As the economy develops and people increasingly pursue spiritual satisfaction, river camping as a sport has also become increasingly popular. The Big Long River is well-known for its beautiful scenery and exciting rapids experiences. At the same time, as river managers and developers, how to develop better plans that balance ecological environment and life safety while providing better wilderness experiences for passengers has become a problem. In addressing this issue, we propose two models for obtaining optimal time schedules while ensuring the river's carrying capacity. These two models can be used respectively in the classic trial run stage and the mature operation stage after obtaining enough data. We hope it will be helpful for your river management.

We named Model One "Parallel Moving Model" because it has the characteristic of parallel movement. Specifically, by specifying different batches of travelers to use different types of boats and travel time intervals, we can ensure that boats departing nearby will camp at nearby campsites, thus solving the problem of chasing boats departing on the same day, while maximizing the utilization of campsites. Additionally, we also address the problem of crashes between different batches of departing boats through calculation, and the specific details of the solution are explained in the article.

Model Two can be considered as the "flexible version" of Model One, as it does not have as many constraints as Model One. With sufficient data from our scenic area's trial operations, such as peak and off-peak seasons, preferred types of boats, and average daily travel time, we can use Model Two to more efficiently plan travel itineraries that cater to the specific needs and preferences of our visitors. This allows for a more personalized and enjoyable camping experience for our guests, while also maximizing the utilization of our resources.

In addition, through thorough data simulation and sensitivity analysis, we have confidently determined that "our model is robust and reliable". This conclusion is based on the model's ability to withstand various scenarios and changes in parameters, without losing its effectiveness. We have also verified that our model is able to provide stable and accurate results in different situations. We believe that the solutions we have proposed can effectively assist in managing and developing rivers while ensuring safety and providing a high-quality wilderness experience for visitors.