies that provide Internet connection through fixed, wired infrastructure, including DSL, cable, and fiber.
Wireless Broadband	Wireless broadband connections use over the air radio waves between a cellular tower and the home: • Fixed wireless provides a connection between the tower and a device typically mounted on the roof or the side of a home • Mobile broadband provides a connection between the tower and a mobile device such as a laptop or a smartphone.[43] Wireless technologies include Wireless Local Area Networks (WLANs), Long-term evolution (LTE), and satellite.

APPENDIX D: ADDITIONAL CONNECTIVITY MAPS

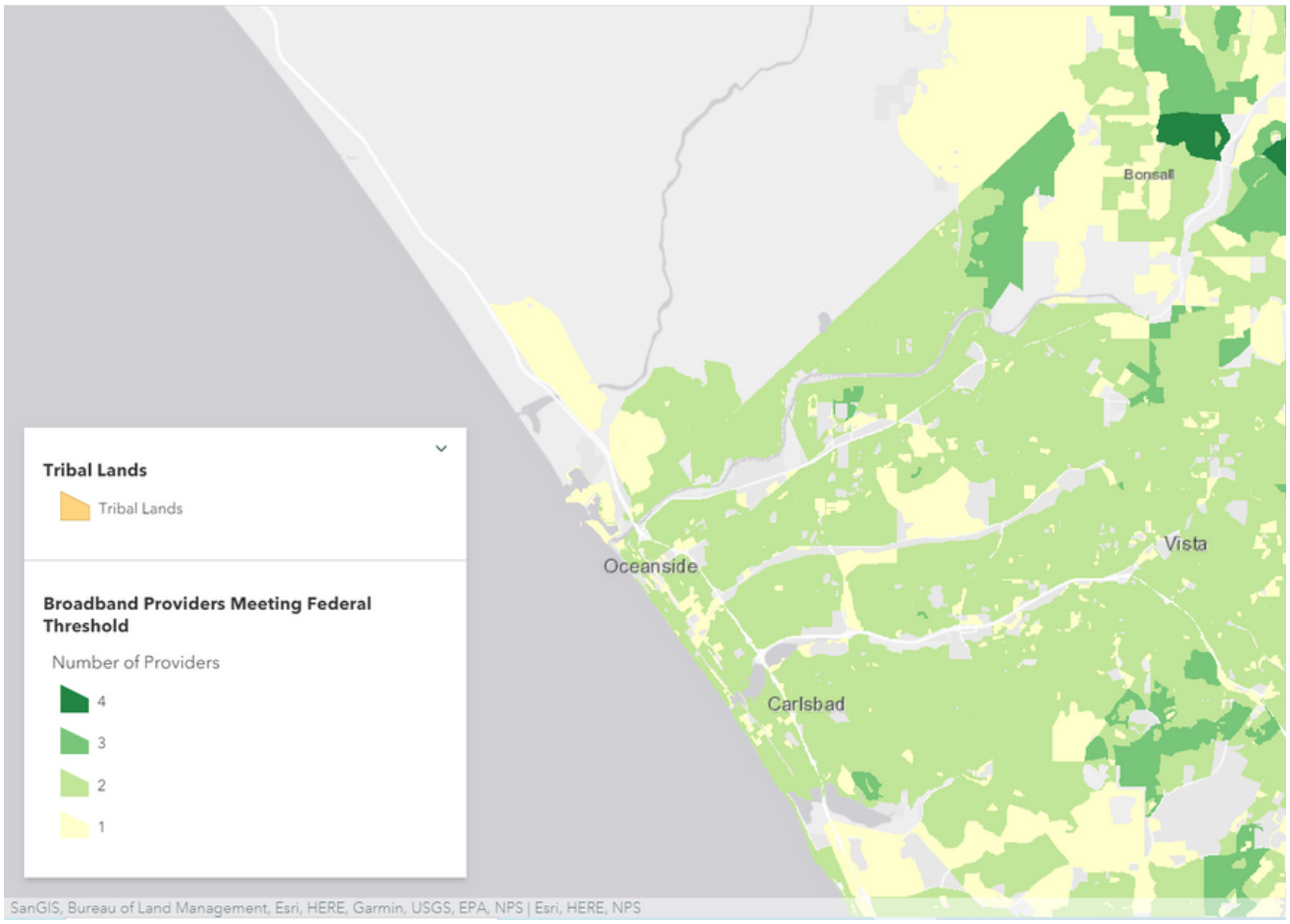

Figure: Number of Broadband Providers
This SANDAG map utilizes data from BroadbandNow to show the number of broadband providers that meet the 25/3 Mbps federal threshold. AT&T, Cox Communications, and Comcast are the most common broadband providers in Oceanside.

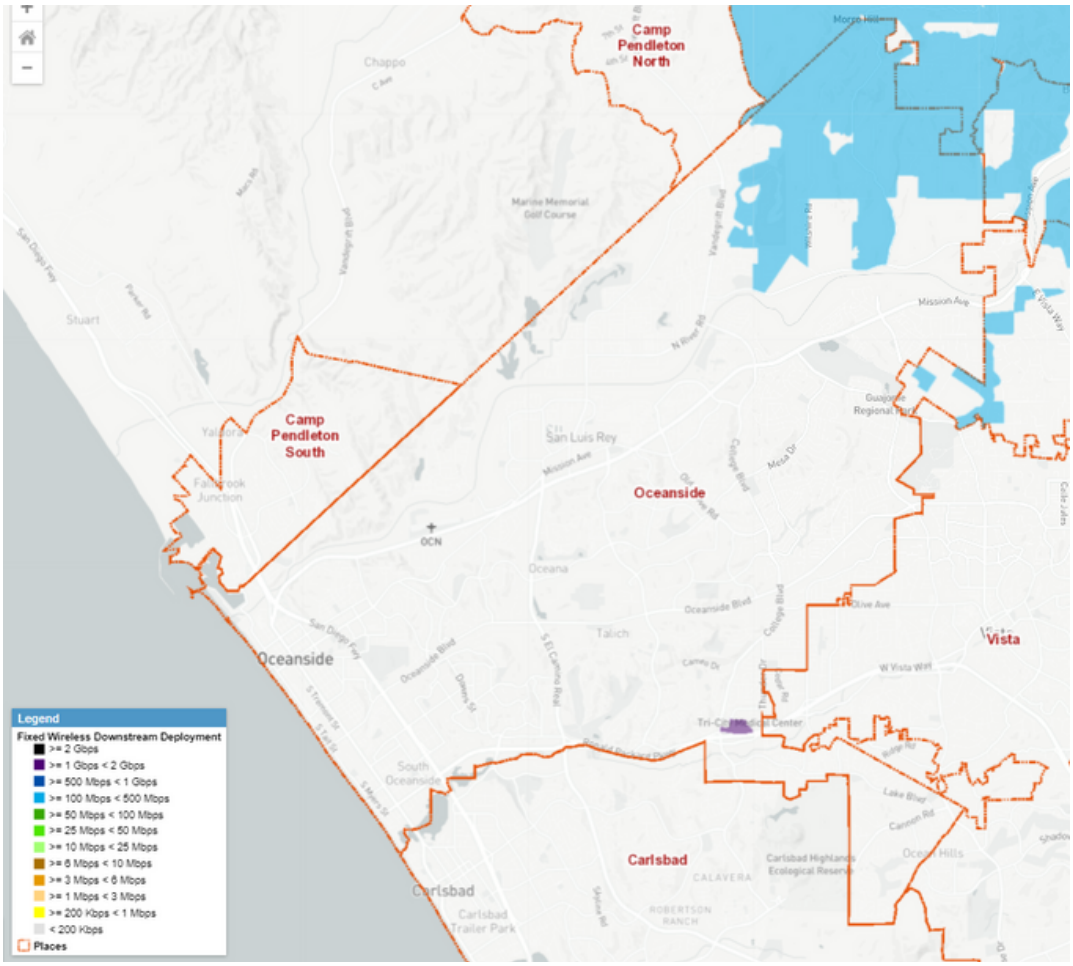

Figure: Fixed Wireless Downstream Deployment

This CPUC map displays the downstream speeds for fixed wireless infrastructure. Most of the city does not have access to fixed wireless infrastructure; however, areas in East Oceanside that have limited wireline access are served by wireless speeds between 100 Mbps - 500 Mbps (light blue).

2020 Microsoft Study

Microsoft provided an independent study of connectivity in December 2020. The company released a zip code level analysis of Internet connectivity in the United States. To gather this data, Microsoft used anonymized data collected as a part of their ongoing work to improve the performance and security of their products and services. The company estimated broadband usage by combining data to estimate the speed of connectivity each time a device connects to or updates a Microsoft service. Through this method, they are able to assess how many devices are connected to the Internet at broadband speeds set by the FCC (25 Mbps up/3 Mbps down). Microsoft found that a far greater number of individuals did not have access to the Internet at broadband speeds, 120.4 million people in the US compared to the FCC's estimate of 14.5 million as of October 2020.

A key difference between the data sources is that the FCC collects data from Internet Service Providers (ISPs) on what connections they offer, while the Microsoft data is attempting to demonstrate speeds that people are experiencing when trying to connect to the Internet. Below are the findings on rates of broadband connectivity for zip codes in Oceanside.[44]

92054: 100% (Population 41,807)
ZIP code 92054 is located along the western coast of Oceanside, encompassing 11.94 square miles. This area includes Oceanside neighborhoods Fire Mountain, South Oceanside, and Loma Alta. The median household income is $49,534 and the median home value is $426,200. A majority of the households in the area are renter occupied (52%), while 33% are owned and 15% are vacant.[45]

92056: 58.8% (Population 52,337)
ZIP code 92056 encompasses a large section of the inland Oceanside community across 12.41 square miles. This area includes Oceanside neighborhoods Tri-City, Mira Costa, Rancho Del Oro and Ocean Hills. The median household income is $64,033 and the median home value is $353,100. A majority of the households in the area are owned (63%), while 32% are renter occupied and 5% are vacant.[46]

92057: 100% (Population 60,414)
ZIP code 92057 is located across 15.09 square miles in northern Oceanside. This area includes Oceanside neighborhoods Rancho Del Oro, Morro Hills, and North Valley. The median household income is $64,004 and the median home value is $341,000. A majority of the households in the area are owned (62%), while 29% are renter occupied and 6% are vacant.[47]

92058: 36.9% (Population 46,029)
ZIP code 92058 encompasses a 28.22 square mile area that includes Northern Oceanside and Camp Pendleton. Compared to the rest of the city, this area has the lowest population density, with an average of 1,504 people per square mile. The median household income is $49,521 and the median home value is $261,900. A majority of the households in the area are renter occupied (59%), while 30% are owned households and 11% are vacant.[48]

APPENDIX E: RESIDENTIAL INTERNET SERVICE OFFERINGS

Table 1 details the current offerings from residential Internet service providers in Oceanside according to information on Broadband Now accessed in April 2022.[49] The average download speed is 243.6 Mbps and the average cost is $0.21/Mbps. Approximately 5% of Oceanside residents had one or fewer wired Internet providers available at their address.[50]

Table: Residential Internet Service Offerings in Oceanside

Provider	Coverage	Connection Type	Price	Internet Download Speeds
AT&T	94.9%	Fixed Wireless, IPBB, Fiber	$55/mo - $180/mo	25 Mbps - 5 Gbps
Cox	90.3%	Cable	$29.99/mo - $99.99/mo	25 Mbps - 1 Gbps
Viastat	100%	Satellite	$49.99/mo - $149.99/mo	12 Mbps - 50 Mbps
HughesNet	100%	Satellite	$64.99/mo - $159.99/mo	25 Mbps
EarthLink	94.9%	DSL, Fiber	$49.95/mo - $99.95/mo	12 Mbps - 1 Gbps
Ultra Home Internet	45.2%	Fixed Wireless	$59.99/mo - $189.99/mo	115 Mbps
T-Mobile Home Internet	45.2%	Fixed Wireless	$50/mo - $55/mo	115 Mbps

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