

PREPARING FOR FISH PASSAGE PROJECTS



What is effective fish passage?

Fish Passage

- ❑ Fish
- ❑ Water

Effective

- ❑ Safe
- ❑ Timely

Fish Passage is Different

- Very site specific
- Involves multiple interrelated factors
- Requires study and experimentation
- Innovative maturing technology
- Design is iterative...
Often with reevaluation of the concept



Fish Passage is Different

Start Early

Consult Expertise

Invest in Information

Information

FISH

- Relevant Species
- Design Population
- Migration Seasons

WATER

- Fishway Operational River Flows
- Headpond and Tailwater Elevations
- Order of Unit and Gate Discharge
- Fishway Attraction Flow
- Fishway Internal Velocities

SITE SPECIFICS

- Surveys – Location, Drawings, Topography, Bathymetry
- Debris and Ice
- Access – Public and Construction
- Property, Legal, Schedule, and Other Constraints

Four factors that most significantly influence
PERFORMANCE

Information

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FISH

Relevant Species

Design Population

Migration Seasons

WATER

Fishway Operational River Flows

Headpond and Tailwater Elevations

Order of Unit and Gate Discharge

Fishway Attraction Flow

Fishway Internal Velocities

SITE SPECIFICS

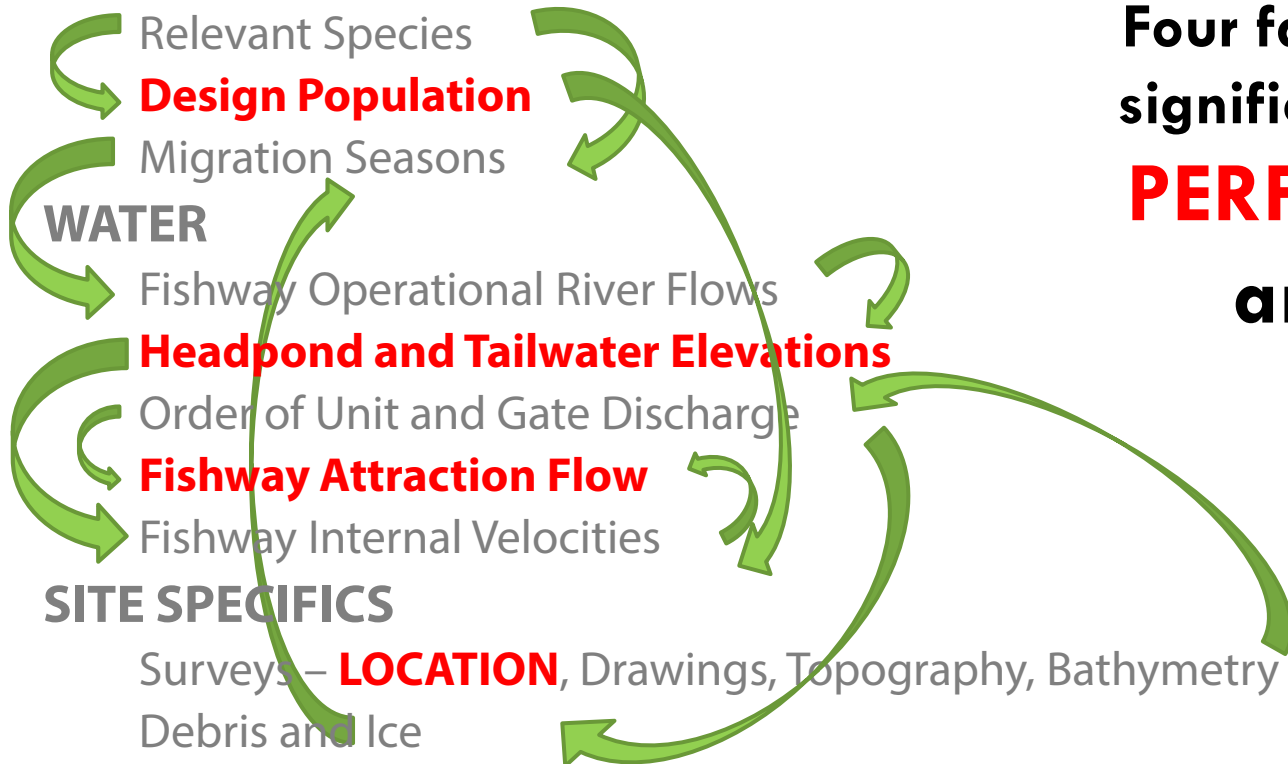
Surveys – **LOCATION**, Drawings, Topography, Bathymetry

Debris and Ice

Access – Public and Construction

Property, Legal, Schedule, and Other Constraints

Four factors that most significantly influence
PERFORMANCE
and **COST**



Information

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FISH

Relevant Species
Design Population
Migration Seasons

WATER

Fishway Operational River Flows
Headpond and Tailwater Elevations
Order of Unit and Gate Discharge
Fishway Attraction Flow
Fishway Internal Velocities

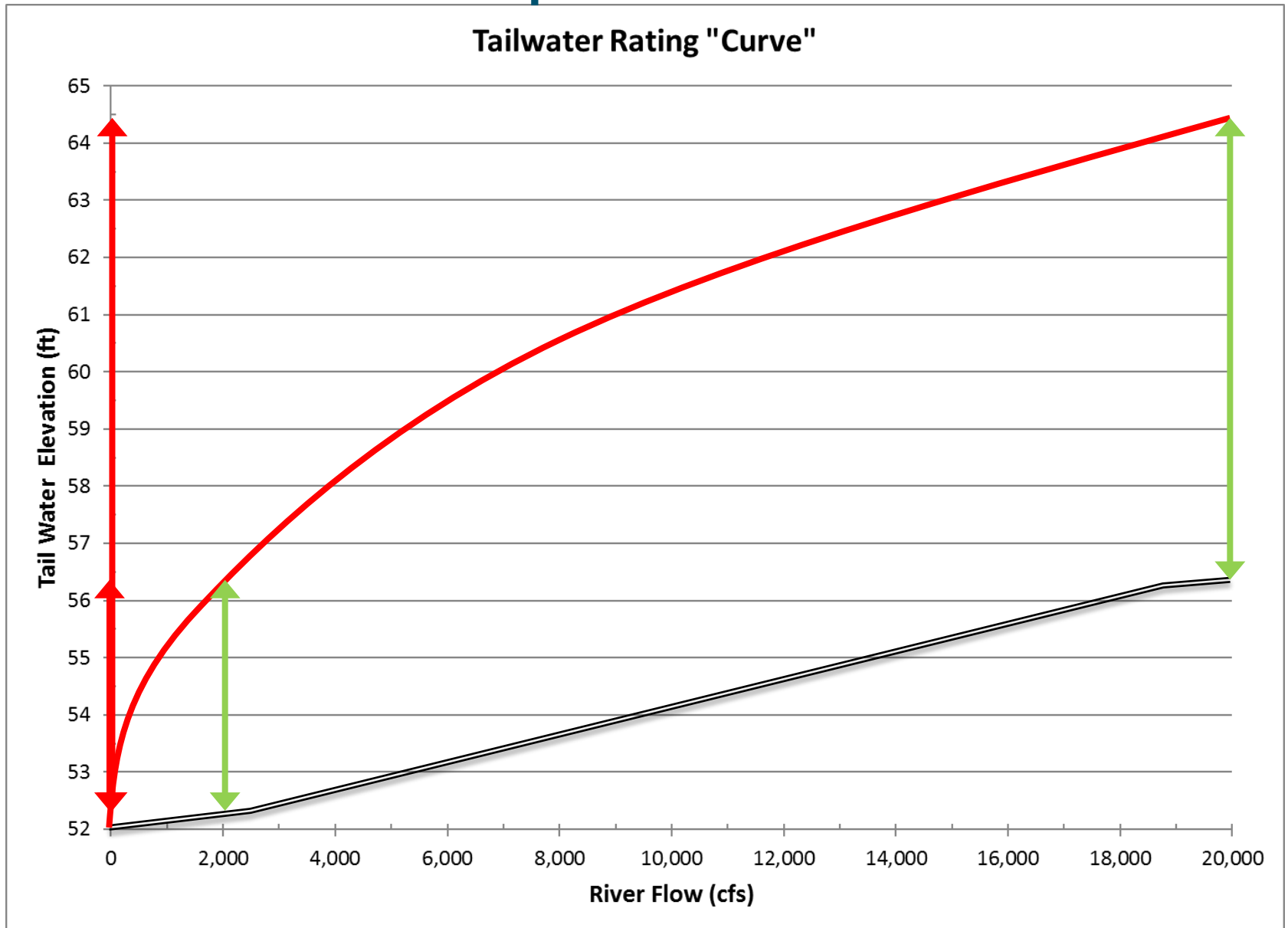
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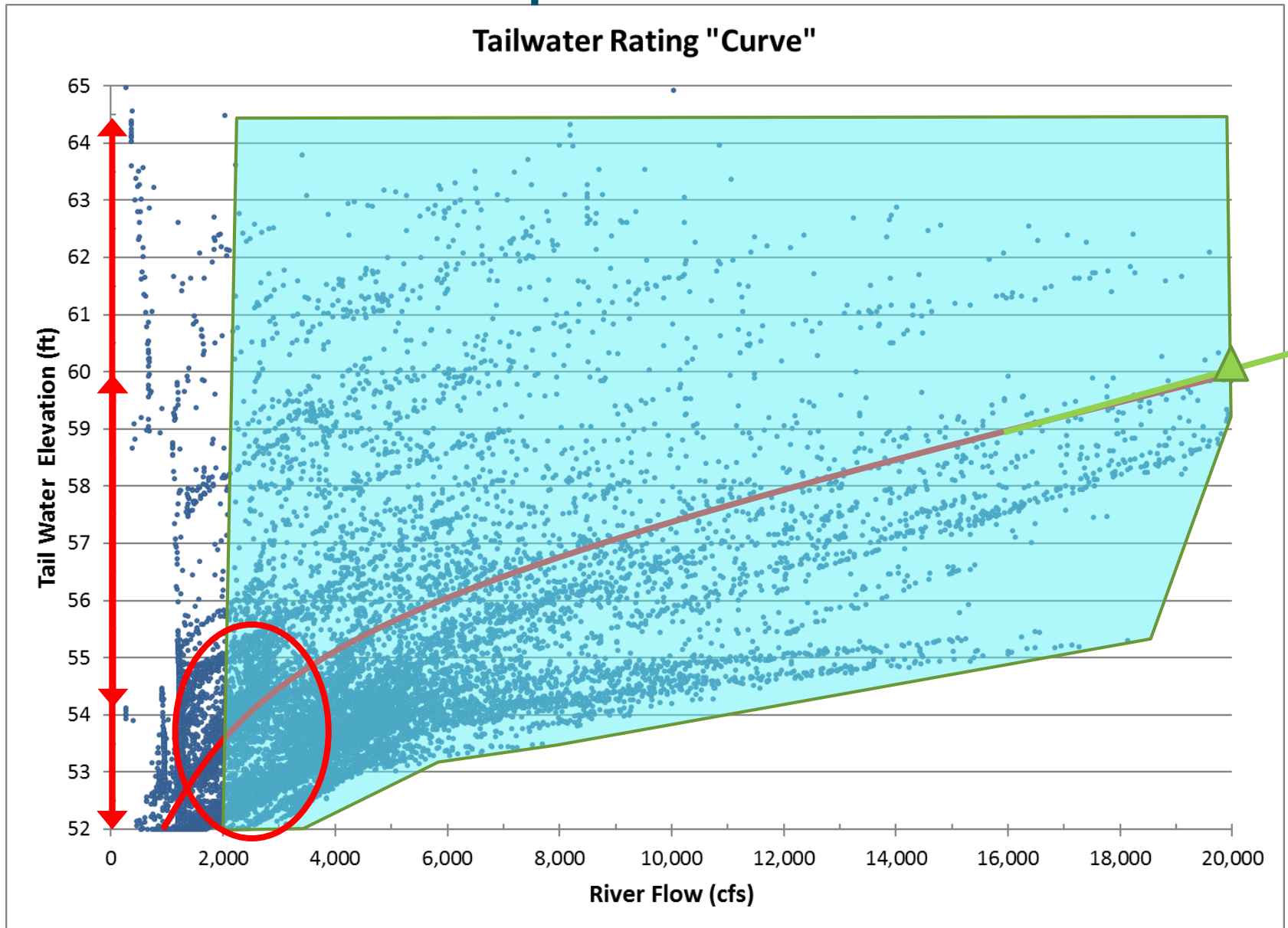
COMPLEXITY
SIZE



Tailwater Example



Tailwater Example



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The best time to plant a tree is 20 years ago...

the next best time is tomorrow.

What should I do tomorrow?

1. Talk to First Nations and Regulators
2. Think Data Acquisition
 - Turn it ON
 - Archive Data
 - Check Calibration
3. Build your Library – Find Drawings and Reports
4. Start Surveys
 - Vertical Datum
 - Topography
 - Bathymetry
5. Develop Study Plans

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Keith Martin, P.E.

Senior Engineer - Fish Passage Group

207-416-1261

Keith.Martin@KleinschmidtGroup.com

Kleinschmidt

Headpond Elevation Duration Curve

Upstream Fish Passage Season (May 1 - October 31)

