

Bull Run
TREATMENT
PROJECTS

*Our water: Safe and abundant
for generations to come*

PORTLAND WATER BUREAU
Bull Run Filtration Project

Site Advisory Group Meeting 8

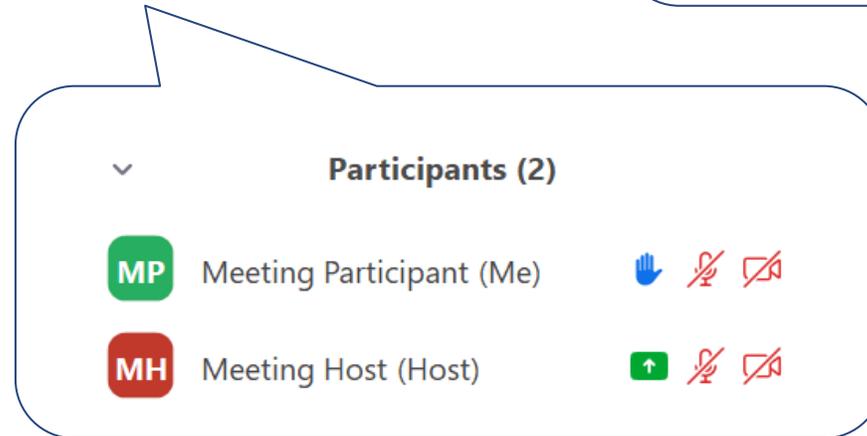
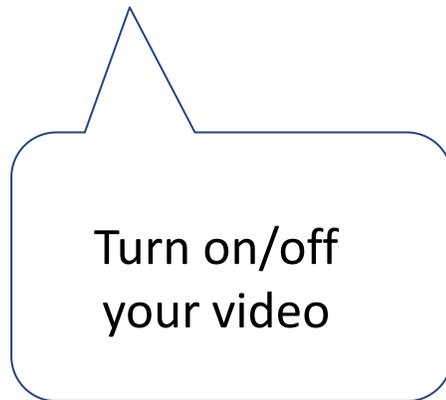
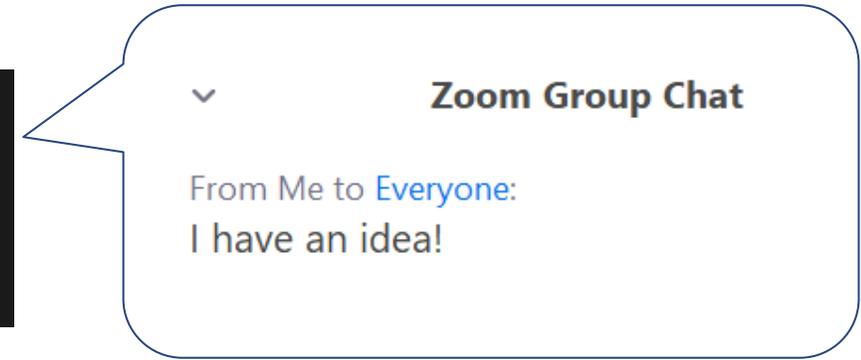


Agenda

1. Introductions
2. Project Update
3. Site Access Alternatives
4. Site Edges and Buffers Design Considerations
5. Next Meeting

Conference call meeting tips

Using the Zoom tool bar, you can:

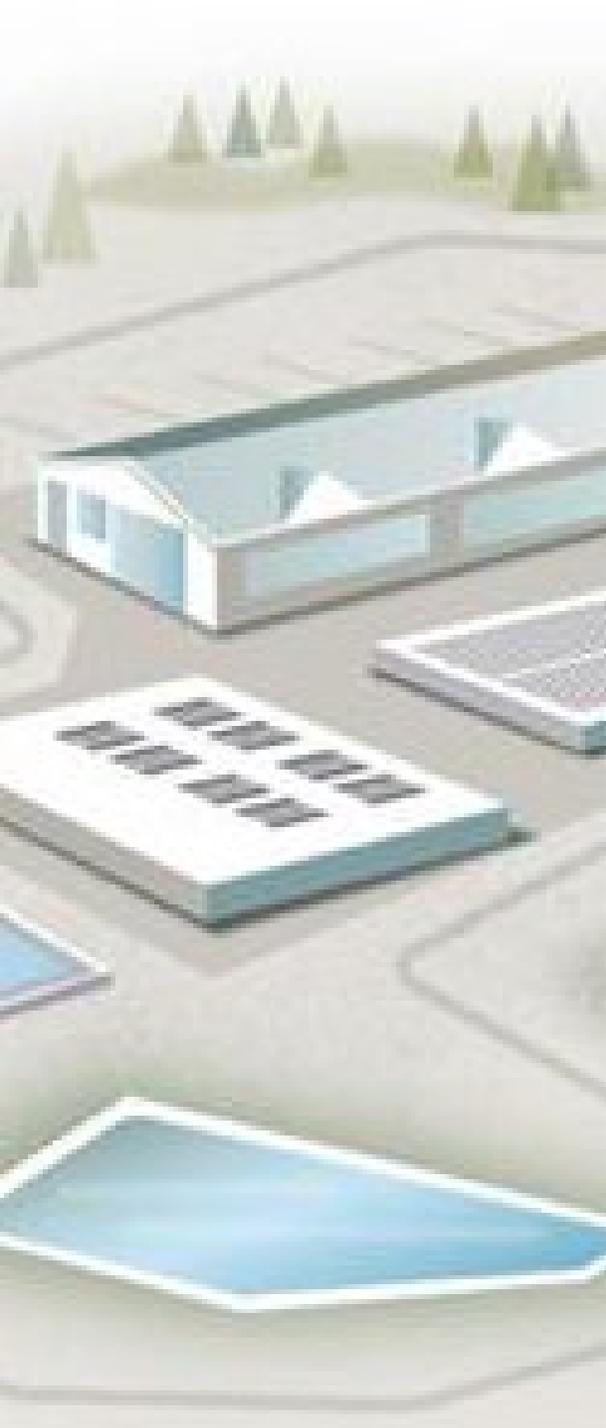


✓ We'll post the meeting recording on the website with a summary

Who's on the line?



- Introduce yourself
- What's your favorite stay-at-home activity?

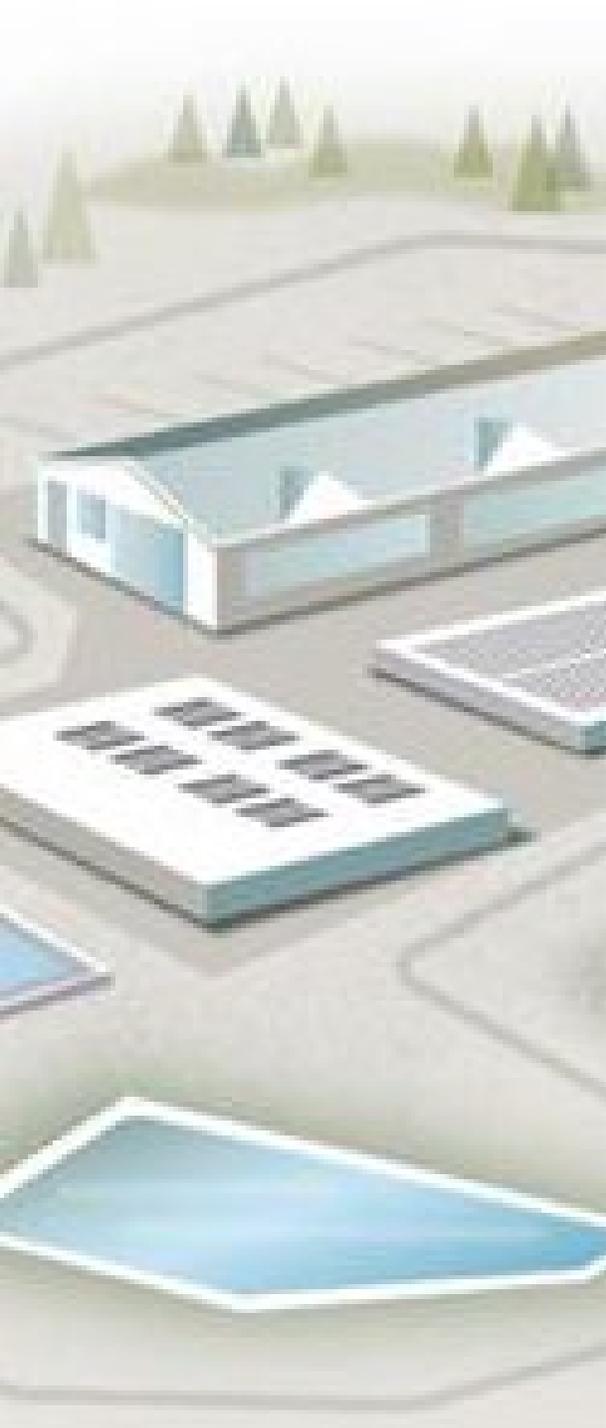


Project Update

- Submitted application for WIFIA financing in April
- Using recent field investigations to support planning for new pipelines
- Continuing design work for filtration facility, including integrating Site Advisor input into the design process

Your input is shaping our meeting roadmap

	Advisors	Community	Total
Traffic (Site Access)	14	18	32
Light and Noise	11	11	22
Chemicals	10	12	22
Wildlife and Environment	11	7	18
Facility Size and Appearance	12	2	14
Landscaping	7	2	9
Communications	3	2	5
Property and Infrastructure	1	2	3



Site Access Alternatives

Mark Graham

We completed a preliminary traffic impact analysis for ongoing facility operation

Goal

- Select suitable access for facility operation that limits impacts on neighbors and local roads

Evaluation Process

- Used transportation and county standards to analyze potential traffic impacts related to different site access alternatives
- Used preliminary information to estimate peak hour trips from staff commutes and deliveries
- Looked at safety and capacity of existing local roads



During operation, minimal new traffic is anticipated

Summary of Anticipated Average Daily Weekday Site-generated Trips									
	7 - 9 a.m. Peak Hour			4 - 6 p.m. Peak Hour			Off-Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Facility Operations and Maintenance Staff	16	4	20	4	16	20	0	0	0
Chemical Deliveries and Solids Off-Hauling	3	0	3	0	0	0	0	3	3
Total	23			20			3		

Source: Draft Filtration Facility Overview

Which of the preliminary site access alternatives do you feel is the best option for ongoing operation?

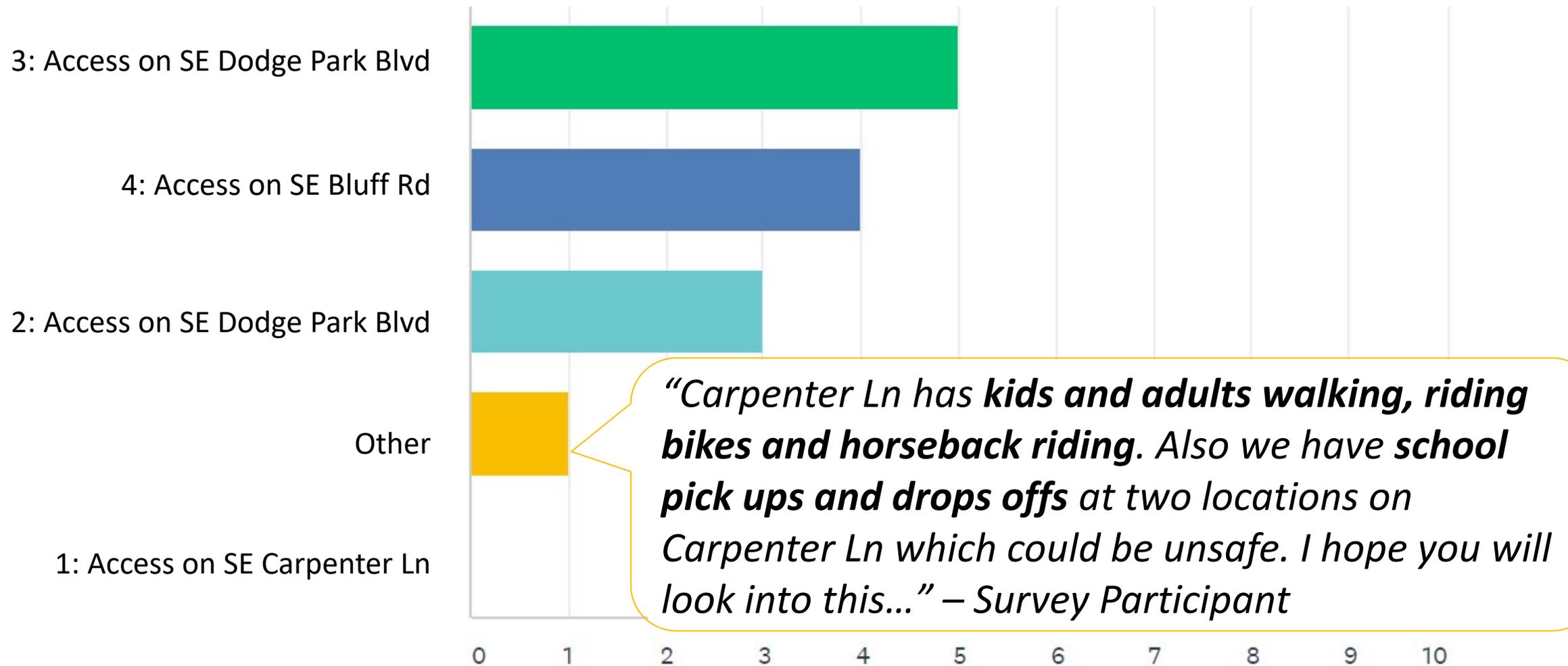


★ = Potential Site Access

Source: Draft Filtration Facility Overview

Site Advisor Input: Best Preliminary Site Access Alternative for Ongoing Facility Operations

Answered: 8 Skipped: 0



Site Advisor comments (survey excerpts)

- *I feel as though Access route #4 is **located too closely to Oregon Trail Academy** and may cause traffic disruptions for the parents and students.*
- ***Dodge Park is the better built road.***
- *They need to be **off of Carpenter Lane** due to residential area.*
- *Stick with the **sites that will not impact us.***
- ***Daily traffic** from nurseries, schools, bikes, residences and utilities.*
- *You want to be a good neighbor, so use access with **least number of residences and businesses** affected...yet offering alternative approaches for delivery of men, machines and supplies.*

For construction, we're evaluating safety and capacity and potential roadway improvement needs

Goals

- Limit potential traffic impacts on neighbors and local roads
- Use community input to develop traffic safety and control measures
- Maintain condition of roads used for site construction access

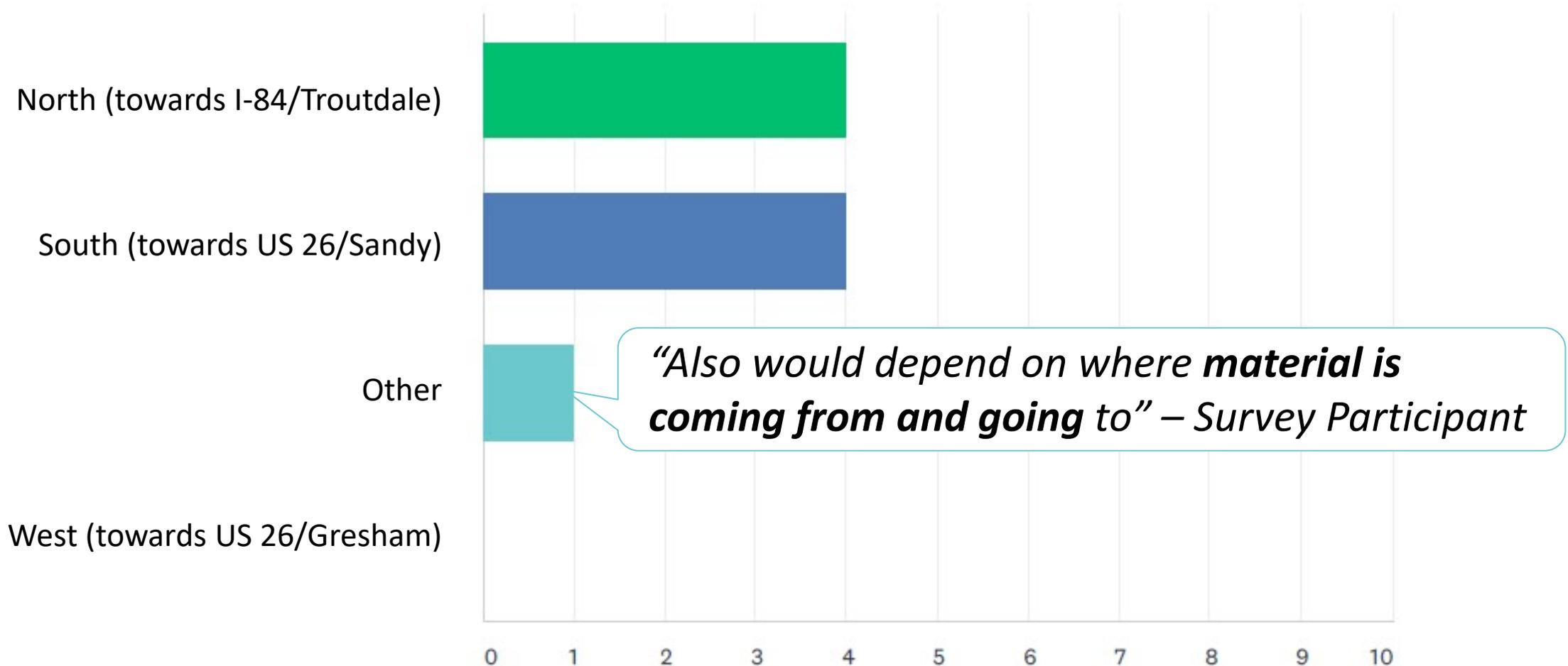
Evaluation Process (ongoing)

- Using design information to better estimate number of truck trips
- Considering scenarios for distributing truck trips over time
- Evaluating site access options and potential off-site improvements



Site Advisor Input: Best Ways to Get Trucks to and from the Site during Construction

Answered: 8 Skipped: 0



Site Advisor Input: Potential Ways to Manage Traffic during Construction

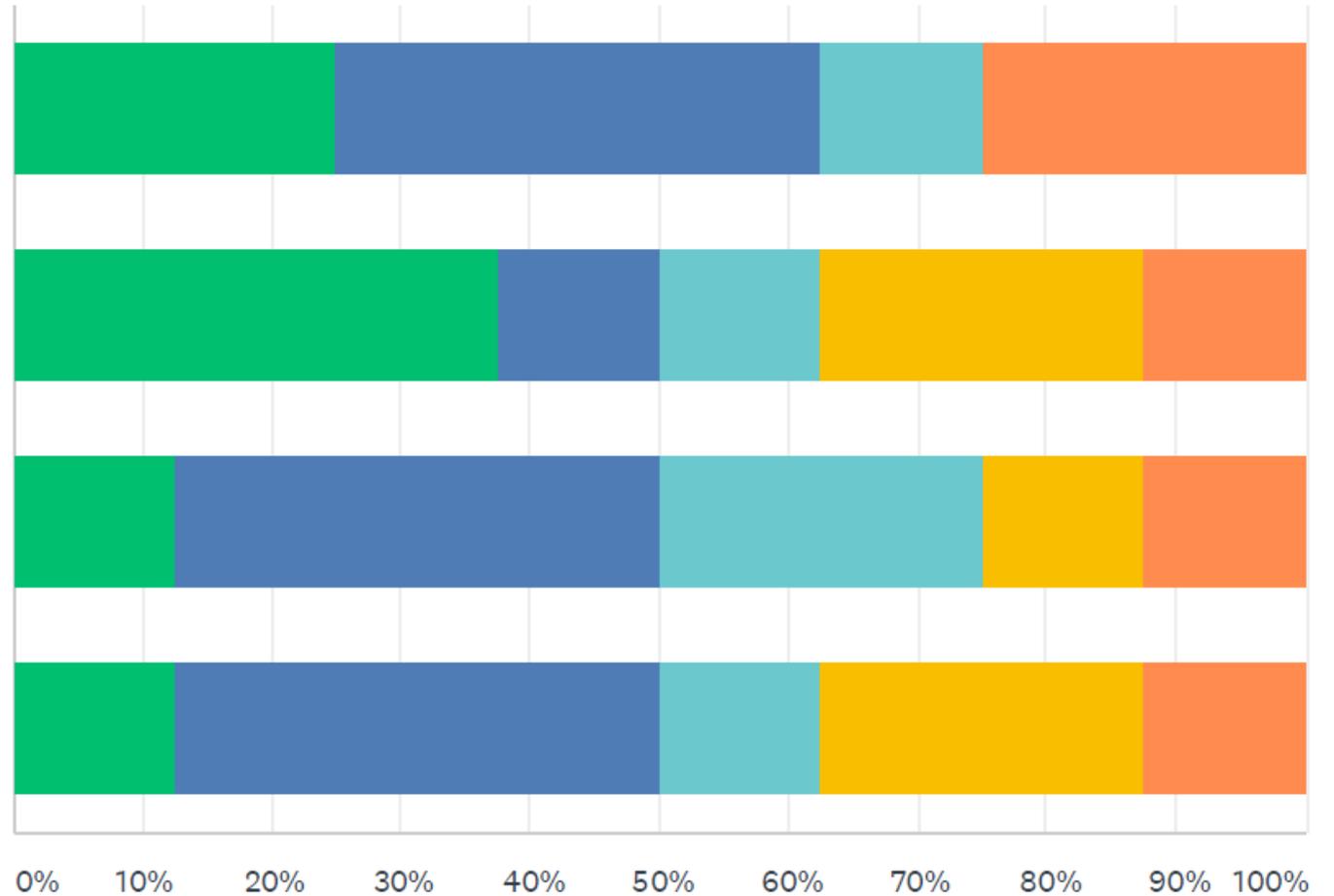
Answered: 8 Skipped: 0

One-way truck traffic is better than two-way

Longer **work days** are better than longer work weeks

Two site access routes for trucks are better than one

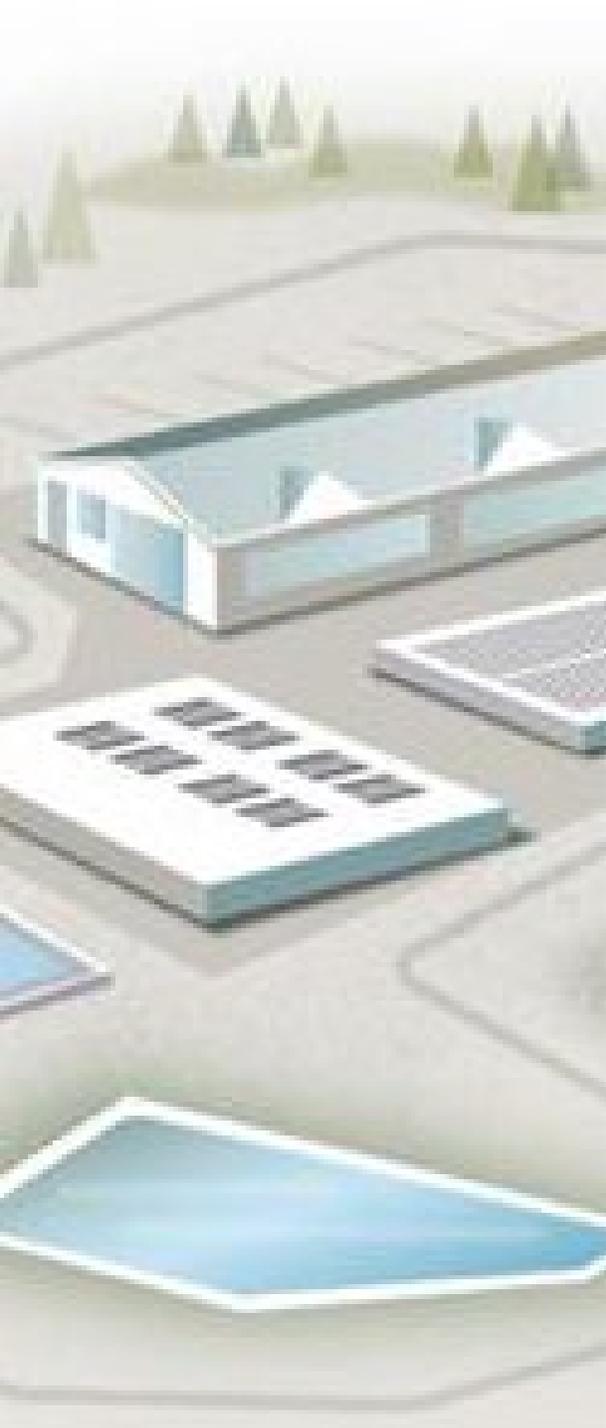
Trucks **using established speed limits** are better than trucks driving slower than other traffic



Absolutely Agree  Absolutely Disagree

Site Advisor comments (survey excerpts)

- *Dodge Park is the best built road for large trucks.*
- *Routes 1, 2 and 3 are already going to be **disrupted due to pipelines.***
- *5 days a week with longer hours would be better than 7 days with less hours. Area needs a **break from heavy trucks on weekends.***
- *Trucks should **maintain speed limits for areas.***
- *I have seen **trucks on Cottrell** and they could care less about laws one almost ran me down a few years ago.*
- *The 2nd site access route should be **a backup only**, in case of closure of the primary.*
- *The traffic study did not take into consideration **residential areas, bus stops and supposed 55mph** on streets that have schools along their length, as well as physical condition of roads currently.*

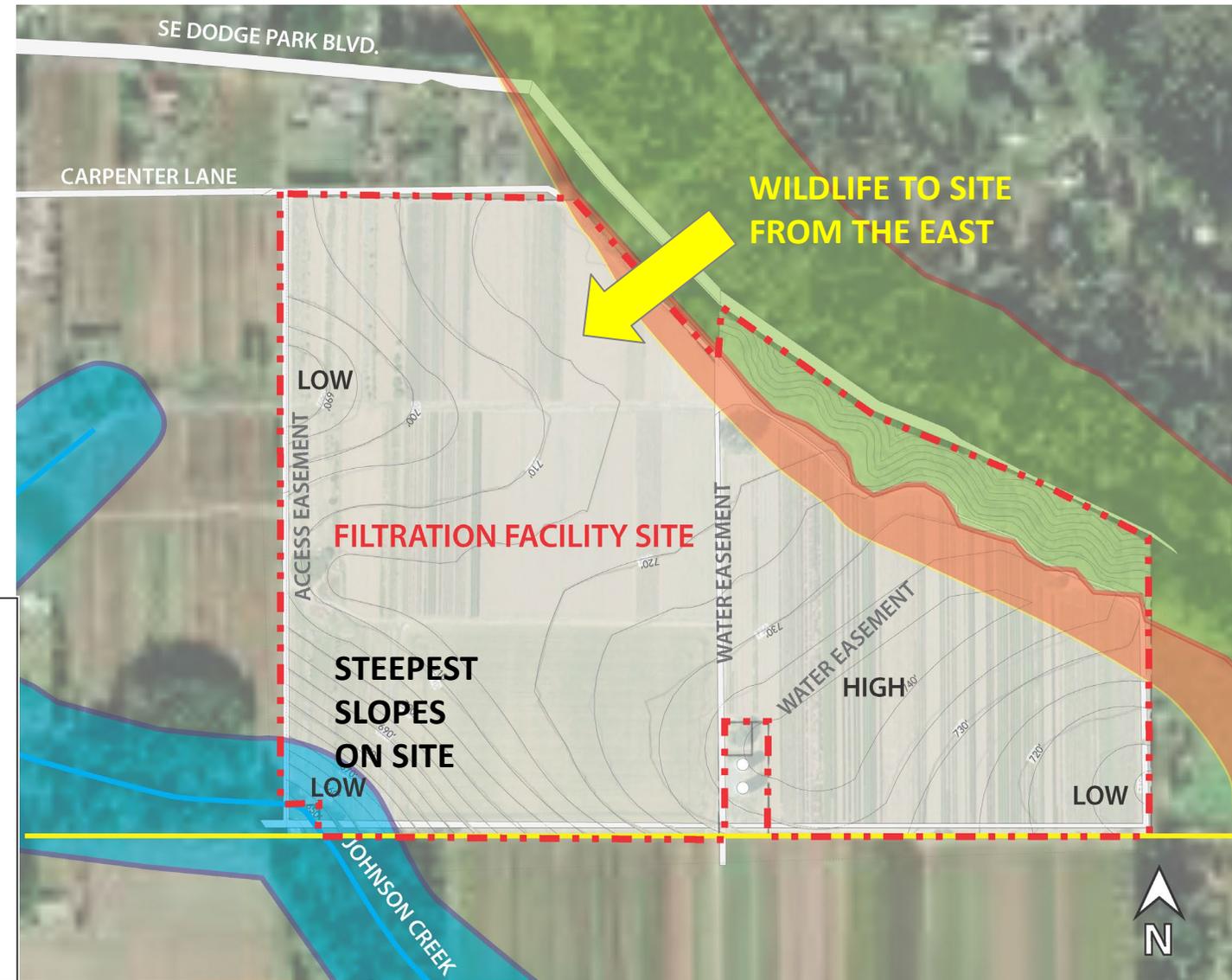
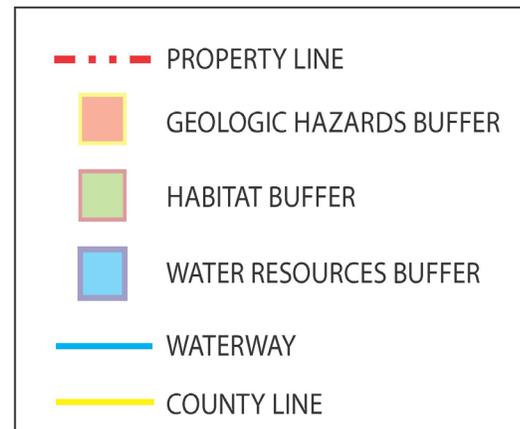


Edges & Buffers Design Concepts

Casey Hagerman, Jason Hirst, and Ben Ngan

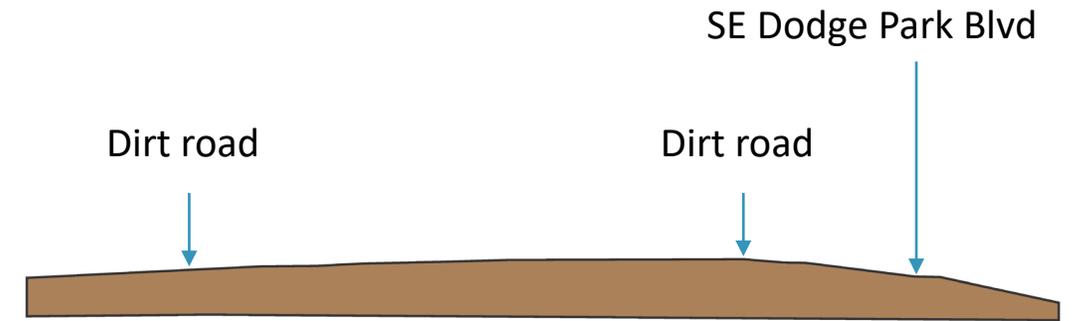
Existing Site Conditions and Observations

- Approx. 95 acres
- Buffers for habitat, geologic hazards, and water resources areas
- Property line setbacks:
 - 30' from north
 - 20'-25' from east and west
 - 30' from south

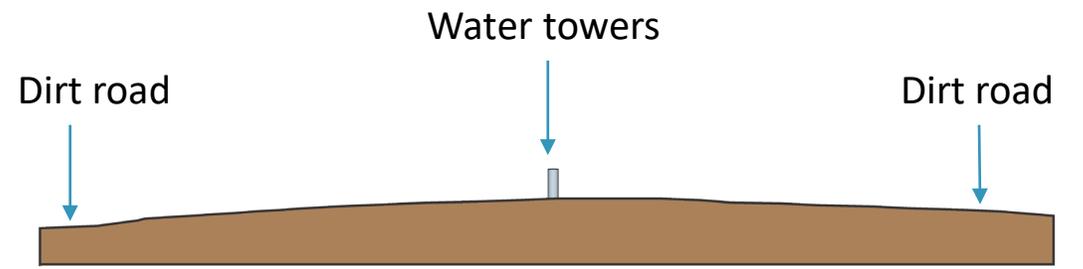


Existing Site Conditions: Topography

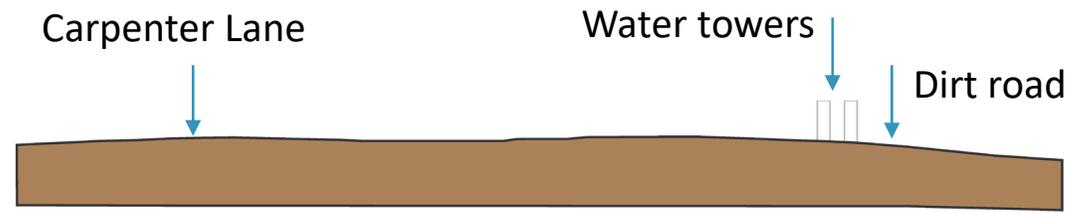
High and low areas (elev. 740'-645')



SECTION B-B



SECTION A-A



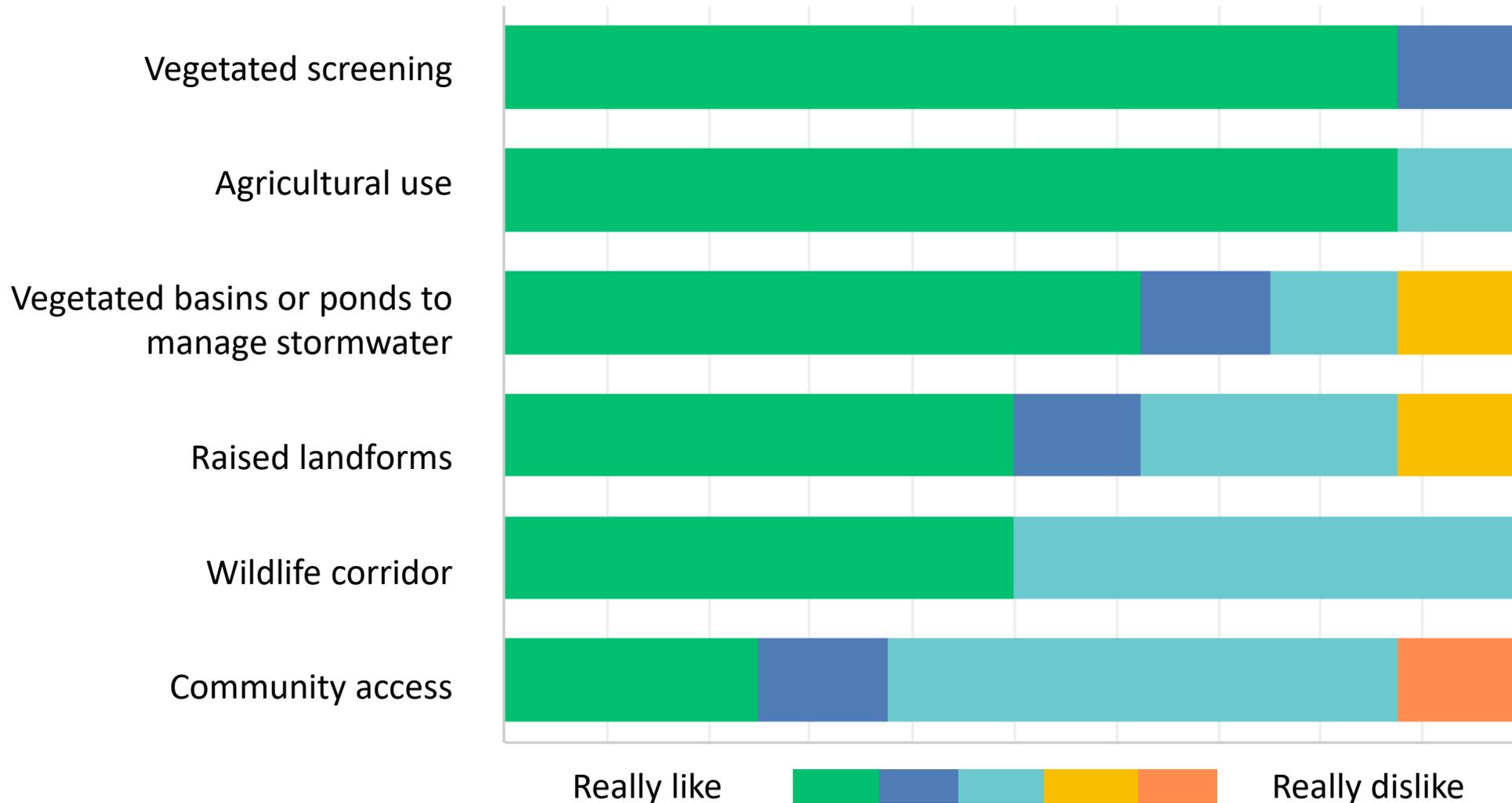
SECTION C-C

Existing Site Conditions: Views Into the Site



Site Advisor Input: Edges & Buffers Preferences

Answered: 8 Skipped: 0



Edges & Buffers Concepts: Different Features for Different Edges

West Edge

- Natural **vegetation** in riparian areas and uplands
- **Landform** shaping to screen facility while keeping distant view lines open from the west

South Edge

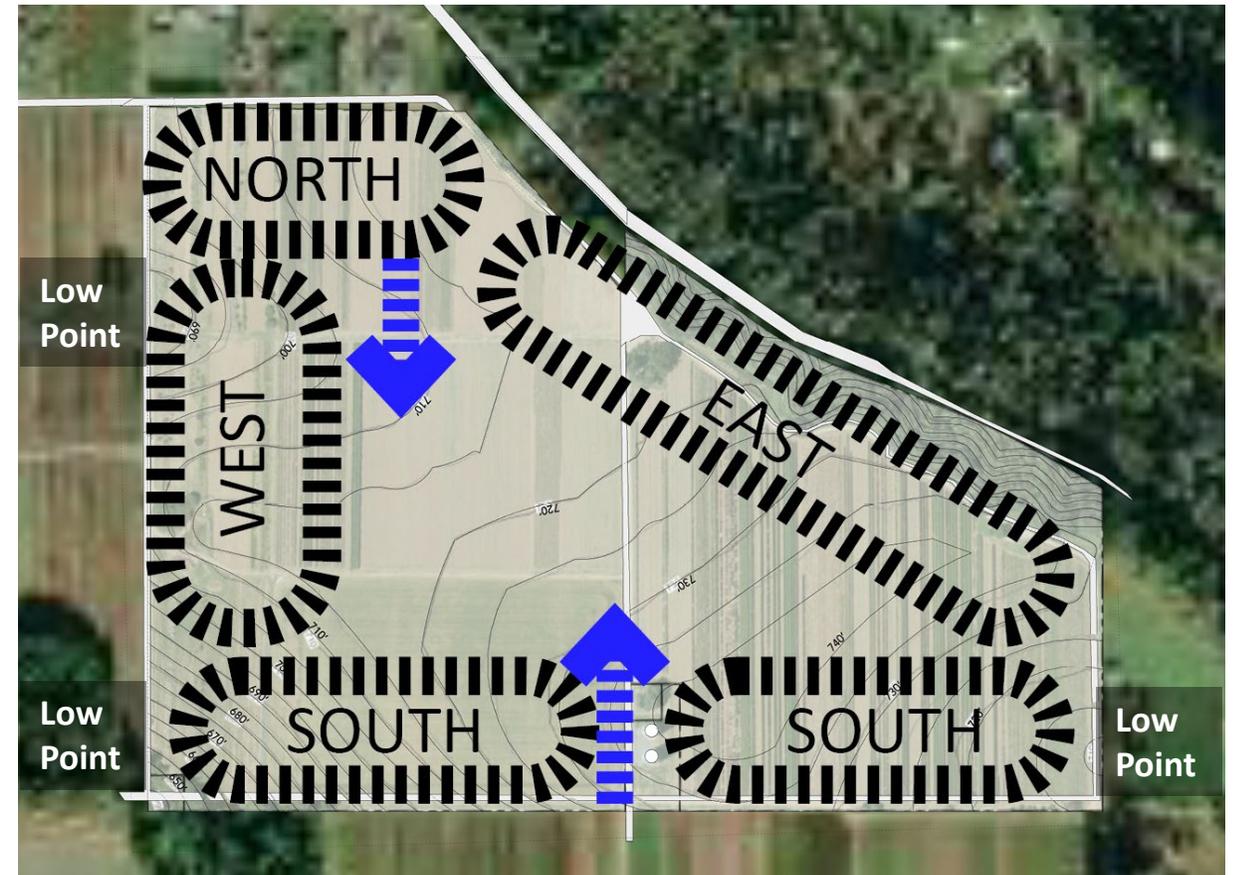
- **Agriculture use** like property to the south
- Excavated **basins or ponds** with vegetation to manage stormwater at low points
- Site **entry development** for Bluff access option

East Edge

- Natural **vegetation** and slope to the east
- Could include **agricultural use**

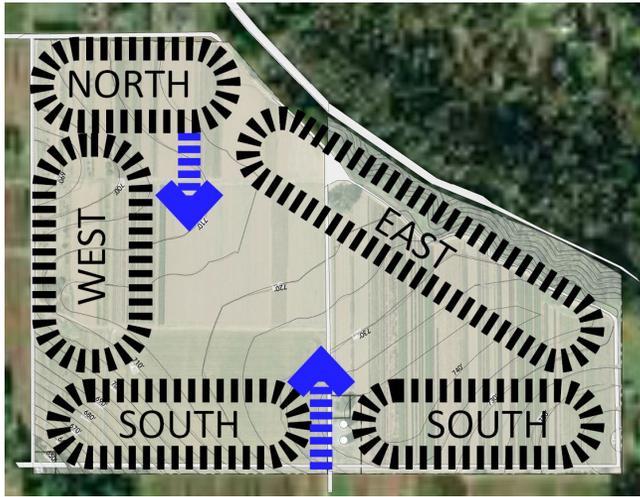
North Edge

- Could include **agricultural use**
- Site **entry development** for northern access option
- Keep distant **view lines** open from the north



Blue arrows show potential access alternatives

Site Advisor Input: Different Edges Preferences

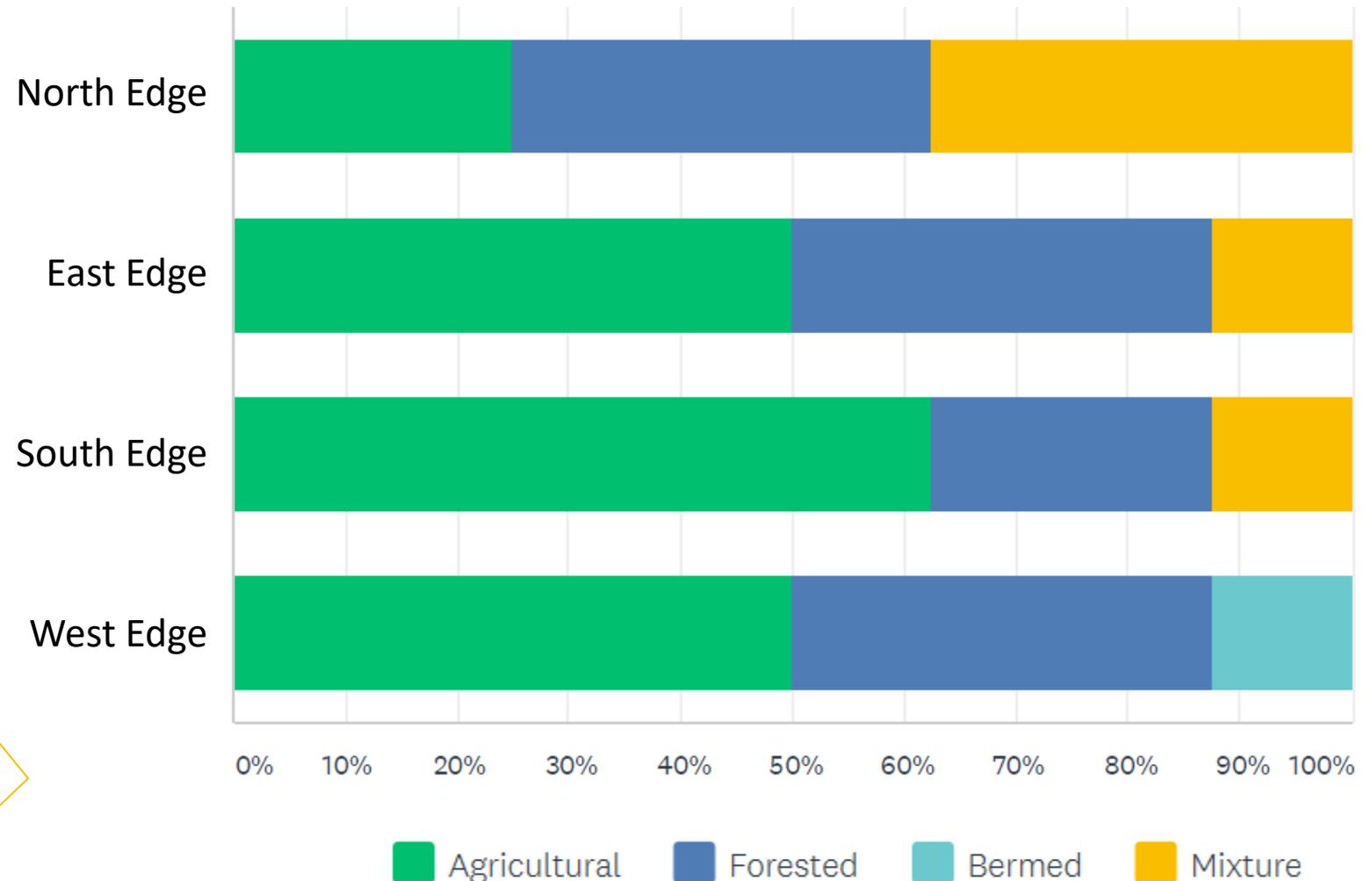


*“Any agriculture should be in contiguous blocks that provide are practical to farm viably. **Otherwise forested.**”*

For West: “Bermed, tiered landscape and some agricultural.”

– Survey Participants

Answered: 8 Skipped: 0



Edges & Buffers Concepts: Raised Landforms

Potential Types

- Berms that reuse soil excavated during construction
- Low stone retaining walls that help secure the site while maintaining views

Potential Benefits

- ✓ Screen views of facility
- ✓ Help reduce noise
- ✓ Provide natural setting for plantings
- ✓ Help with site security



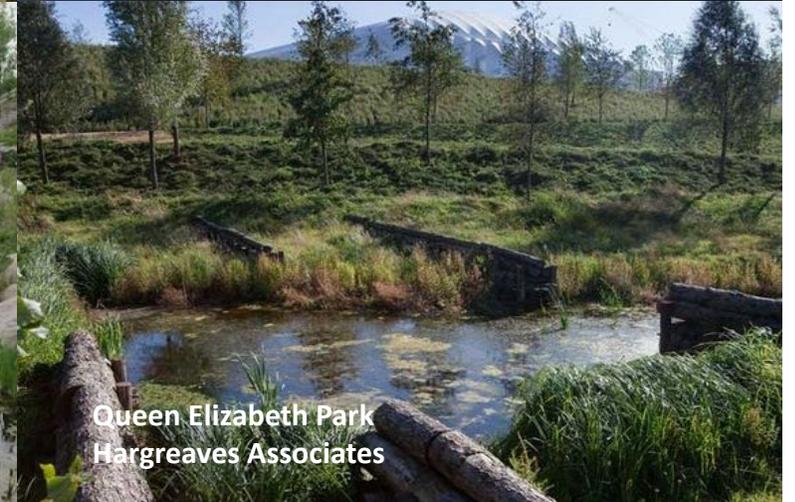
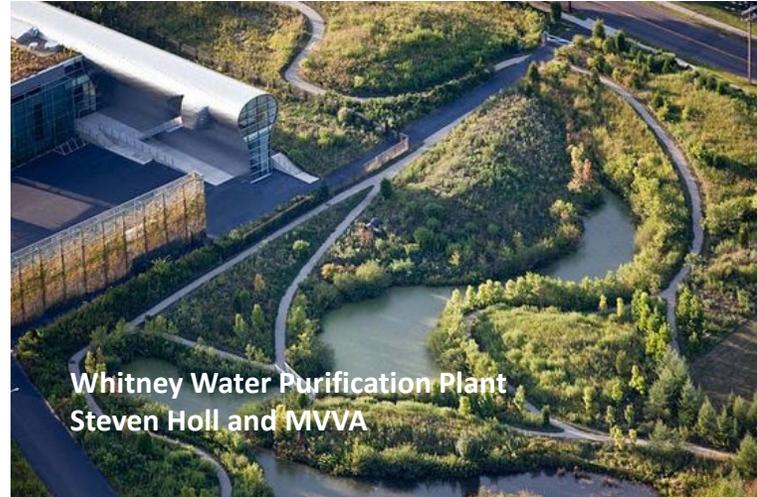
Edges & Buffers Concepts: Stormwater Management

Potential Types

- Excavated basins or ponds with vegetation to help manage stormwater

Potential Benefits

- ✓ Abundant trees and riparian plant species create habitat
- ✓ Trees can help keep water temperature low



Edges & Buffers Concepts: **Vegetated Screening**

Potential Types

- Oak Savanna
- Forest and understory
- Orchard style planting
- Line of trees and hedges with open field

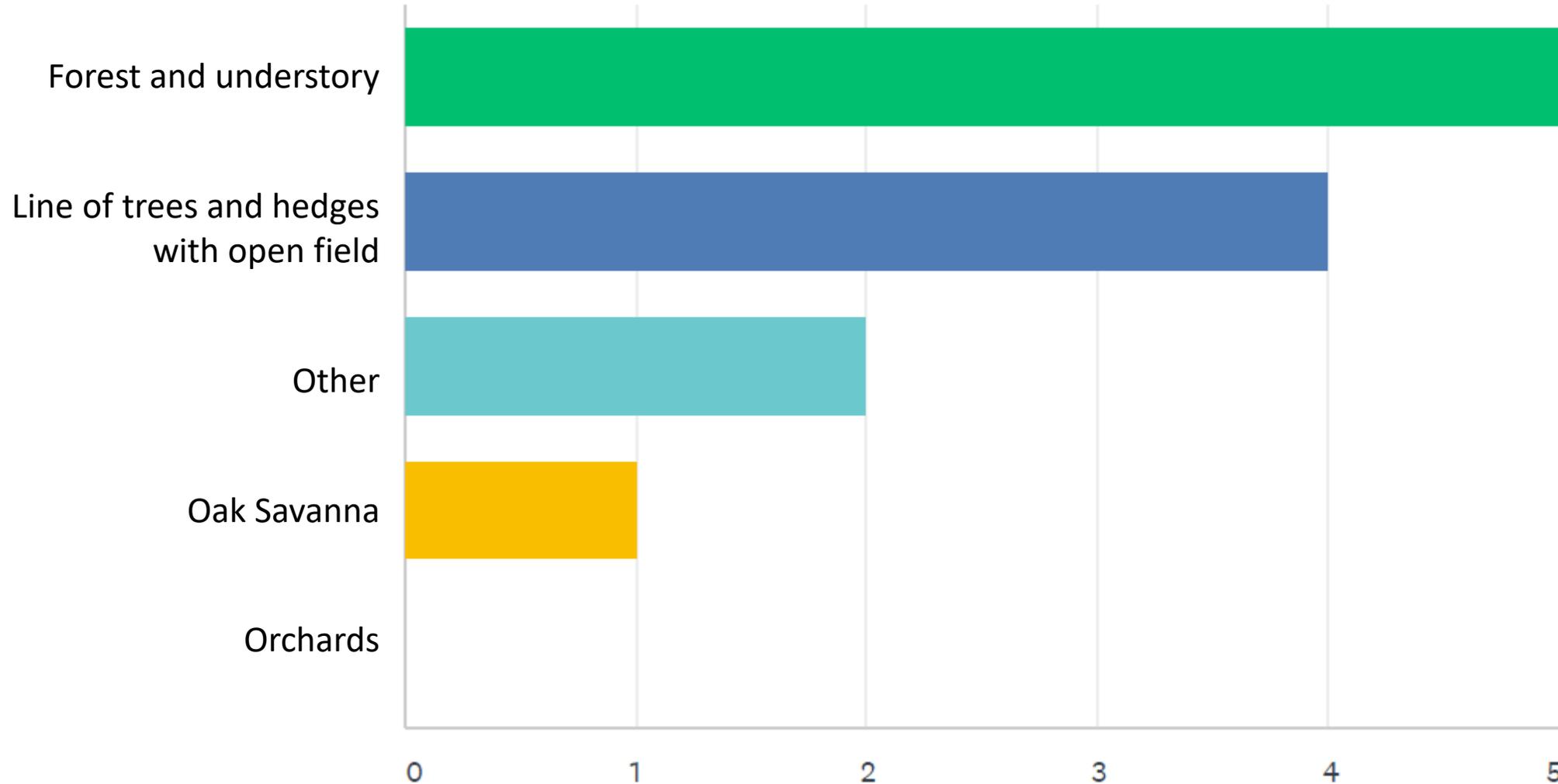
Potential Benefits

- ✓ Creates natural look
- ✓ Helps screen views of facility
- ✓ Provides habitat
- ✓ Plantings can be agricultural (orchards and hedgerows)



Site Advisor Input: Vegetated Screening Preferences

Answered: 8 Skipped: 0



Site Advisor Input: Vegetated Screening Preferences (other category)

*“I can envision a **combination of berm hedges with orchard** then open field for east side. **Forestry** and understory for north side. **Oak savanna** for southwest corner, though oak is not native to the area (substitute **dogwood and maple or birch** - low height/canopy) West end would be agricultural (**nursery stock** followed by hedge then berm - west to east direction.”*

*“Any screening vegetation should **match the native forest, forest edge, or meadow vegetation** that would occur naturally in the area as far as possible. That will minimize maintenance and water use, and provide the best **habitat for pollinators, birds and other wildlife**. Restoring **oak savanna would be great**, but the feasibility of this would need to be looked at carefully - to make sure the site conditions are suitable, and what disturbance/management regime would be necessary to keep it from turning into forest over time.”*

– Survey Participants

Edges & Buffers Concepts: Agricultural Uses

Potential Types

- Leased for growing nursery stock
- Demonstration of nursery gardens or food crops
- Production of food crops
- Small animal grazing

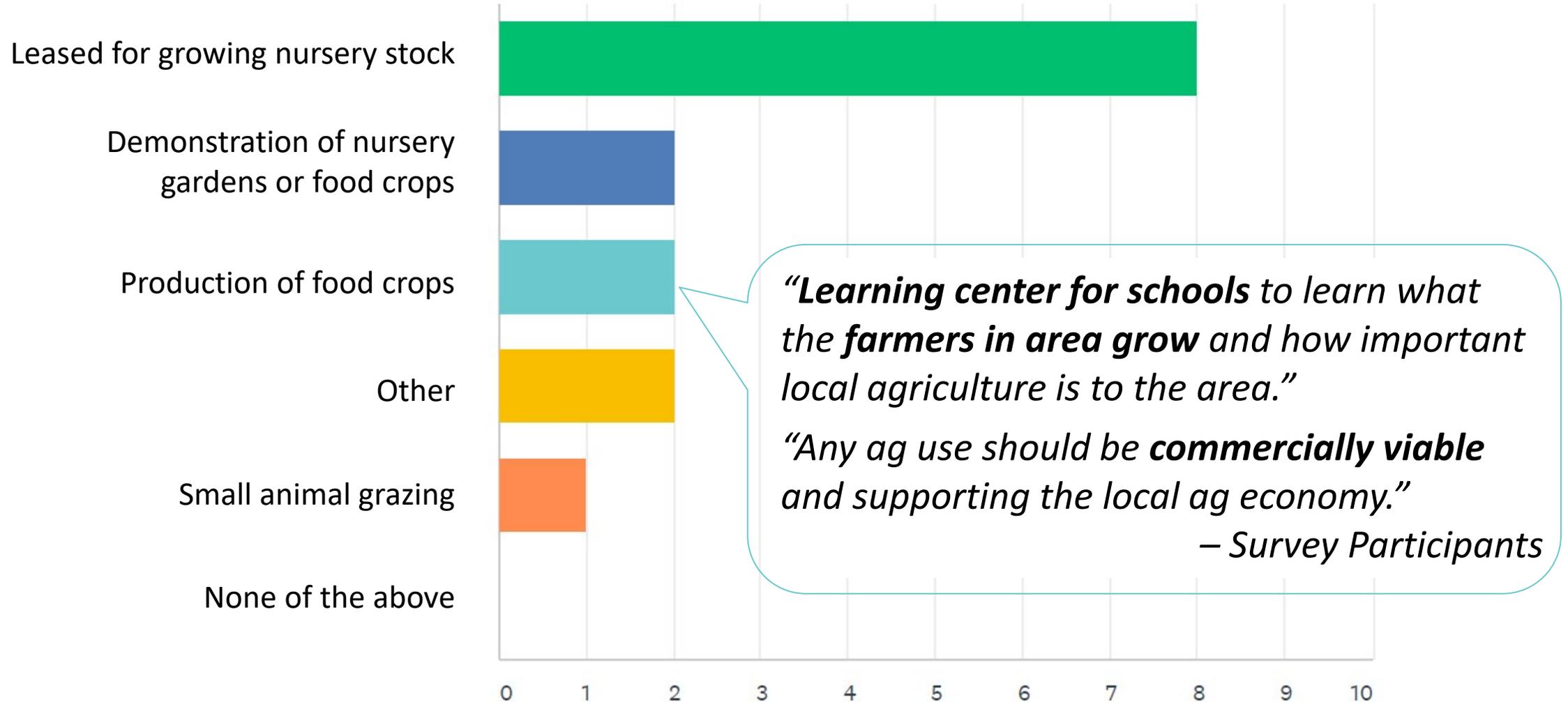
Potential Benefits

- ✓ Serves as a community resource
- ✓ Complements neighboring properties



Site Advisor Input: Agricultural Uses Preferences

Answered: 8 Skipped: 0



Edges & Buffers Concepts: Additional Uses

Potential Types

- Solar panel arrays
- Wildlife buffer zones
- Maintenance roads/trails

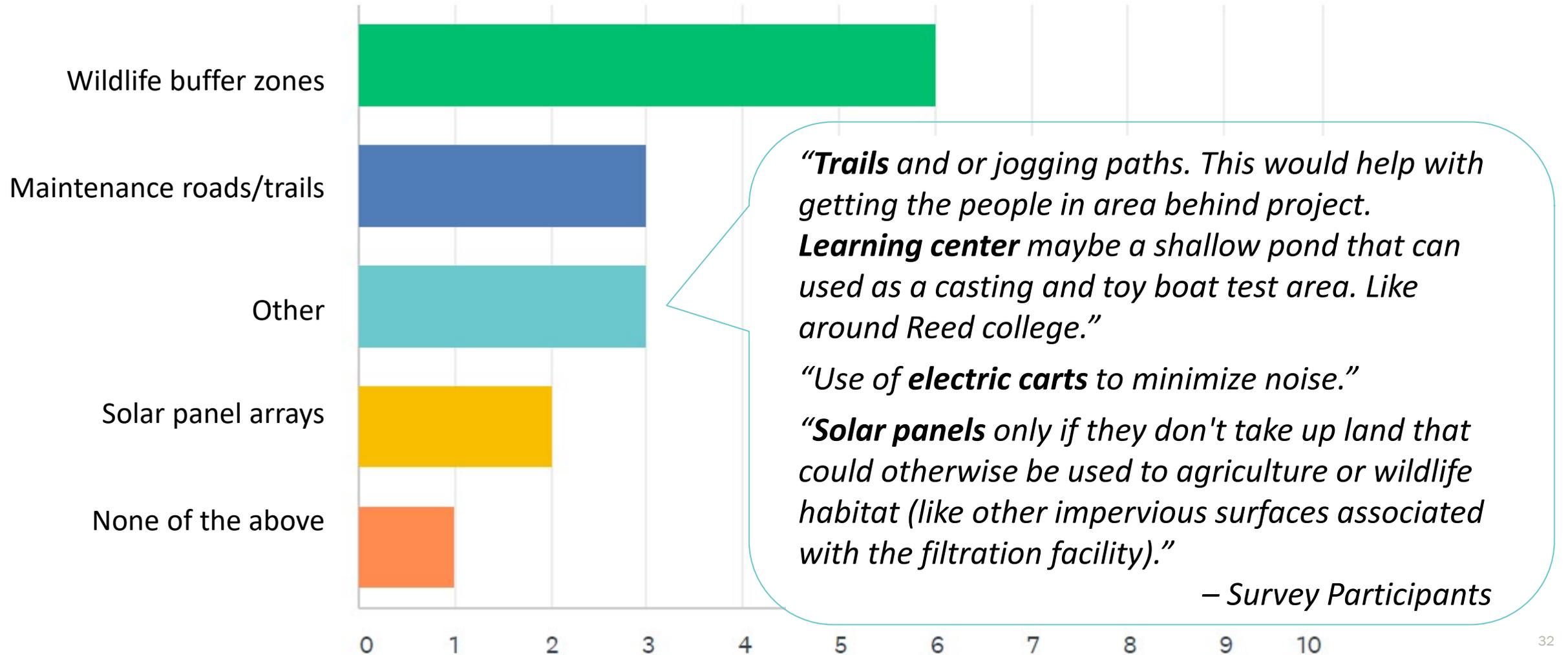
Potential Benefits

- ✓ Serves as a community resource
- ✓ Supports sustainability



Site Advisor Input: Additional Uses Preferences

Answered: 8 Skipped: 0



Site Advisor comments (survey excerpts)

- *As **least visible** as possible.*
- *I like the idea **using soil excavated** during construction for berms. This would reduce truck traffic in and out of the construction site.*
- *A **mix of the concepts** would be appreciated. This may give the site a more natural and native appearance. If only 40-50 acres are going to be in actual use for the functioning modules of the filtration and an additional administrative building, why not try to find a **balanced blend with the surrounding area**.*

Site Advisor comments cont. (survey excerpts)

- *Vegetated screen should use **native plants** as far as possible, and plants that provide a mix of **pollinator forage** through the season - that will provide a benefit to this rural farming area beyond the property itself.*
- *Make it so area people can use part of it for **recreational use and learning center**.*
- *Making use of **natural landscape and attention to Johnson Creek** and other low lying water pools.*
- *What is feasible for agriculture on the site will be largely based on the layout of the filtration facility, and how much **contiguous field space** can be retained.*

Would you like **more detail or clarity** on any
of the information we just shared?

Discussion format feedback?



What went **well**?

What could have gone **better**?

What **suggestions** do you have for next time?

What's next?



Facility Visual Preferences

Thursday June 11 6-7 pm

Pipeline Planning

Thursday July 9 6-7 pm

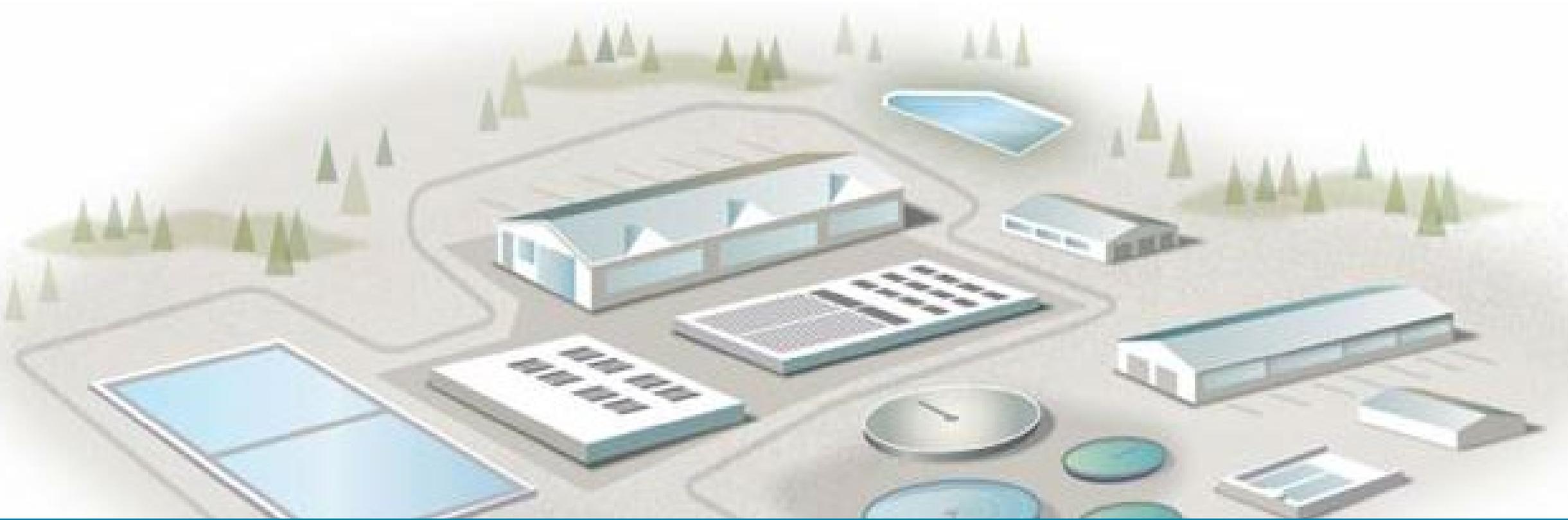
Facility Siting

Thursday August 13 6-7 pm



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*Our water: Safe and abundant
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Thank you!