Middle-Mile Advisory Committee

September 16, 2022

CALIFORNIA ALL — **BROADBAND FOR ALL**

Mark Monroe

Deputy Director
Middle-Mile Broadband Initiative

Recap

- **Proceeding with execution phase**

Updates

- **Statewide – CDT**

- **Build Efforts – Caltrans**

- **Core Network Backbone Design – GoldenStateNet**

- **Last Mile Coordination – CPUC**

Coming up

- **Contract execution**

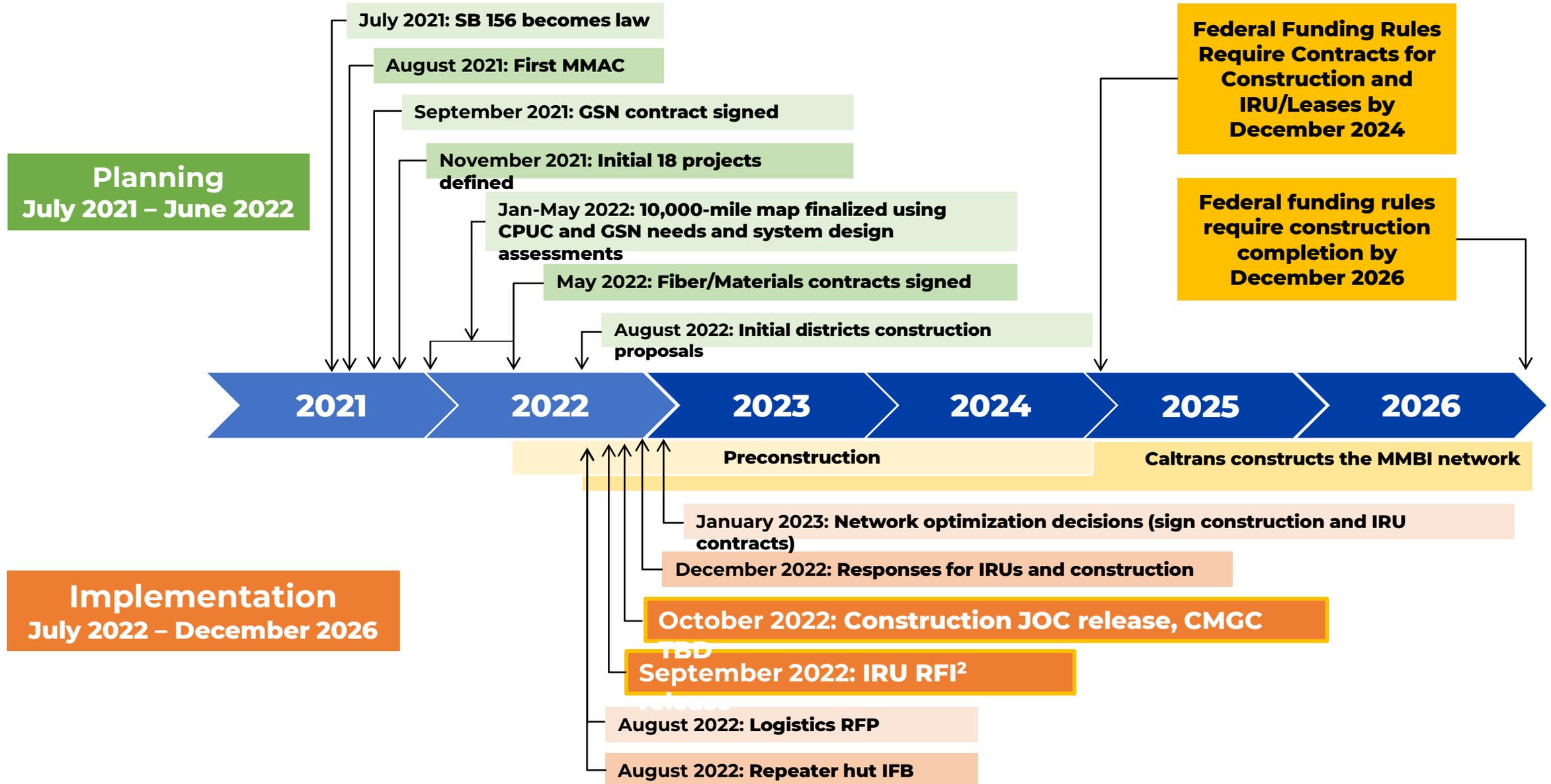May 2022 Statewide Network Design
County Boundaries

100 Miles

6/13/2022

Goal: Optimize Coverage

Three avenues available to complete miles:

- **Build**
- **Joint Build**
- **Lease**

CDT Project Recap

Planning
July 2021 – June 2022

July 2021: SB 156 becomes law

August 2021: First MMAC

September 2021: GSN contract signed

November 2021: Initial 18 projects defined

Jan-May 2022: 10,000-mile map finalized using CPUC and GSN needs and system design assessments

May 2022: Fiber/Materials contracts signed

August 2022: Initial districts construction proposals

Federal Funding Rules Require Contracts for Construction and IRU/Leases by December 2024

Federal funding rules require construction completion by December 2026

2021	2022	2023	2024	2025	2026

Preconstruction

Caltrans constructs the MMBI network

January 2023: Network optimization decisions (sign construction and IRU contracts)

December 2022: Responses for IRUs and construction

October 2022: Construction JOC release, CMGC TBD

September 2022: IRU RFI² release

Implementation
July 2022 – December 2026

August 2022: Logistics RFP

August 2022: Repeater hut IFB

By October 14 ...

1. **Releasing an RFI² solicitation for pricing for:**
   - **IRUs (fiber leasing)**
   - **Joint builds**
2. **Job Order Contracts (JOC) build**

Construction Contracts
~60% of system released for bid October 14

Approximately 6,000 miles of Job Order Contracts

- **50% committed for build**
- **Decision on remainder build/lease is pending cost estimates**

Benefits
- **Maximum miles released to calculate average cost**
- **Flexibility to choose best cost option-build vs. lease**

100% of system under contract by **May 2023**

Janice Benton

Division Chief
California Department of Transportation

More than 3,500 miles expected to begin construction by early 2023

How did we get here?

1. **Alternative delivery methods**
    - **667 miles of Dig Smart opportunities**
    - **Job Order Contracting**
    - **Construction Manager/General Contractor**
2. **Initial 18 locations (39 projects)**
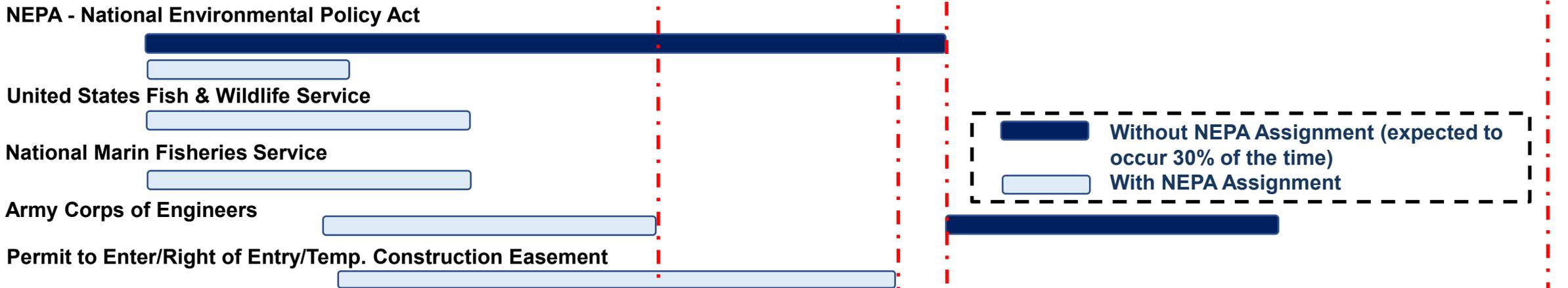3. **Streamlined permitting**

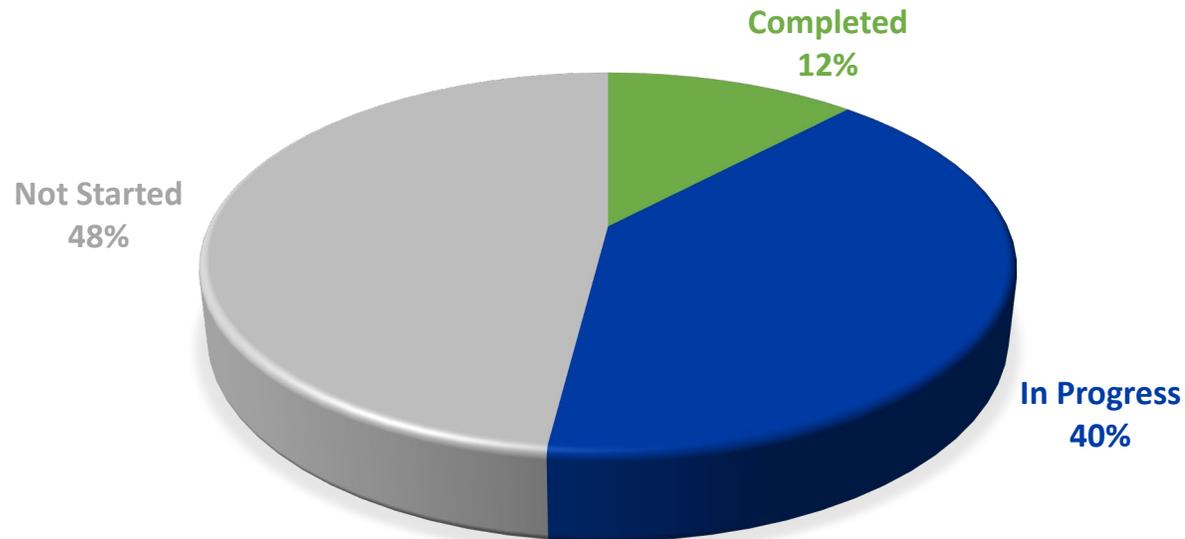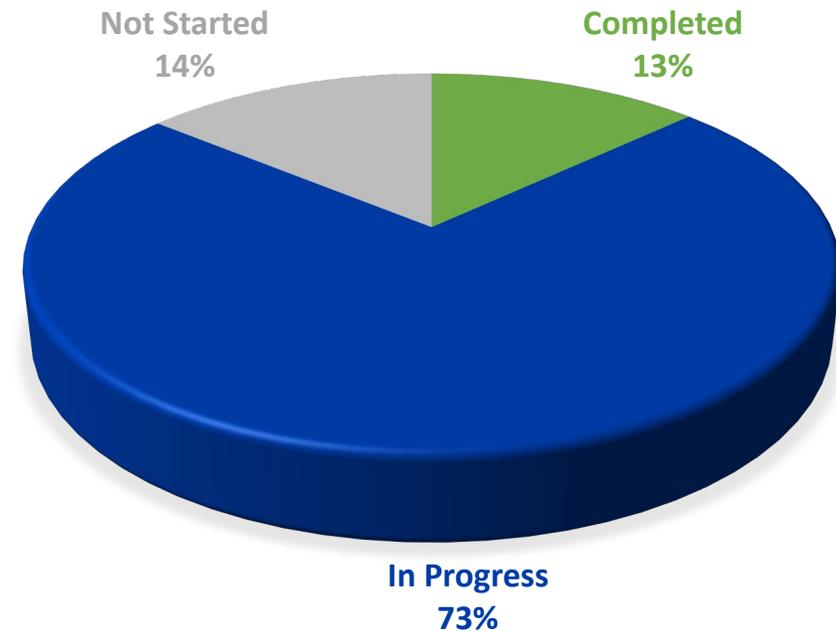Caltrans Recap: Permitting reduced from 30 to 17 months

State Permitting

0 3 6 9 12 15 18 21 24 27 30

CEQA - California Environmental Quality Act (underground)

CEQA - California Environmental Quality Act (above ground)

State Historic Preservation Office (adverse effects)

State Historic Preservation Office (No adverse effects)

California Department of Fish and Wildlife

State Water Resource Control Board/Regional Water Quality Boards

California Coastal Act – Coastal Development Permit

State Fire Marshal

With SB 156 and NEPA delegation there is a 13-month reduction in the average permitting time.

With the enhanced resourcing provided to the agencies an additional reduction of 1 month can be realized

Fire Marshal is only required for huts

SHPO with adverse effects (expected to occur 8% of the time)
SHPO without adverse effects

Fed. Permitting

NEPA - National Environmental Policy Act

United States Fish & Wildlife Service

National Marin Fisheries Service

Army Corps of Engineers

Permit to Enter/Right of Entry/Temp. Construction Easement

Without NEPA Assignment (expected to occur 30% of the time)
With NEPA Assignment

Project Delivery Updates

Preconstruction progress by Caltrans district.

August 2022

September 2022

Legend: Completed (green) · In Progress (blue) · Not Started (gray)
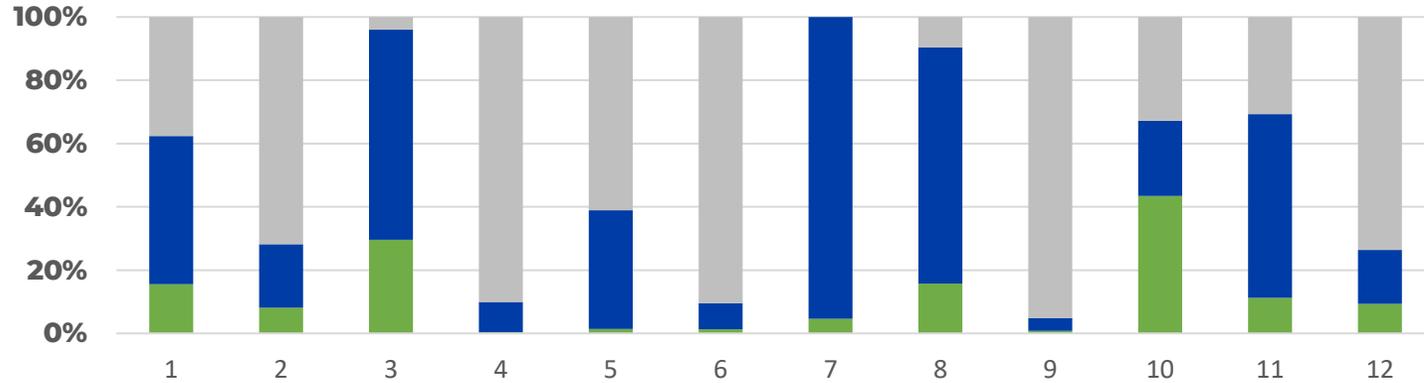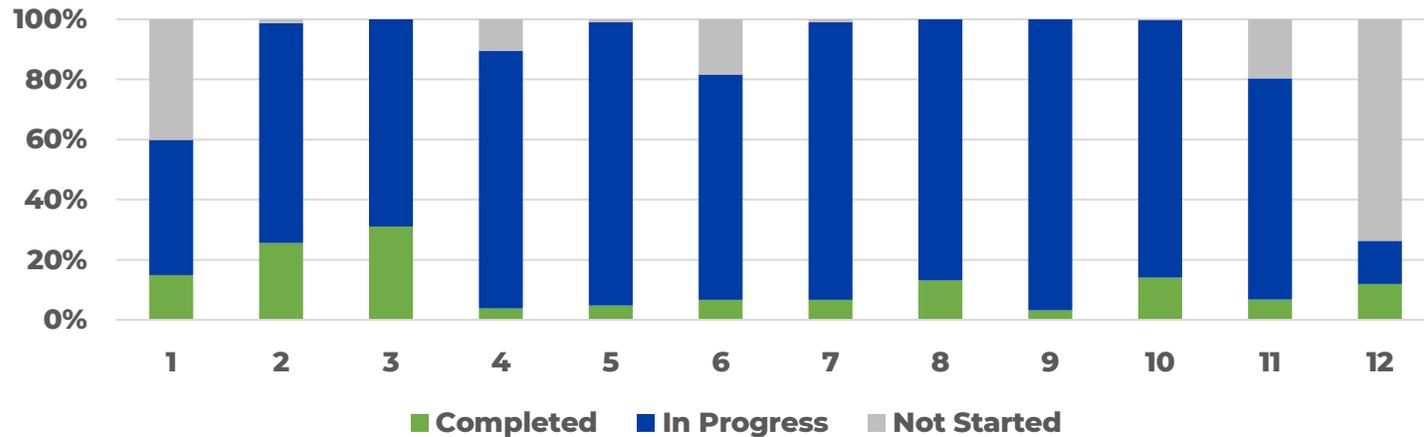
Preconstruction Completion
(Average Permitting and Design Reduced from 30 to 17 months)

- ## Location 14: San Bernardino (33.2-miles)
  - **Progressed to 50% from less than 10%**
  - **Completed majority of design layout**

- ## Location 16: Orange County (39-miles)
  - **Progressed to 45% from 35%**
  - **Validated shelter network hub locations and 2/3 of design layout.**

- ## Location 10: Fresno (32.6-miles)
  - **Progressed to 30% from 20%**
  - **Prepared electrical estimates and specifications**

Dig Smart Miles

	AUGUST	SEPTEMBER
Start in 2022	90	114
Start in 2023	234	301
Under Evaluation	343	251
Total	667	667

Tony Naughtin
President and Chief Operating Officer
GoldenStateNet

- **Significant work on MMBI Network Service Architecture:**
  - **Continue to finalize recommended ILA (retransmission) hut locations with Caltrans – now 40% complete**
  - **Engineering drawings for huts and specifications for hut systems (power, HVAC, security)**
  - **Active Electronics: 'BOM' (Bill of Materials) configurations and specifications**
    - **Core backbone vs. lateral BOMs**
    - **Best options for pricing and technical support of all electronics**

GoldenStateNet Update

- **Collaboration and support of bidding and procurement processes:**
- **With CDT:**
  - **RFI2 process for DF IRUs, Joint Builds, Facilities colocation (RXPs)**
  - **RFP for fiber management system**
  - **RFPs for other software systems to follow**

- **With Caltrans:**
  - **Bids for Job Order Contracting:**
    - **Optical network construction**
    - **ILA huts including all structural and hut systems**

GoldenStateNet Update

- **Network development work continues to progress for:**

  - **Potential Joint Builds, growing in number and potential mileage**

  - **Leasing of DF IRUs and conduit, substantial progress being made**

- **Work also continues on:**

  - **Business model - focusing on revenue projection and analysis; continuing review of OPEX cost projections**

  - **System Layer Design and Program Plan refinements and updates**
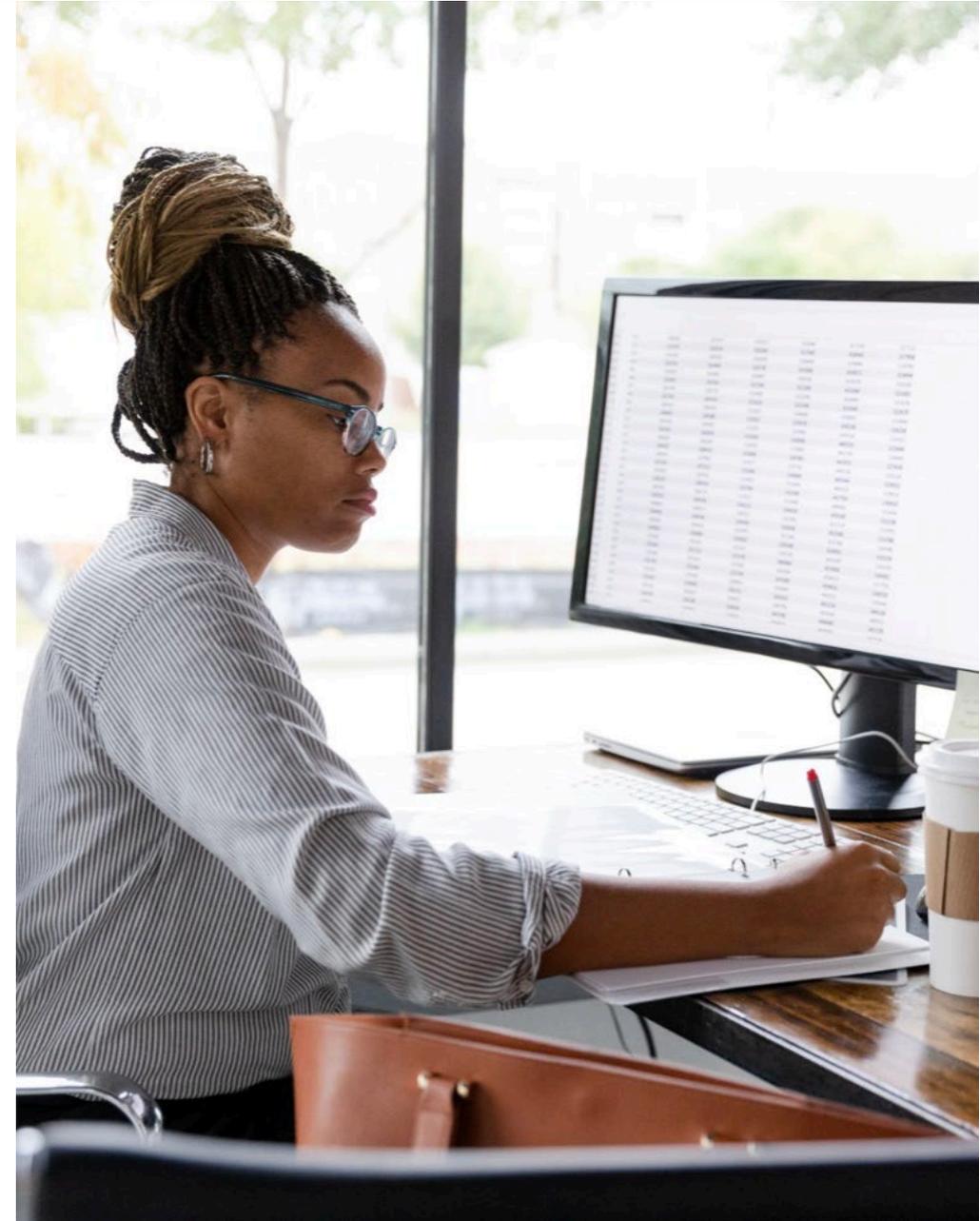
GoldenStateNet Update

- **Full software architectural model has been provided:**
  - Defines essential software and system needs:
  - FMS, Inventory Mgmt, CRM, Billing…plus
  - Network Mgmt System (NMS), Ticketing, Run Book, Reporting, Comms, other
  - Defines use case scenarios and workflows
  - Defines interoperating relationships between these systems to support NOC and NetOps
  - Enable high quality network services and customer support

Jonathan Lakritz
Communications Division
California Public Utilities Commission

Local Agency Technical Assistance

$50 Million for Local and Tribal Governments

- **To facilitate last-mile broadband infrastructure projects**
- **Supporting local agency and Tribal efforts expanding broadband to families and communities lacking sufficient internet access**

Eligibility

- **Broad eligibility includes cities, counties, community service districts, municipal utilities districts, school districts, electrical cooperatives, sovereign tribal governments, and Joint Powers Authorities**
- **Eligible costs are for pre-construction deliverables, such as environmental permits, engineering studies, and strategic plans**

Applications

- **46 applicants requested a total of $22.2 million during the August window – these applications are now under review**
- **Applications are currently being accepted for the September window**

County Map of Technical Assistance Applications
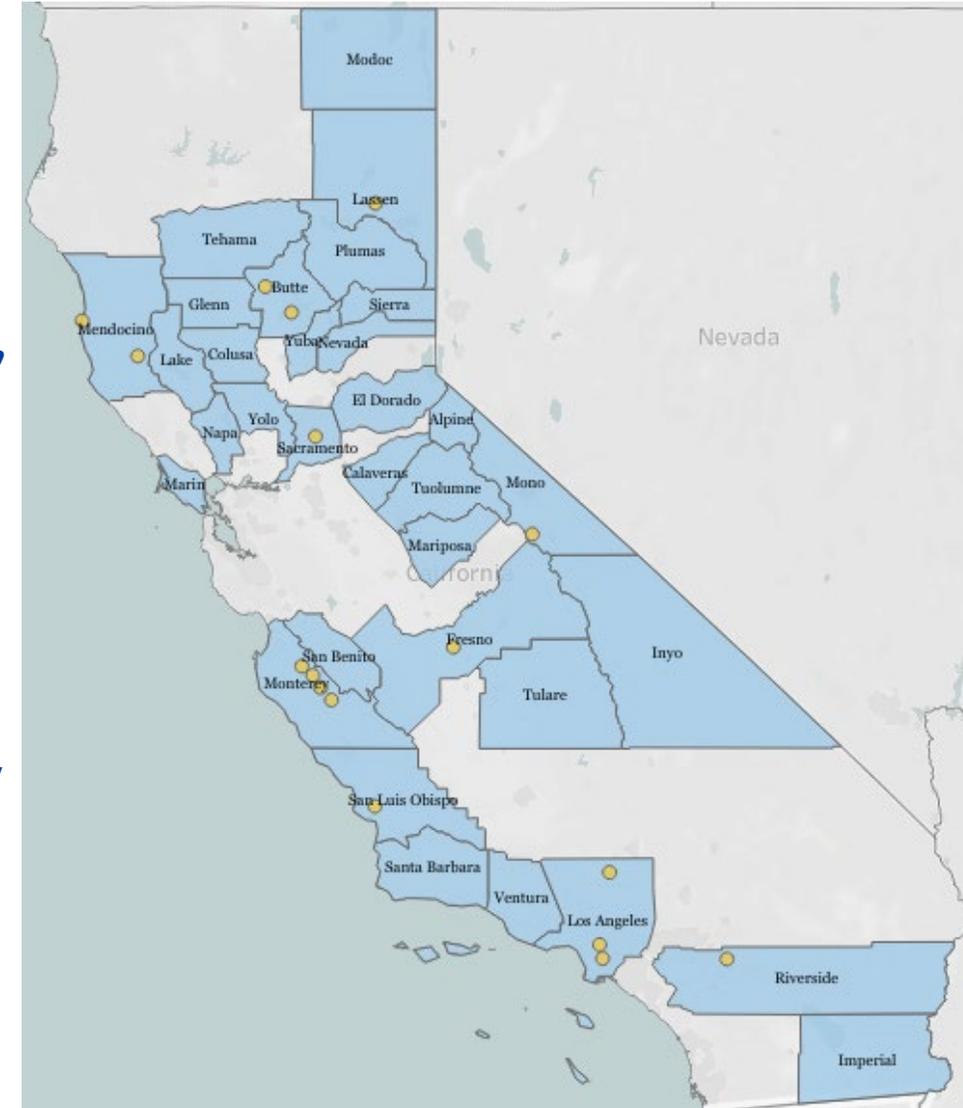
Broadband Adoption and Digital Equity

Grants to public entities and community-based organizations for digital literacy and broadband access projects

- On July 1, CPUC received 99 project applications.

Consortia

Regional consortiums of public entities and community-based organizations to help deploy broadband infrastructure and service by assisting with broadband grant application development.

- On July 15, the CPUC received 15 applications.

Public Housing and Low-Income Communities

Grants to build broadband networks offering free broadband service for residents of low-income communities including but not limited to, publicly supported housing developments, and housing or mobile home parks with low-income residents

- On July 1, CPUC received 19 project applications.

California Advanced Services Fund Adoption Account Center for Elders' Independence digital literacy project grantee

2022 Broadband Investment Last-Mile Broadband Initiative Snapshot

	TECHNICAL ASSISTANCE	LOAN LOSS RESERVE FUND	FEDERAL FUNDING ACCOUNT	CALIFORNIA ADVANCED SERVICES FUND
Amount	$50 million	$750 million	$2 billion	$150 million per year
Summary	Assist local governments & Tribes to prepare for broadband infrastructure investments.	Enable local governments & nonprofits to secure financing for broadband infrastructure.	Fund last-mile broadband infrastructure projects in every county.	Assist with broadband infrastructure deployment & adoption in public housing, Tribes, & unserved areas.
Target	Apply monthly now	Comment on proposal	Priority Areas to be released before applications open	Apply in the next cycle for adoption, public housing, line extension, and consortia accounts

THANK YOU!