DCA
DELTA CONVEYANCE DESIGN & CONSTRUCTION AUTHORITY

AUGUST 26, 2020

Stakeholder Engagement Committee Meeting

Meeting Agenda

1	*Welcome/ Call to Order*
2	Roll Call/ Housekeeping
3	Minutes Review: July 22, 2020 Regular SEC Meeting
4a.	SEC Open Forum - Reflection on Status
4b.	DWR Updates
4c.	Intakes Design Refinements
4d.	Traffic Reductions
4e.	Briefing on Bethany Alternative
4f.	Public Comment on Item 4
5a.	SEC Tour Updates
5b.	September Meeting Topics
5c.	September SEC Report to DCA Board
6	Non-Agendized SEC Questions or Comments
7	Public Comment on Non-Agendized Items

Item 2.

Roll Call/ Housekeeping

Item 3.

Minutes Review:

July 22, 2020 Regular SEC Meeting

Item 4a.

SEC Open Forum – Reflection on Status

#1. Thank You

Where are we today?

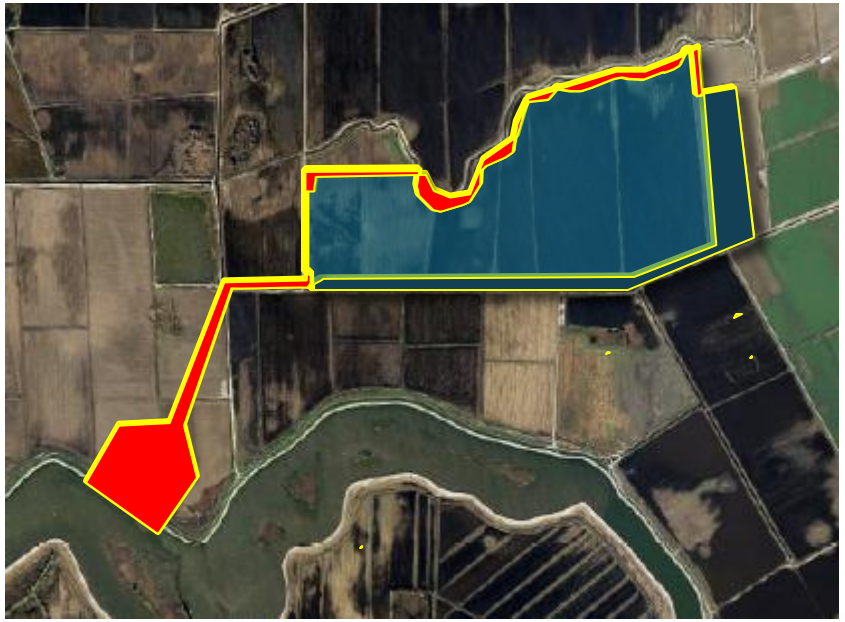
- ✓ **Introduction to the Delta Conveyance System**
- ✓ **Introduction to each of the Project elements of the preferred project for Central and East Corridors**
  - Intakes
  - Tunnel and Shafts
  - Southern Facilities
- ✓ **Siting Alternative Studies**
- ✓ **Logistics Plans and Traffic Impacts**
  - Proposed roads, barge landings and rail spurs
  - Routes to each site
  - Traffic histograms to each site
  - Project Impacts to Level of Service
  - RTM Management
- ✓ **Design changes to reflect SEC comments**

Made great progress….

- Reduced site footprints throughout
- Maximized reclamation of impacted agricultural land
- Shifted facilities away from natural areas including Stone Lakes and Woodbridge Reserves
- Eliminated barging and associated affects to recreational boating
- Reduced traffic along Hwy 4 by eliminating structures
- Reduced traffic along Byron Hwy by adding infrastructure and shifting material to rail
- Reduced borrow requirements to reduce traffic loads
- Added rail and expanded roads to maintain acceptable levels of service

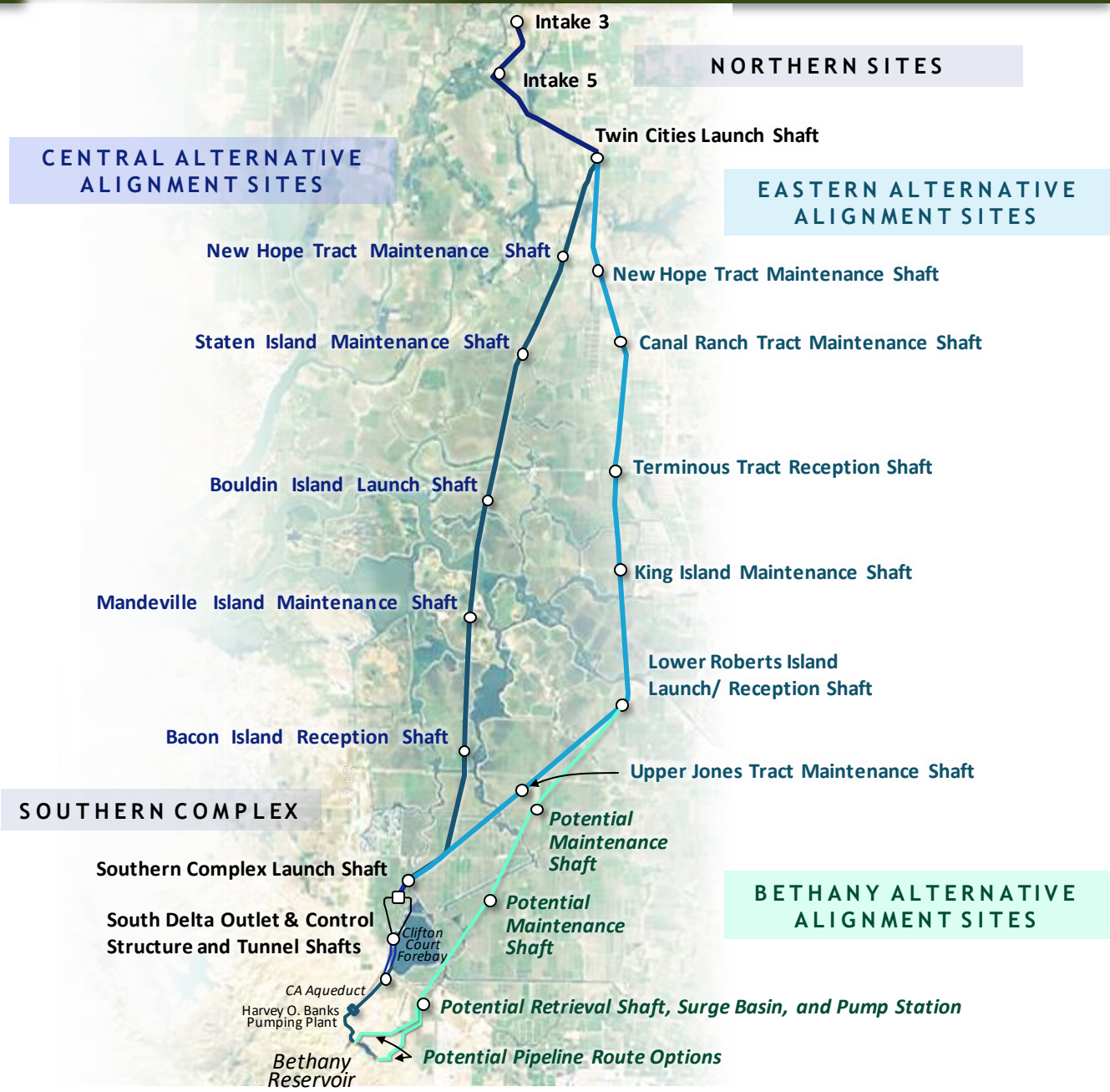
Moved shaft one mile from Woodbridge Reserve Boundary to Canal Ranch Maintenance Shaft Site

Eliminated the Barge Landing at Bouldin Island Launch Shaft Site



What still needs to be done with the SEC?

- **Central and East Alignment Alternatives**
  - Generally wrapping up the DCA engineering effort
  - Minor updates to reflect the final changes
- **Bethany Reservoir Alternative**
  - Overall System Map
  - Description of the Elements
  - Siting Alternatives Analysis and Selection
  - Pipeline Route Alternatives and Selection
  - Logistics and Traffic Impacts



Open Discussion - Guiding Questions

Any comments you want to share with your SEC colleagues on the work to date?

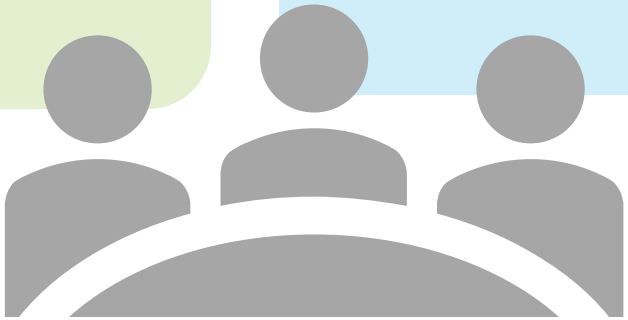
Any way we can make the review of the Bethany Alternative more effective?

Recommendations for additional DCA outreach to the Delta Community – restricted to the engineering work?

Anything we need to go back and review in greater detail?

Any additional information or topics you would like the DCA to provide or cover at future meetings?

Anything else you want to share with fellow SEC Members?



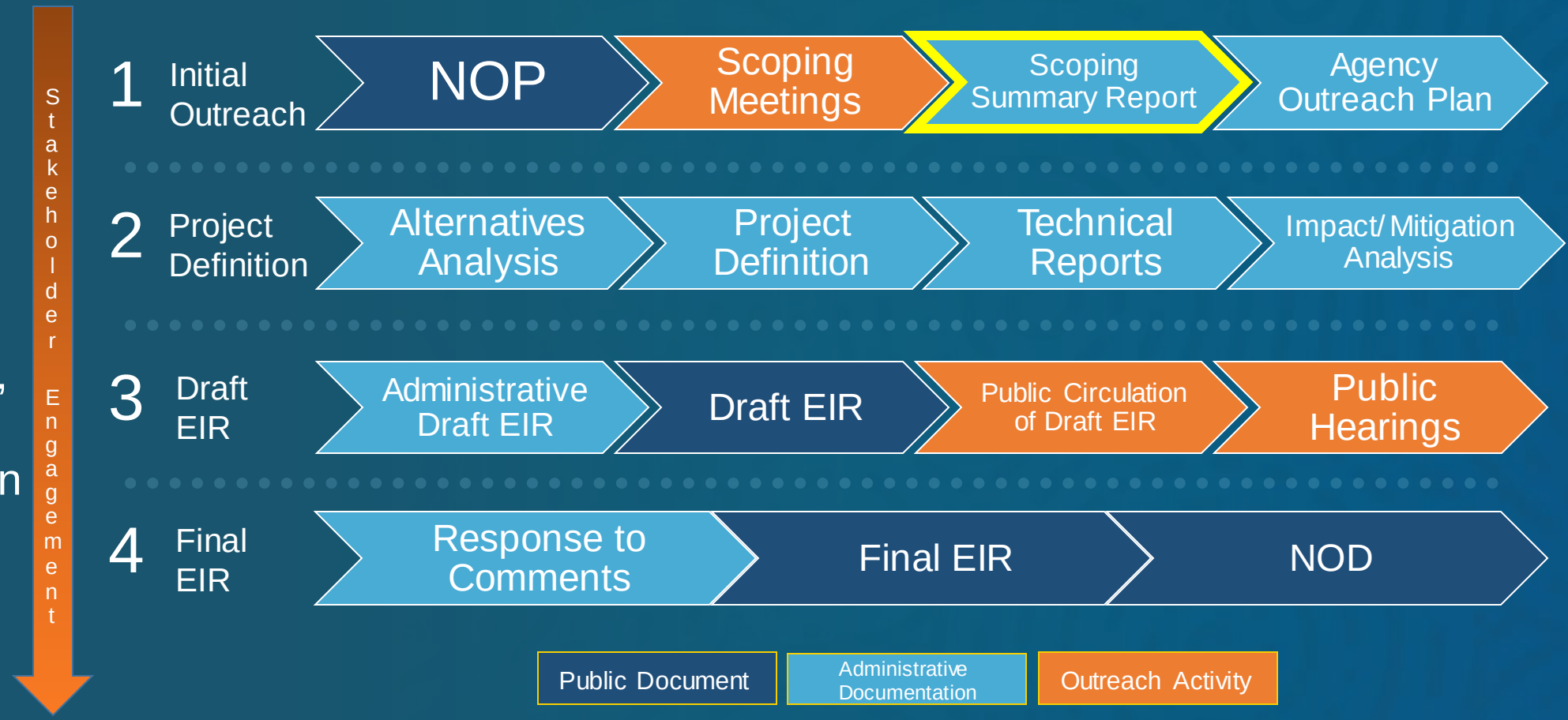
August 2020

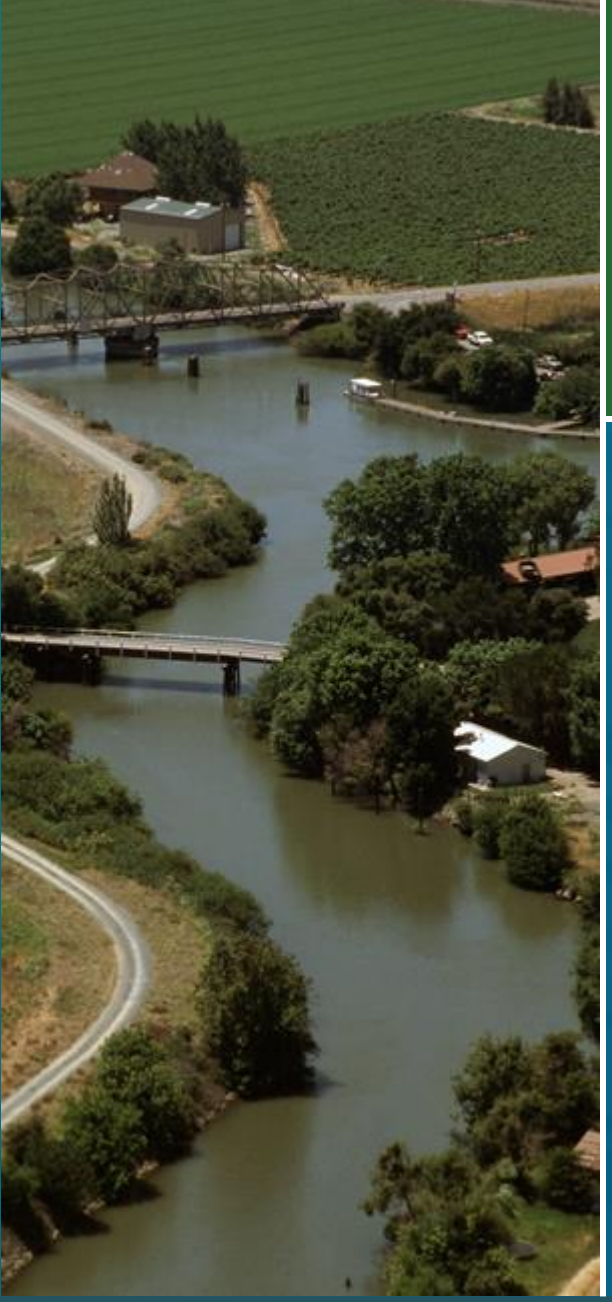
Delta Conveyance Project: *Environmental Review Update*

Carrie Buckman
Environmental Program Manager

Environmental Review Process

Identify, analyze and disclose the potential significant adverse environmental impacts of a proposed project, and provide feasible mitigation measures and alternatives to avoid or reduce such effects.



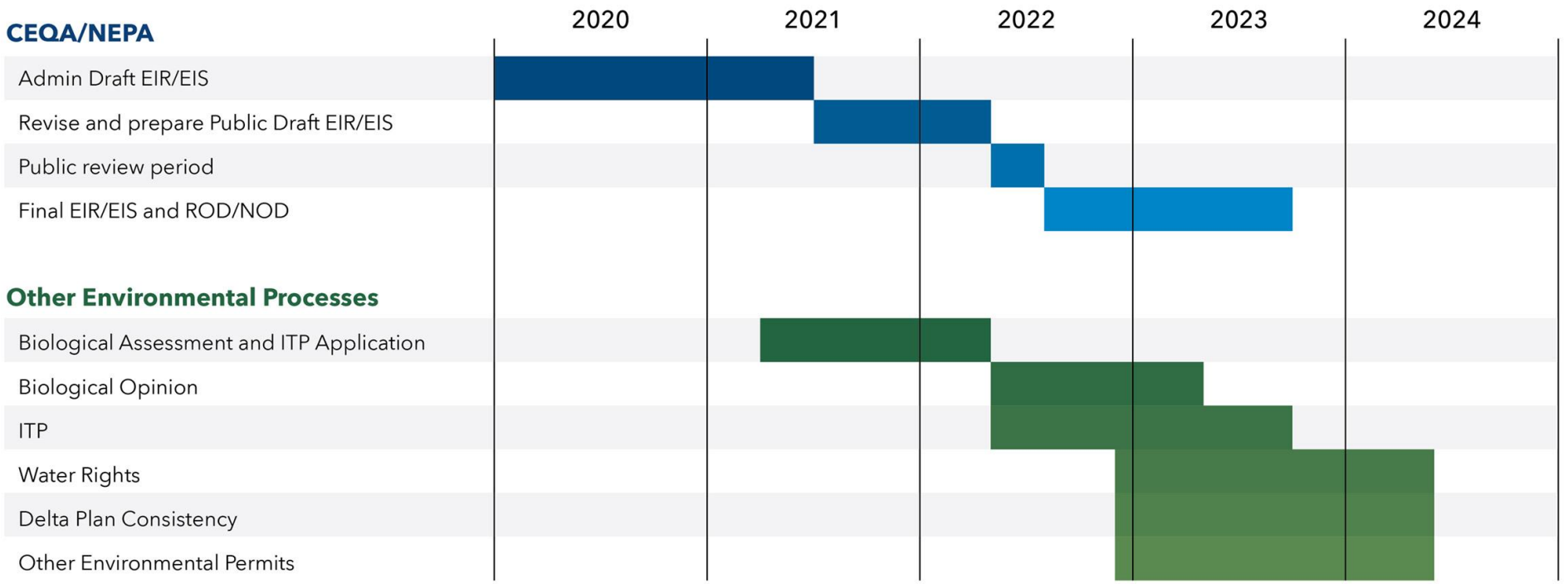


Environmental Planning Update

Process	Status
California Environmental Quality Act (CEQA)	• Scoping Summary Report published • Draft Environmental Impact Report in process
National Environmental Policy Act	• United States Army Corps of Engineers (USACE) released Notice of Intent to prepare Environmental Impact Statement • Scoping August 20 – October 20, 2020
Soil Investigations	• CEQA documentation required for soil investigations adopted • Work scheduled to begin on publicly-owned sites this fall
USACE Section 404 Permit	• USACE published notice for comments on draft application

Schedule Update

Delta Conveyance Project Schedule



Ways to Stay Informed

water.ca.gov

- Programs
  - State Water Project
    - Delta Conveyance

Project Hotline

866.924.9955

Twitter

@CA_DWR

Project Email

DeltaConveyance@water.ca.gov

Item 4c.

Intakes Design Refinements

Phil Ryan, DCA Engineering Manager

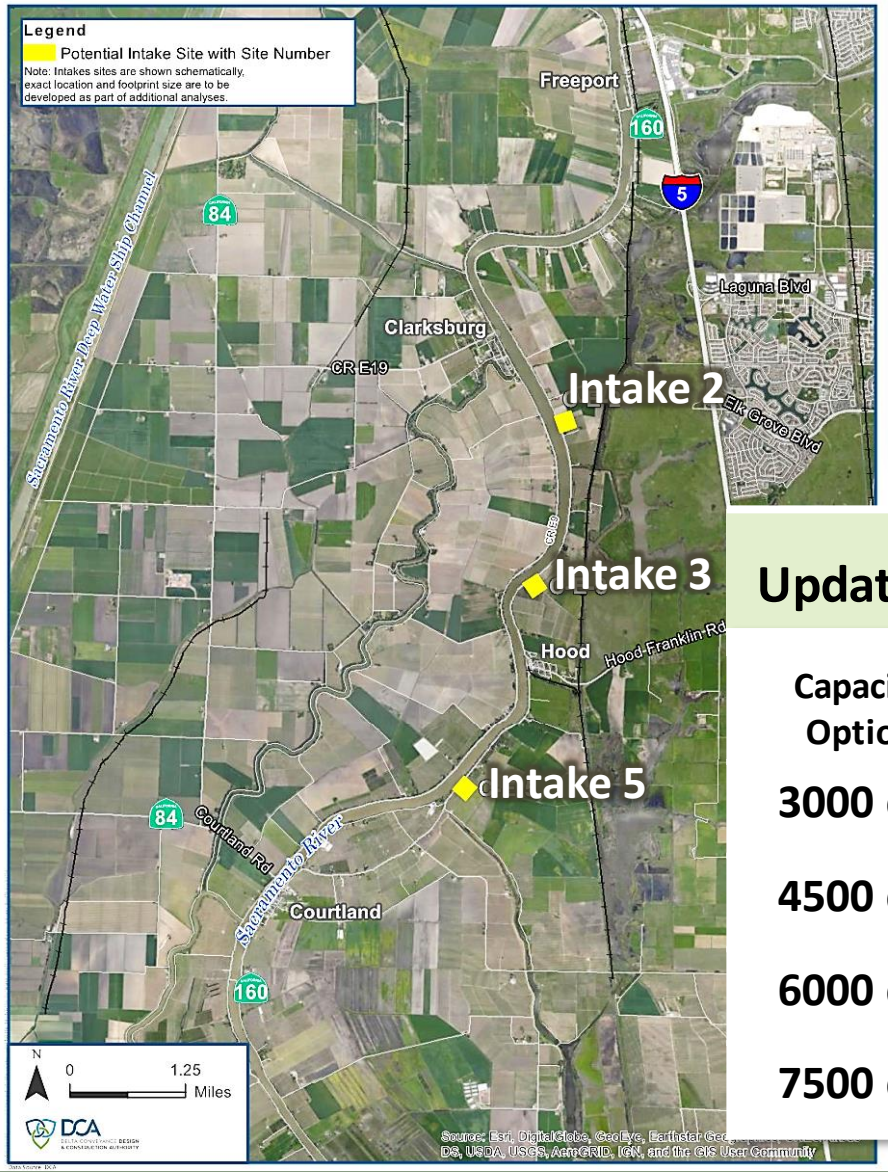
Summary of Key Intake Changes

1.	Defined Intake Sites for Capacity Options
2.	Revised Sedimentation Basin Layout for Onsite Earth Balance
3.	Revised Configuration and Construction Methodology

1. Defined Intake Sites for Capacity Options

Original Plan

- Three sites selected for further consideration
- Specific combination of uses not defined



Benefits

- Reduces length of haul road from Lambert
- Minimizes noise in Clarksburg and Elk Grove
- Promotes smallest in-river intake footprint
- Avoids Lambert Shaft

Updated Plan

Capacity Option	Intake 2	Intake 3	Intake 5
3000 cfs	n/a	n/a	3,000 cfs
4500 cfs	n/a	3,000 cfs	1,500 cfs
6000 cfs	n/a	3,000 cfs	3,000 cfs
7500 cfs	1,500 cfs	3,000 cfs	3,000 cfs

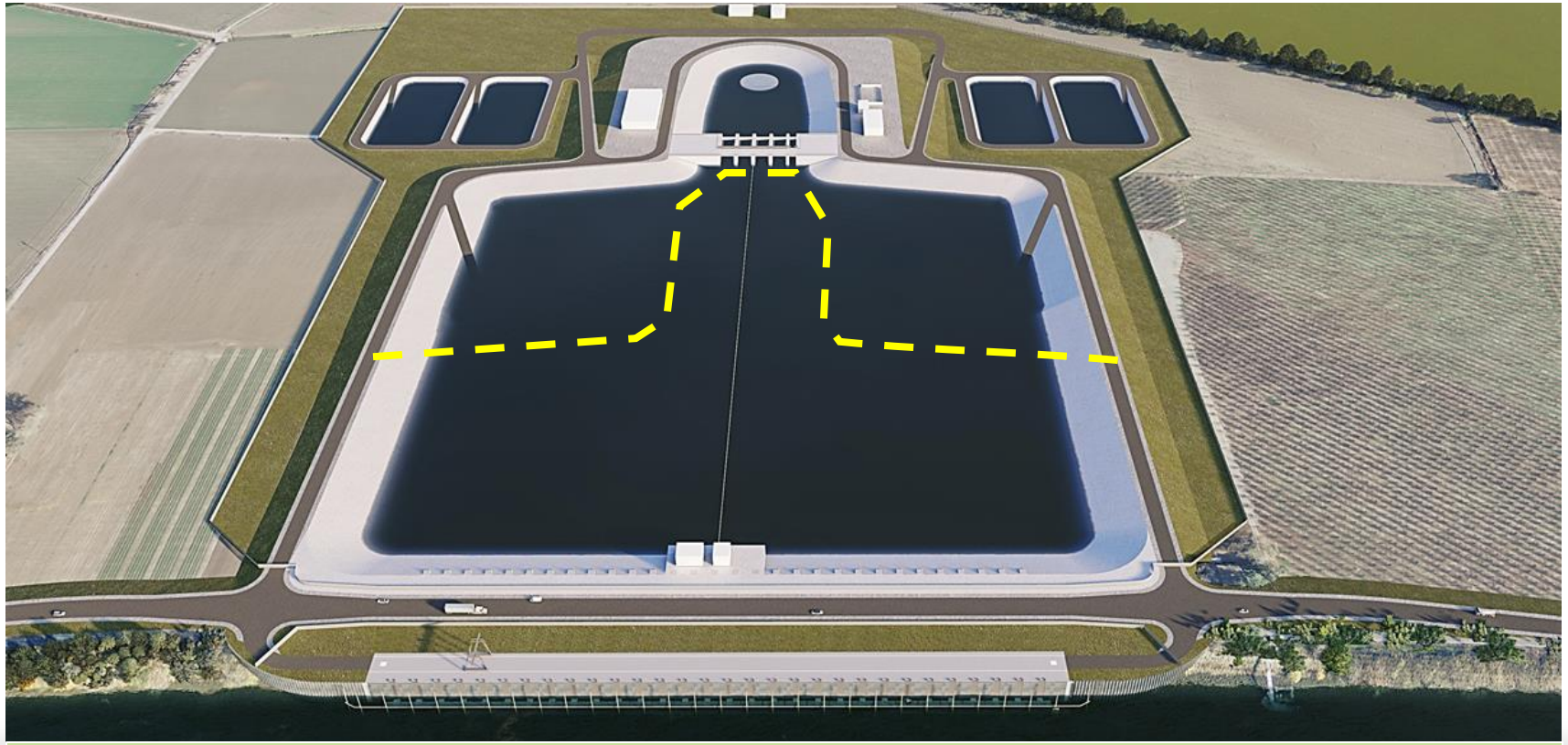
2. Revised Sedimentation Basin Layout for Onsite Earth Balance

Original Plan

- Minimize sedimentation basin size
- Import fill material to relocate State Route 160 and construct embankments
- Jurisdictional Levee to be adjacent to river under new SR 160 location

Updated Plan

- Allow sedimentation basin size to increase to eliminate trucking large quantities of fill material
- Only import levee "core" material not found at the site
- Jurisdictional levee along perimeter embankment of sedimentation basin

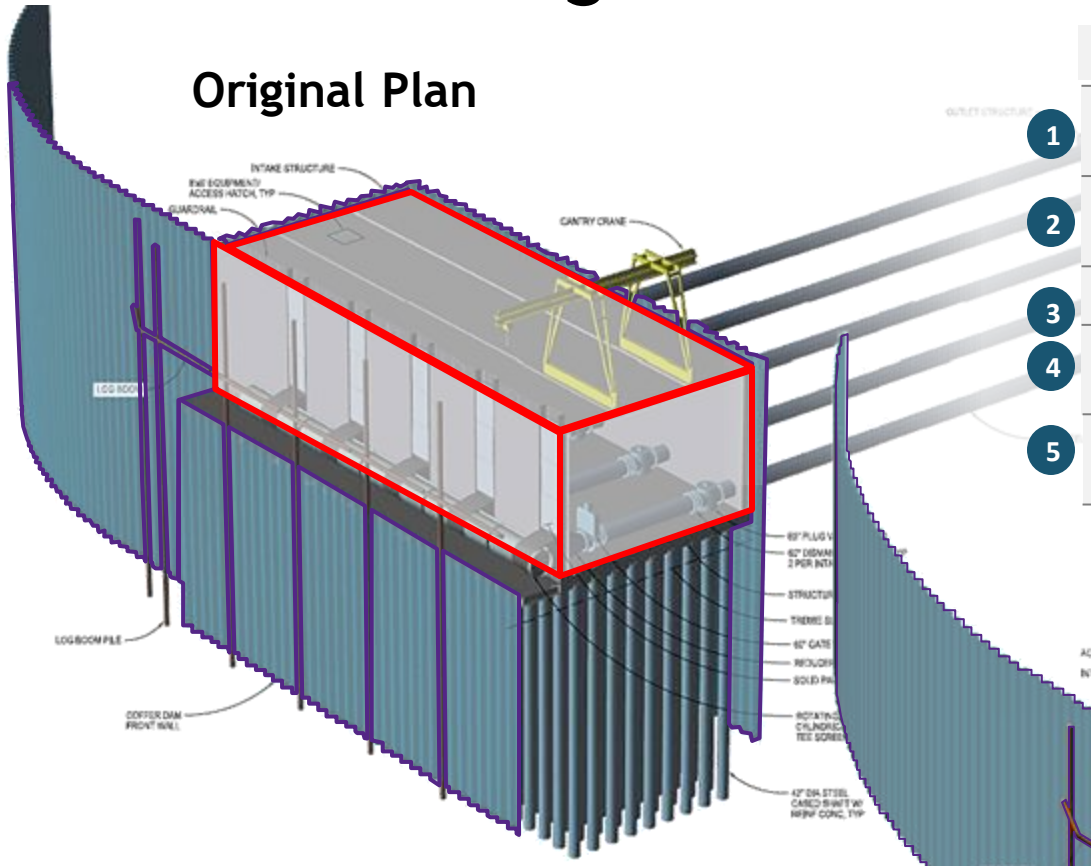


Benefits

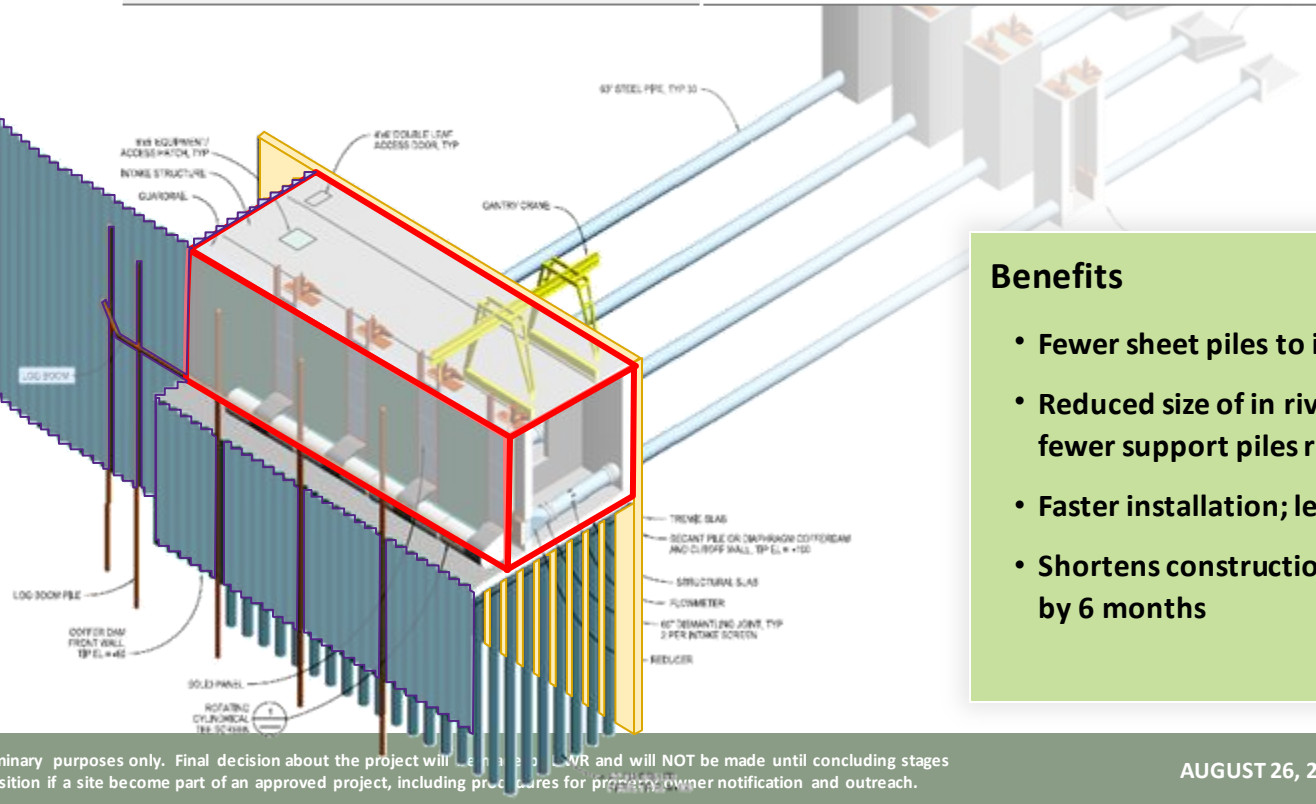
- **Eliminates 1000s of truck trips and associated emissions**
- **Provides better levee inspection**
- **Overall impact change is minimal**
- **Will evaluate size reduction as part of final design**

3. Revised Configuration and Construction Methodology

Original Plan



Current Plan



	Original Plan	Current Plan
1	Sheet pile cofferdam around all four sides of the in-river intake structure	**Sheet pile around 3 sides of the concrete intake structure with changing to a soil-cement wall (DMM) on the backside**
2	Heavy King Piles and "Z" sheet combination wall composition	**Lighter "Z" sheets and no king piles**
3	Sheets installed with pile drivers	**Sheets installed with vibratory methods and limited pile driving**
4	2- year construction period due to limitations on in-river work windows	**Soil-cement wall can be constructed in winter – not affected by "fish window" restrictions**
5	Enclose both sets of control valves inside the concrete intake structure valves	**Shift the sluice gates out of the in-river structure and into a separate on-land structure**

Benefits

- **Fewer sheet piles to install**
- **Reduced size of in river structure; fewer support piles required**
- **Faster installation; less noise**
- **Shortens construction schedule by 6 months**

Item 4d.

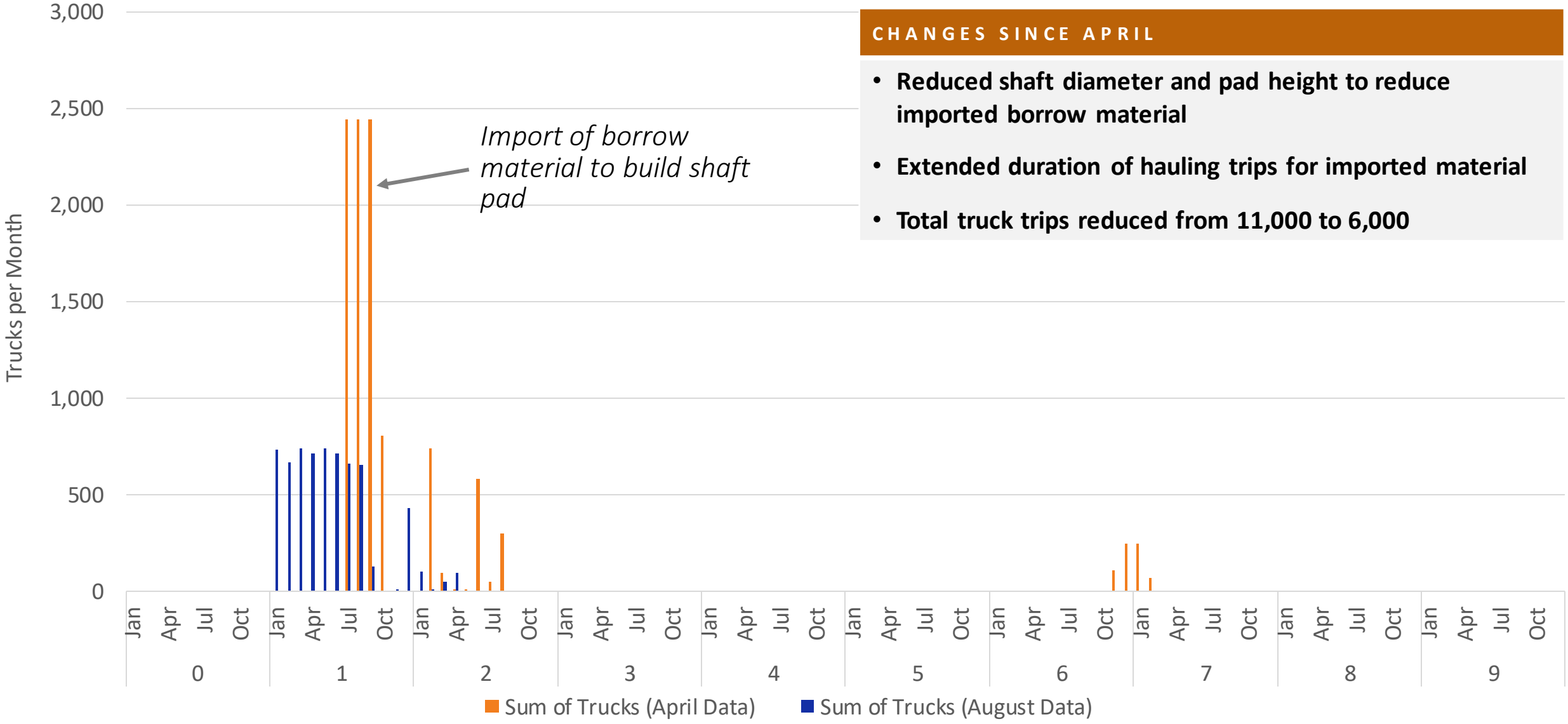
Traffic Reductions

Phil Ryan, DCA Engineering Manager

Items for Discussion

1.	Traffic at Maintenance and Retrieval Shafts (Typical)
2.	Traffic on SR 4 (East Alignment)
3.	Traffic on SR 4 (Central Alignment)
4.	Traffic on Byron Highway (East and Central Alignment)
5.	Traffic on SR 12 (Central Alignment)

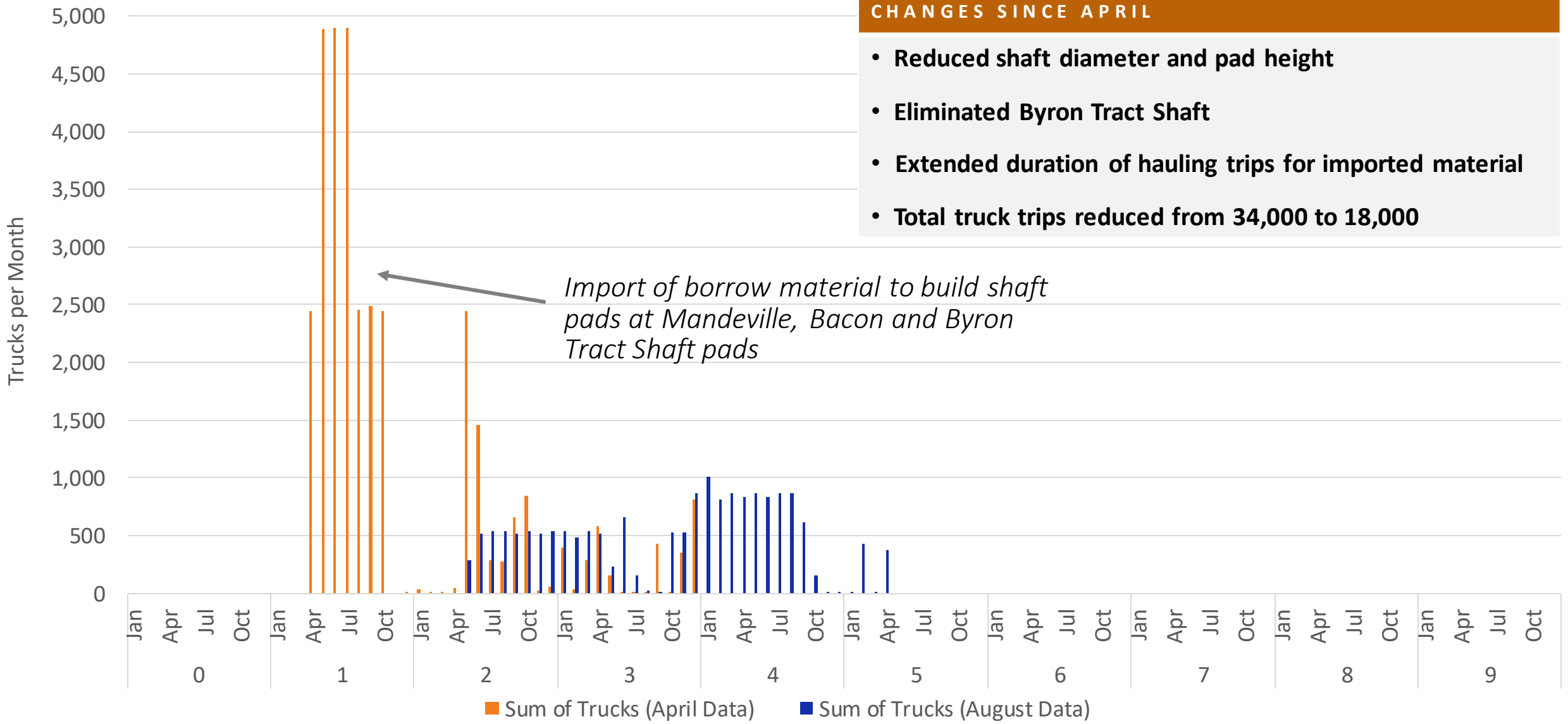
Maintenance/Retrieval Shafts (Example: Staten Island Shaft)



CHANGES SINCE APRIL

- **Reduced shaft diameter and pad height to reduce imported borrow material**
- **Extended duration of hauling trips for imported material**
- **Total truck trips reduced from 11,000 to 6,000**

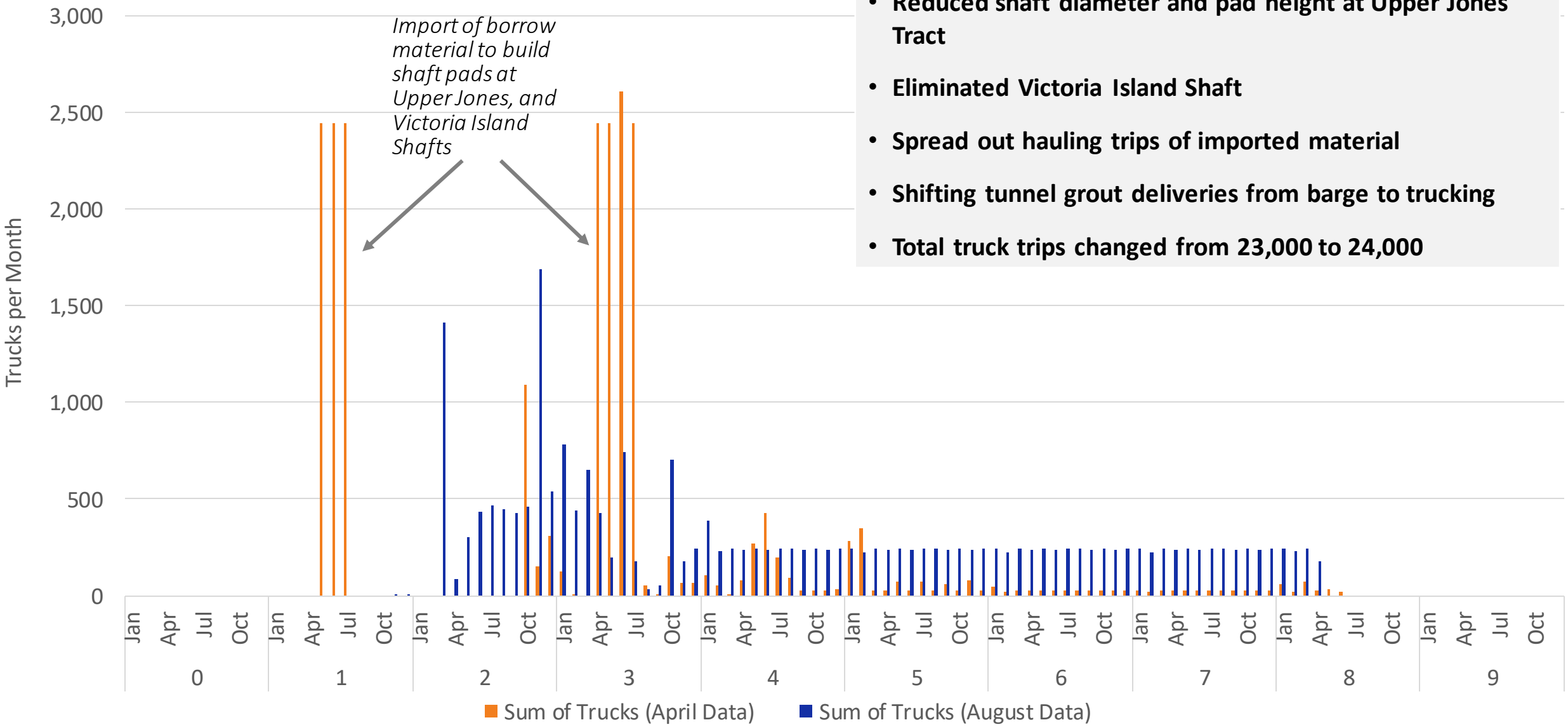
SR-4 (Central Alignment)



CHANGES SINCE APRIL

- **Reduced shaft diameter and pad height**
- **Eliminated Byron Tract Shaft**
- **Extended duration of hauling trips for imported material**
- **Total truck trips reduced from 34,000 to 18,000**

SR-4 (Eastern Alignment)



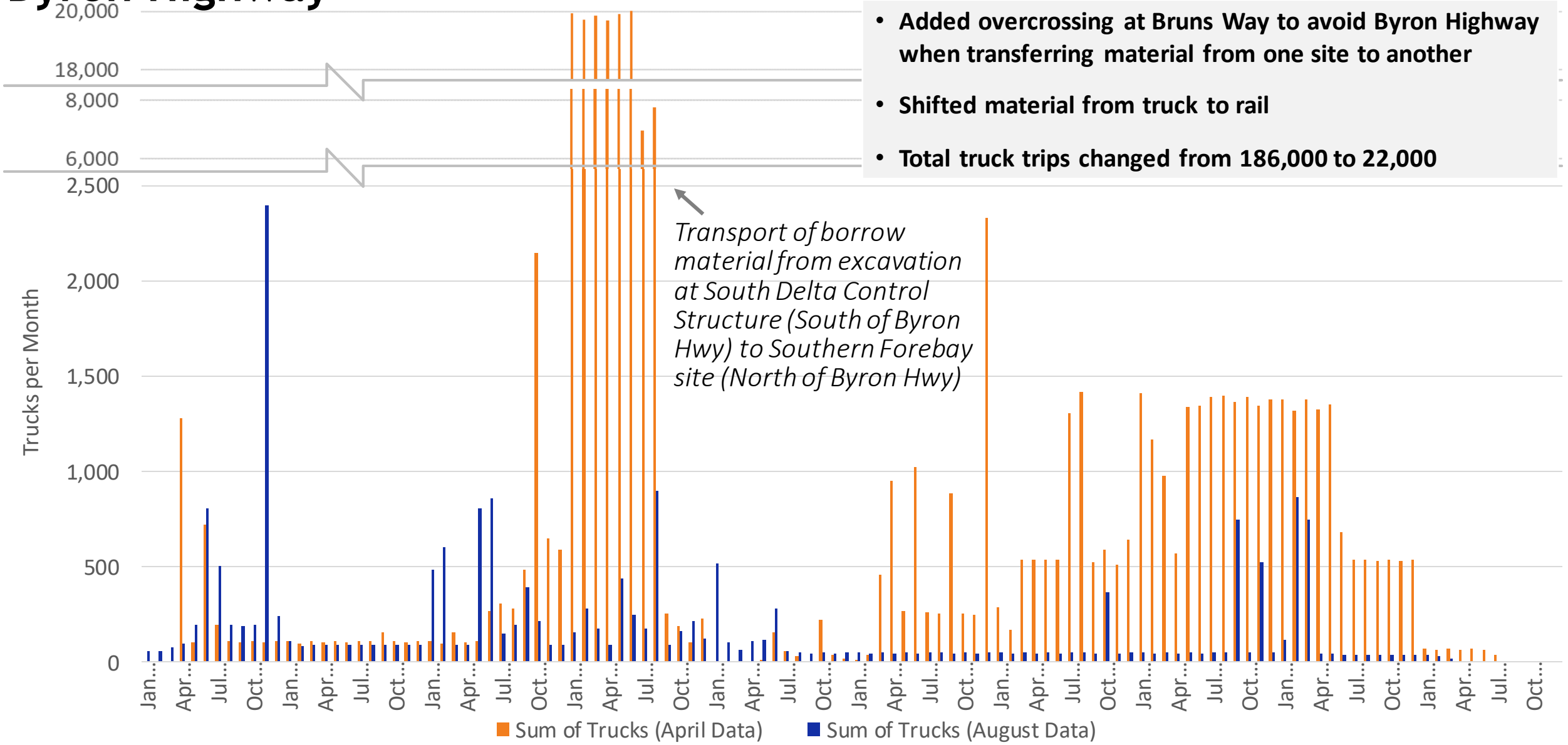
CHANGES SINCE APRIL

- **Reduced shaft diameter and pad height at Upper Jones Tract**
- **Eliminated Victoria Island Shaft**
- **Spread out hauling trips of imported material**
- **Shifting tunnel grout deliveries from barge to trucking**
- **Total truck trips changed from 23,000 to 24,000**

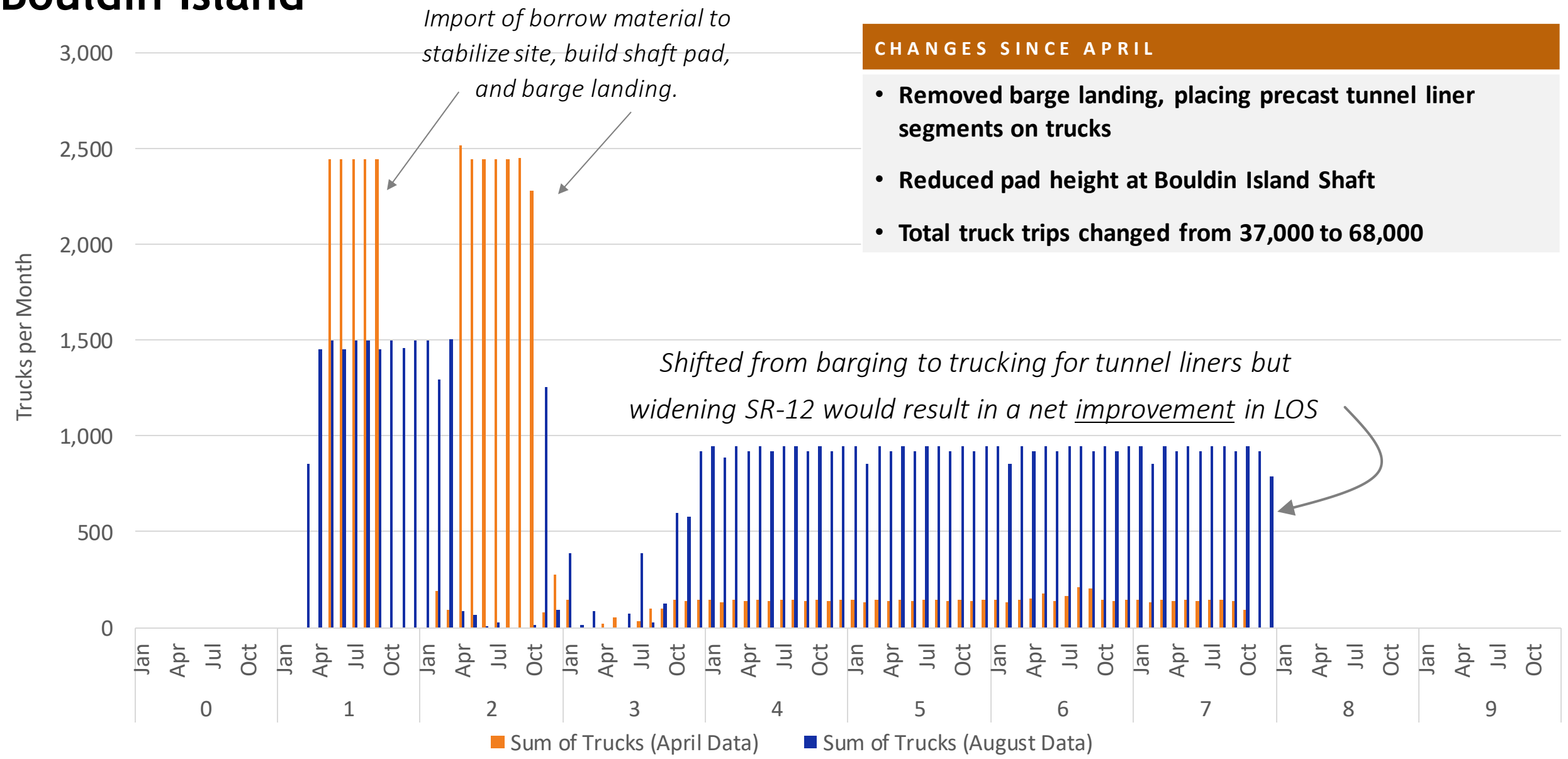
Byron Highway

CHANGES SINCE APRIL

- **Added overcrossing at Bruns Way to avoid Byron Highway when transferring material from one site to another**
- **Shifted material from truck to rail**
- **Total truck trips changed from 186,000 to 22,000**



Bouldin Island



CHANGES SINCE APRIL

- **Removed barge landing, placing precast tunnel liner segments on trucks**
- **Reduced pad height at Bouldin Island Shaft**
- **Total truck trips changed from 37,000 to 68,000**

Traffic Update Summary

Throughout Delta:

- ✓ Reduced shaft diameter and pad heights

Intakes

- ✓ Increased size of basins to balance borrow material to avoid imports

Hwy 12 (Central)

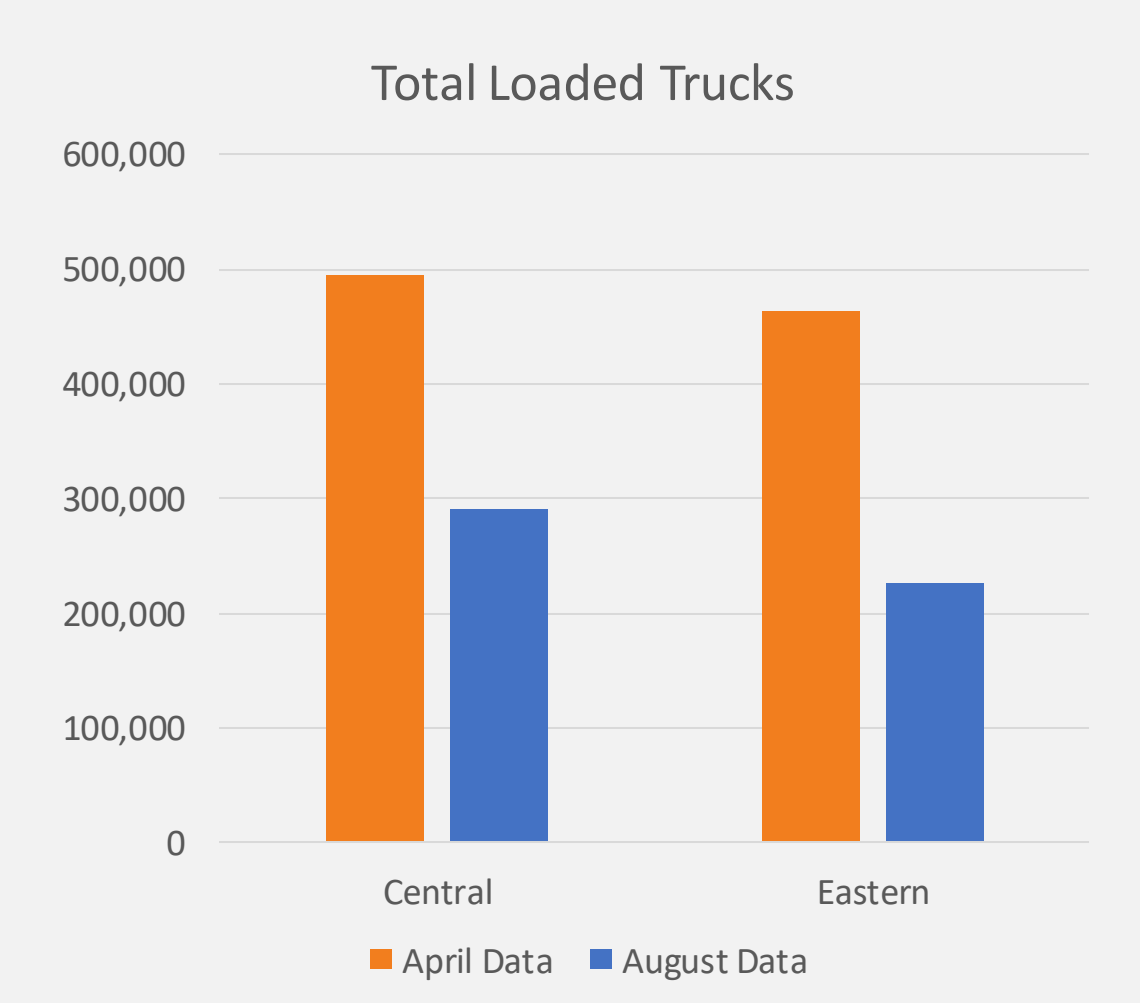
- ✓ Expand to 4 lanes to facilitate increased truck traffic

Hwy 4 (East and Central)

- ✓ Eliminated shafts and reduced borrow material transport for shaft pad construction

Byron Hwy (East and Central)

- ✓ Maximized use of rail transport where spurs were included
- ✓ Construct temporary bridge over Hwy to avoid use for materials transport



Net change in total truck counts reflecting design changes and corrections.

Item 4e.

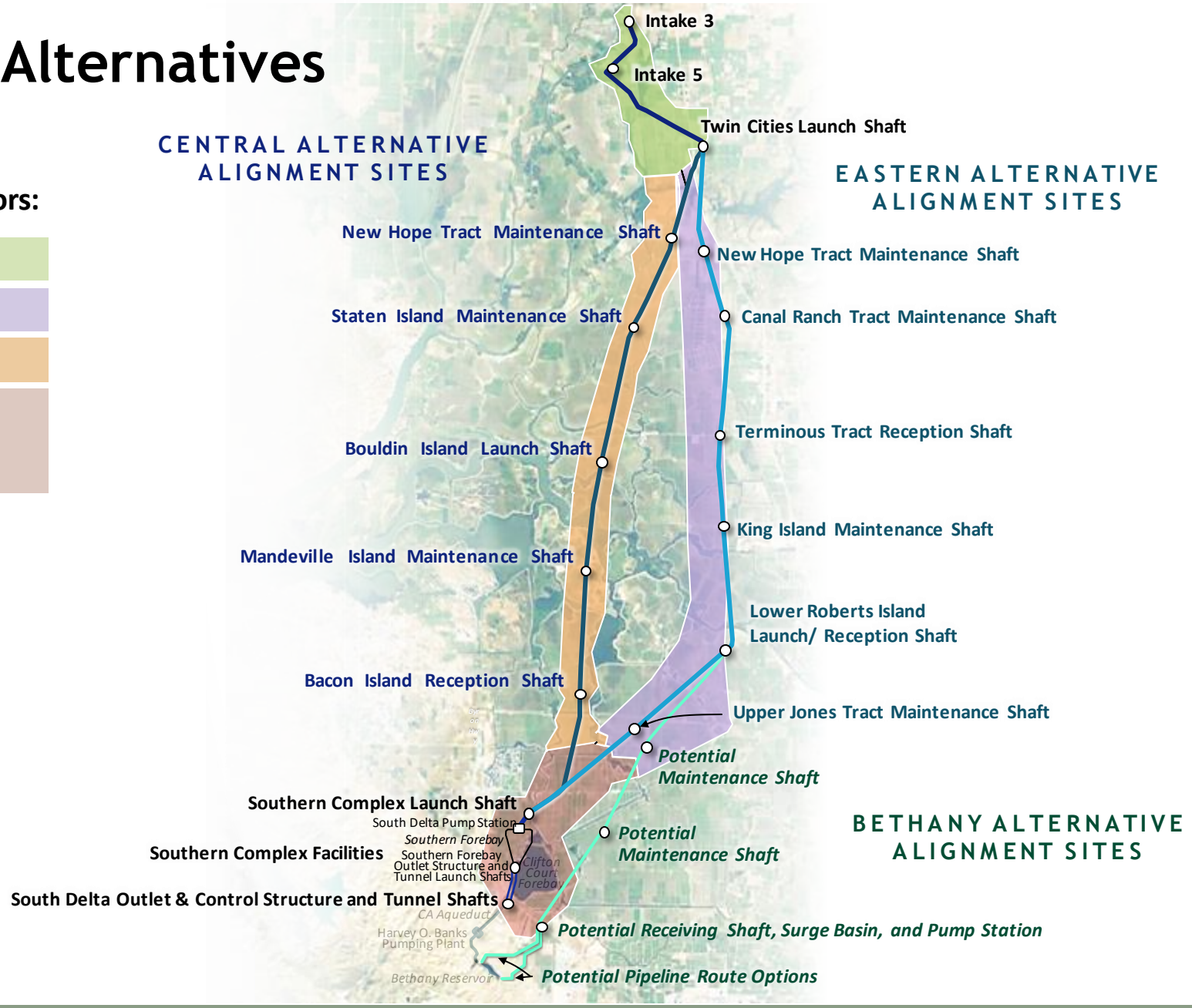
Briefing on Bethany Alternative

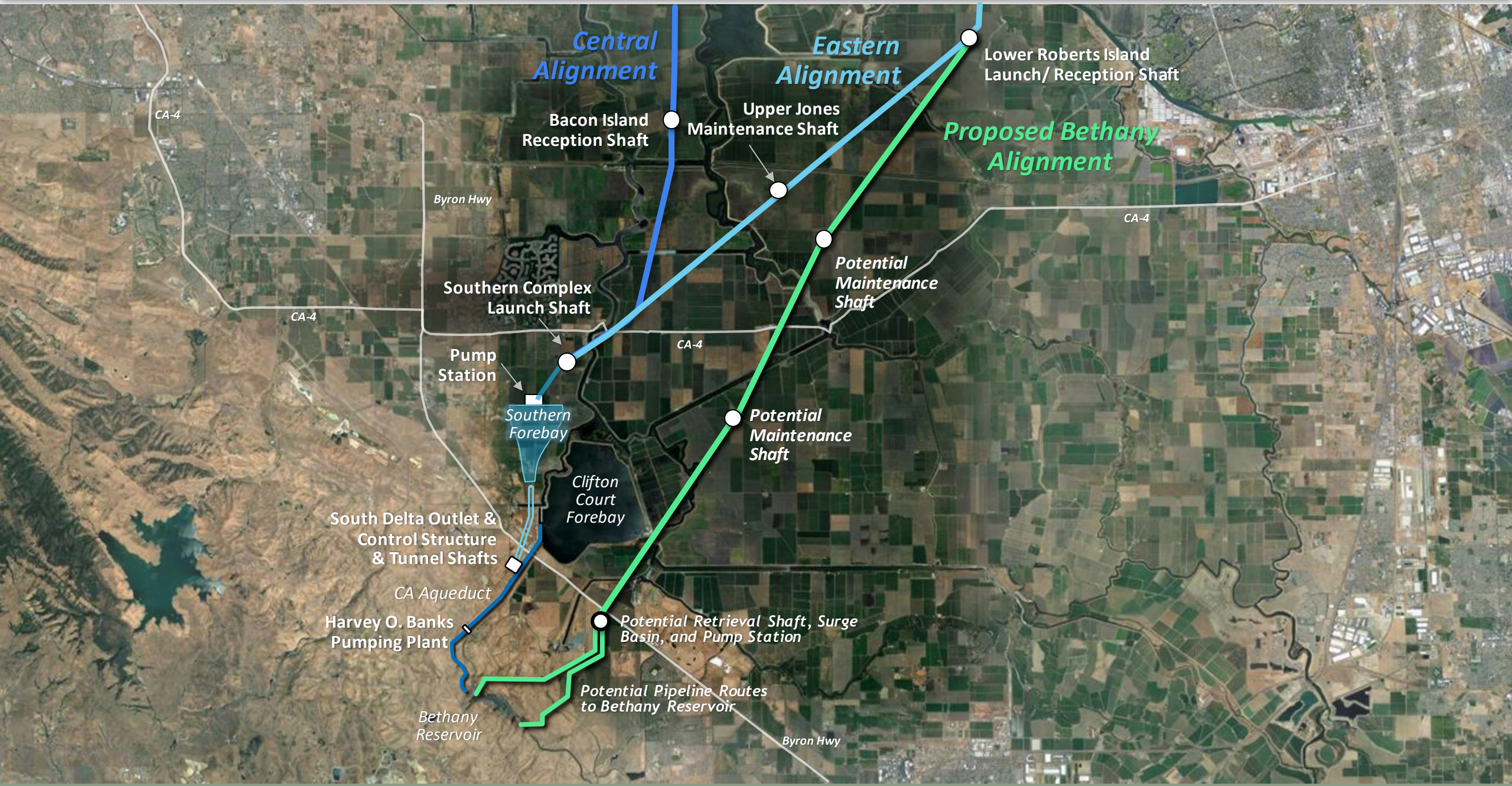
Phil Ryan, DCA Engineering Manager

DWR Assigned Alternatives

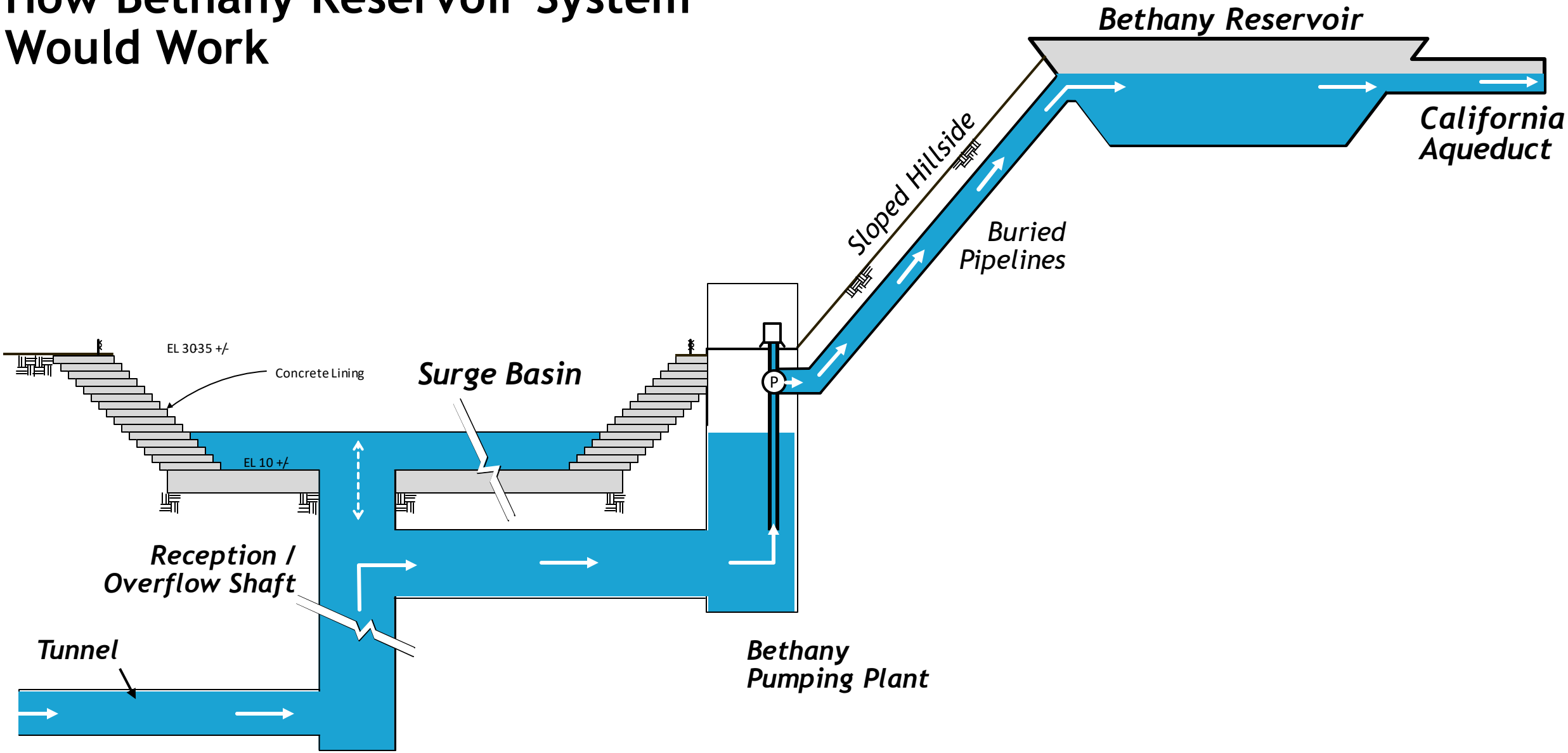
Initial Scoping NOP Corridors:

- Intakes and North Tunnels
- Eastern Tunnel Corridor
- Central Tunnel Corridor
- Pump Station, Southern Forebay and South Delta Conveyance



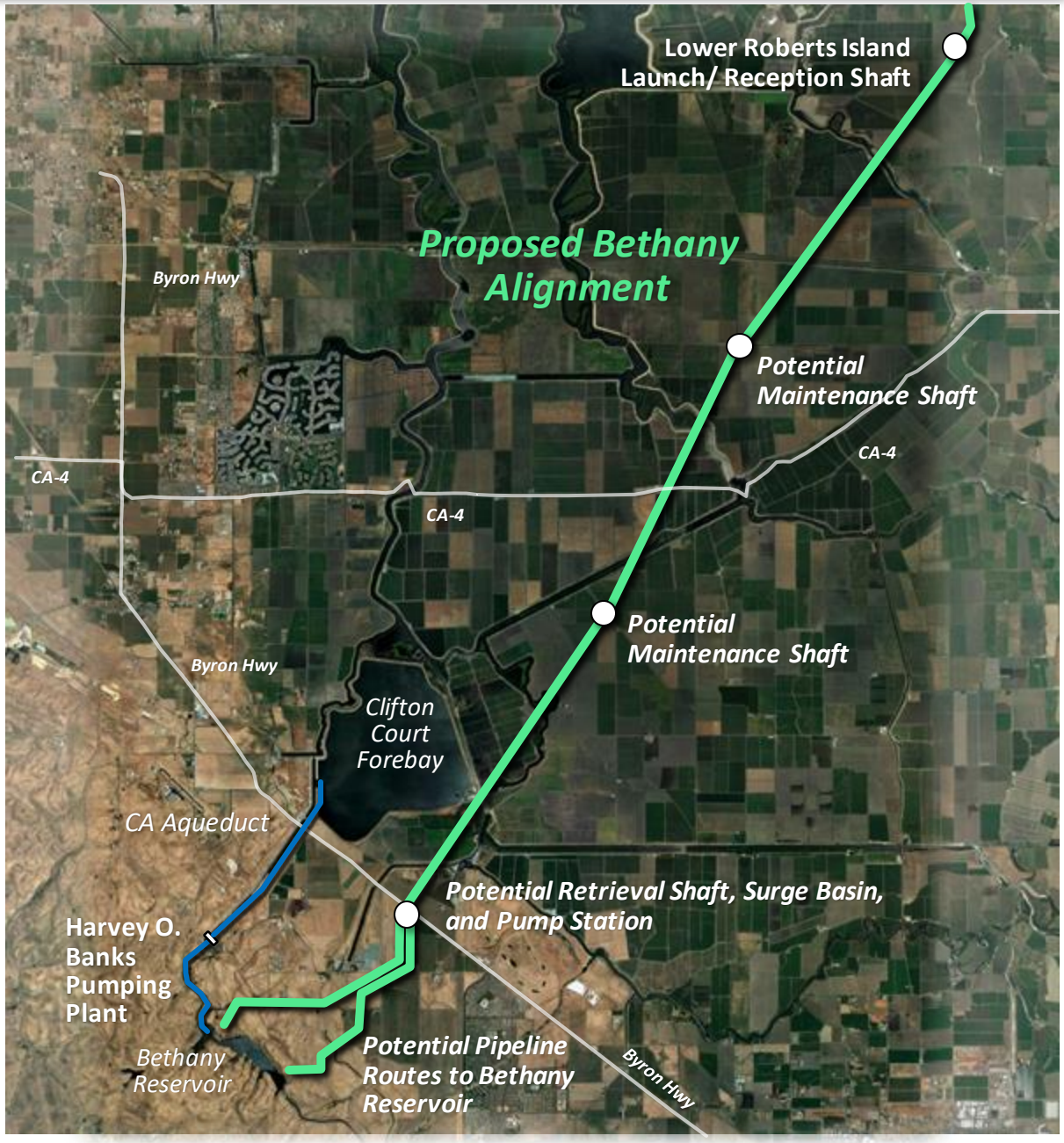


How Bethany Reservoir System Would Work

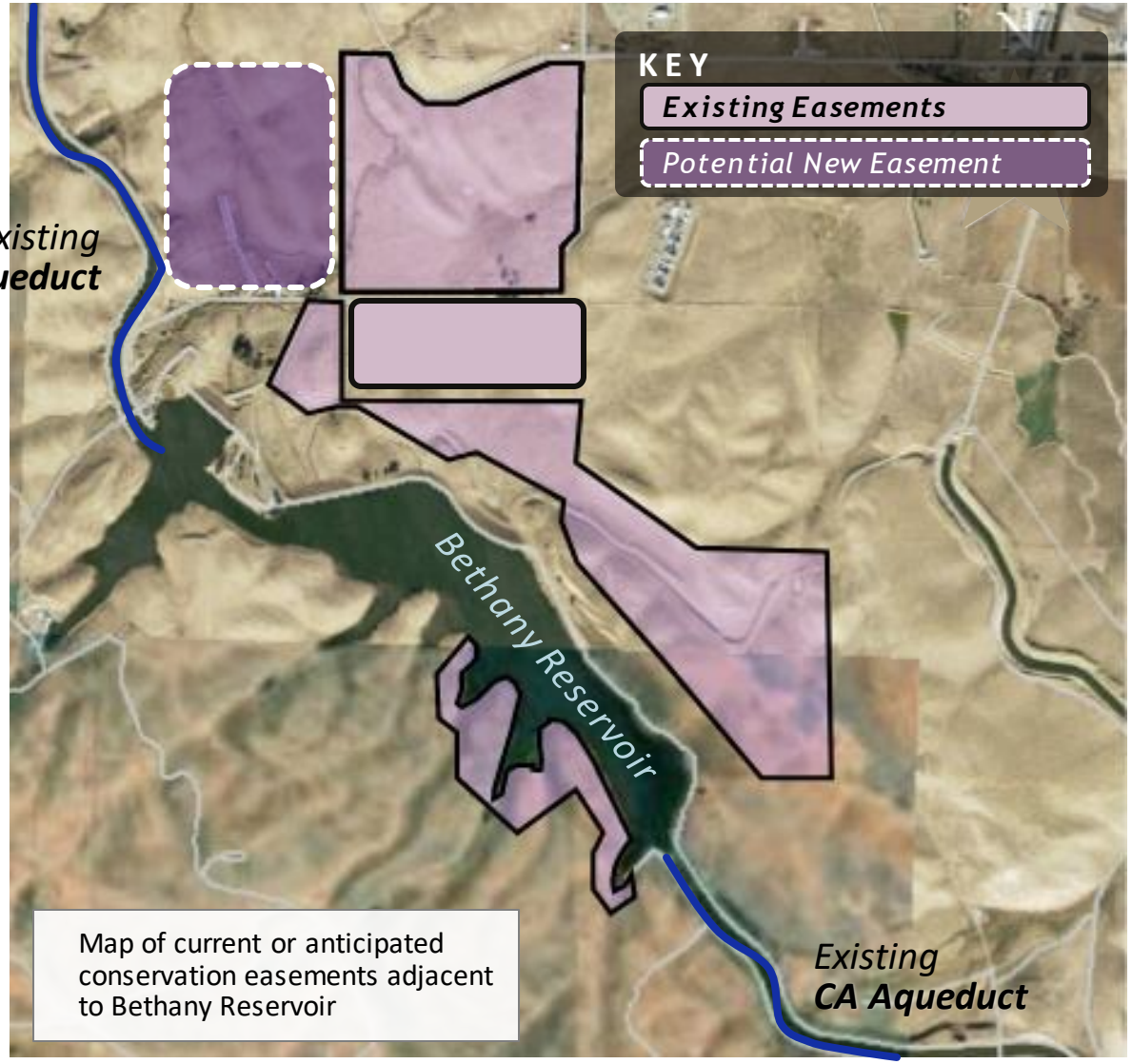


Benefits of Bethany Reservoir Option

- Eliminates the need for a new balancing reservoir - Southern Forebay (1,293 acres).
- Connects to the existing State Water Project system downstream of Banks Pump Station providing independence from the existing system to Bethany Reservoir
- Allows the State to more easily take the Banks Pump Station or Clifton Court forebay out of service for maintenance or repair when necessary.



Bethany Reservoir Alternative - Key Challenges



Map of current or anticipated conservation easements adjacent to Bethany Reservoir

- **The discharge pipelines from the pump station to Bethany Reservoir must navigate around and between the existing and potential future conservation easements around Bethany Reservoir.**
- **Without the Southern Forebay in the Bethany Alternative, there is little project need for reuseable tunnel material (RTM). Will need to prepare a new RTM Management Strategy.**
- **There is little available geotechnical data on the underground conditions in the area. What little exists indicates the area contains weak and fractured rock.**

Item 4f.

Public Comment on Item 4

Item 5a.

SEC Tour Updates

Nazli Parvizi, DCA Communications Manager

Item 5b.

September 23rd Meeting Topics

- **Bethany Alternative Updates**
- **TBD**

Item 5c.

September 17th
SEC Report to DCA Board

Item 6

Non-Agendized SEC Questions or Comments

Item 7.

Public Comment on Non-Agendized Items