

ZooDAO Liquidity Staker Security Audit

April 28, 2022





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Summary

This report has been prepared for **ZooDAO Liquidity Staker** smart contracts, to discover issues and vulnerabilities in the source code of their Smart Contract as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Static Analysis and Manual Review techniques.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.



Overview

Project Summary

Project Name	ZooDAO Liquidity Staker
Codebase	https://github.com/ZooDAO-Project/liquidity-staker
Commit	2ca0adf1ae243437d81ccce4a0ef28af8b6a61fe
Language	Solidity
Platform	Ethereum

Audit Summary

Delivery Date	Apr 28, 2022
Audit Methodology	Static Analysis, Manual Review
Total Issues	3

ZS-1: Outdated Solidity version

Minor

Issue Description

The codebase is using an outdated version of the Solidity compiler.

Recommendation

Please consider using an up-to-date version (ideally $\geq 0.8.10$).

ZS-2: Declare variables as constant where possible

Informational

Issue Description

[contracts/StakingRewards.sol#L23](#)

If a variable is not meant to change, it should be labelled as constant. This will save on gas costs, and increase safety.

Specifically, `rewardsDuration` can be made constant:



ZS-3: Initializing variables to their default value is redundant

Informational

Issue Description

[contracts/StakingRewards.sol#L21-L22](#)

```
uint256 public periodFinish = 0;  
uint256 public rewardRate = 0;
```

Initializing a variable to its default value wastes gas uselessly. In the codebase, there are variables explicitly set to 0.

Recommendation

Change to:

```
uint256 public periodFinish;  
uint256 public rewardRate;
```



Appendix

Timeliness of content

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