

Angler response to the Brown Trout Incentivized Harvest

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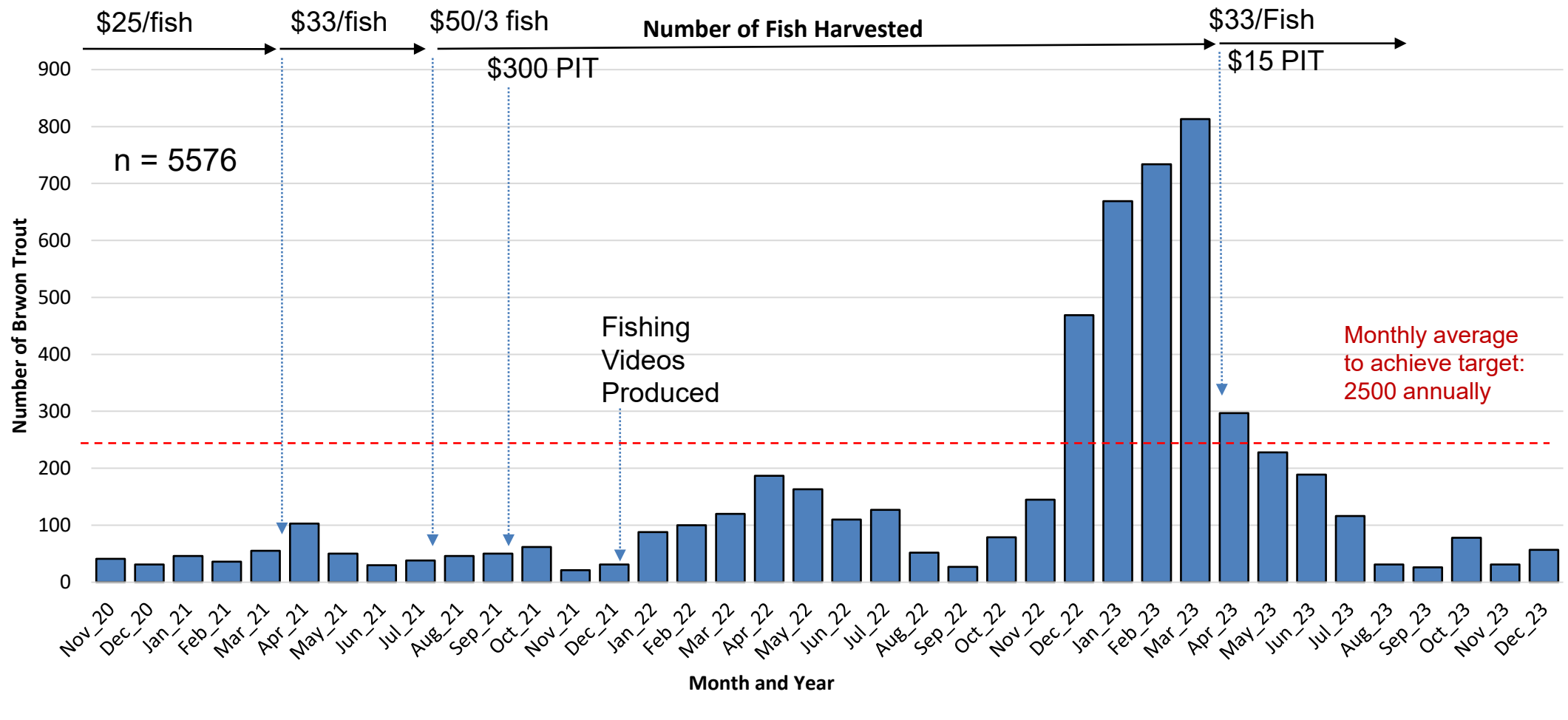
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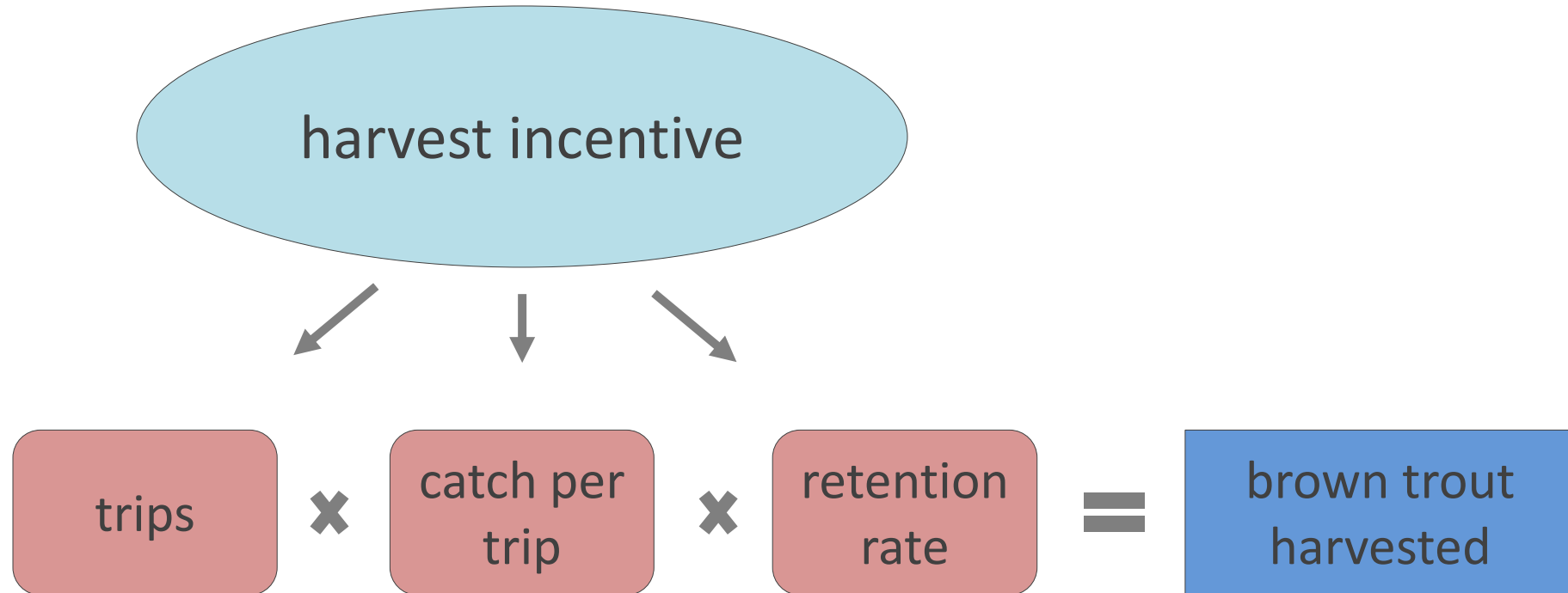
Glen Canyon Dam Adaptive Management Work Group

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Number of Brown Trout Harvested



Total brown trout harvest



Data

Lees Ferry Fishing Data

AZGFD Creel Survey (2018 – May 2022)

- Trips-per-day
- Catch-per-trip (by species)
- Retention rate (by species)

Fishing Conditions

USGS Hydrological Data (2018 – May 2022)

- Discharge rate (cfs, daily mean)
- Water temperature (daily mean)

PRISM Meteorological Data (2018 – May 2022)

- Air temperature (daily mean)
- Precipitation (daily)

AAA Gas Price Data (2018 – May 2022)

COVID-19 Controls

Blavatnik School of Government & Oxford University (2020 – May 2022)

- Government response stringency index (national, daily)
- National confirmed cases & deaths

NPS Intermountain Recreation Visitation (2018 – May 2022)

- Monthly recreation visitation counts

Google Trends Data (2018 – May 2022)

- Monthly search frequency (national, lagged and unlagged)
- Search terms:
“outdoor recreation,” “fishing license,” “fly fishing,” “trout fishing.”

Brown Trout Model Results

Trips per day

- Bonanzas increase trips

Catch per trip

- Program decreases catch
- Bonanzas decrease catch
- Large incentives increase catch

Retention rates

- Program increases retention

Rainbow Trout Model Results

Catch per trip

- Program decreases catch
- Bonanzas increase catch

Retention rates

- Program decreases retention
- Bonanzas increase retention

Conclusion

- The Brown Trout Incentivized Harvest program does increase brown trout catch and retention.
- Brown trout catch rate is sensitive to incentive structure.
- The program in general is not impacting the rainbow trout fishery.



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