



# CFG NINJA AUDITS

Security Assessment

**EVERGROW X Token**

August 12, 2023

Audit Status: Pass with KYC

Audit Edition: Advance













POWERED BY  
**BLADE POOL**

# Risk Analysis


















## Classifications of Manual Risk Results

Classification	Description
 Critical	Danger or Potential Problems.
 High	Be Careful or Fail test.
 Low	Pass, Not-Detected or Safe Item.
 Informational	Function Detected

## Manual Code Review Risk Results

Contract Privilege	Description
 Buy Tax	2%
 Sale Tax	2%
 Cannot Sale	Pass
 Cannot Sale	Pass
 Max Tax	10%
 Modify Tax	Yes
 Fee Check	Pass
 Is HoneyPot?	Not Detected
 Trading Cooldown	Not Detected
 Can Pause Trade?	Owner need to enable trade.



Contract Priviledge	Description
 Pause Transfer?	Detected
 Max Tx?	Fail
 Is Anti Whale?	Detected
 Is Anti Bot?	Detected
 Is Blacklist?	Not Detected
 Blacklist Check	Pass
 is Whitelist?	Detected
 Can Mint?	Pass
 Is Proxy?	Not Detected
 Can Take Ownership?	Not Detected
 Hidden Owner?	Detected, safeManager can withdraw tokens and liquidity.
 Owner	0x8e210528fCF50e538bfeD58af32c21384a7240ab
 Self Destruct?	Not Detected
 External Call?	Not Detected
 Other?	Not Detected
 Holders	1
 Auditor Confidence	Low

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.



# Project Overview

## Token Summary

Parameter	Result
Address	0xC2b6a23accf6e3fdbf0d24e61De569C02bbe9520
Name	EVERGROW X
Token Tracker	EVERGROW X (EGCX)
Decimals	18
Supply	1,000,000,000,000
Platform	Ethereum
compiler	v0.8.18+commit.87f61d96
Contract Name	EVERGROWX
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	<a href="https://etherscan.io/address/0xC2b6a23accf6e3fdbf0d24e61De569C02bbe9520#code">https://etherscan.io/address/0xC2b6a23accf6e3fdbf0d24e61De569C02bbe9520#code</a>
Payment Tx	0x4caf6ecfce7c566c9ca2672987205e909f32f76ad6890d20fc9ba312ef5eec87



## Main Contract Assessed Contract Name

Name	Contract	Live
EVERGROW X	0xC2b6a23accf6e3fdbf0d24e61De569C02bbe9520	Yes

## TestNet Contract Assessed Contract Name

Name	Contract	Live
EVERGROW X	0x38D44b6b1F16963bB13CEE257847EC80EAC0A0c2	Yes

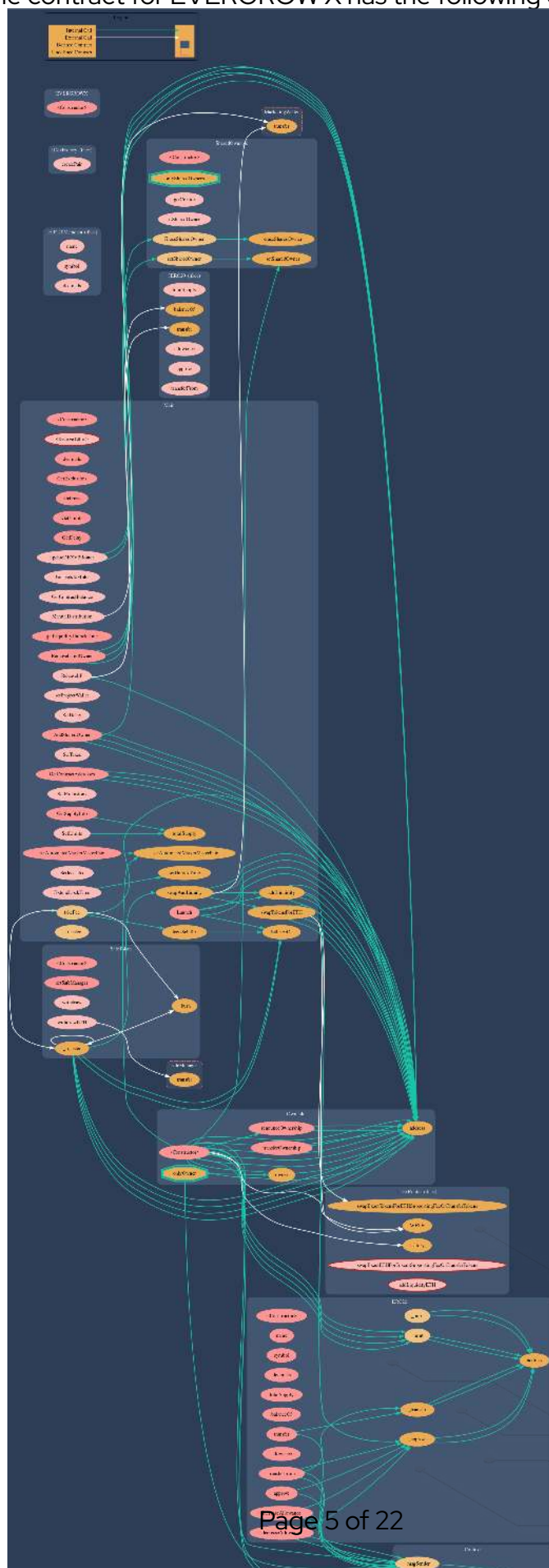
## Solidity Code Provided

SolidID	File Sha-1	FileName
EVERGROWX	62b376621262c1011793da9abbce7a6db1405555	EVERGROWX.sol
EVERGROWX		
EVERGROWX		
EVERGROWX		
EVERGROWX		
EVERGROWX		



# Call Graph

The contract for EVERGROW X has the following call graph structure.





# Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	EVERGROWX.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	EVERGROWX.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	EVERGROWX.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	EVERGROWX.sol	L: 10 C: 0
SWC-104	Pass	Unchecked Call Return Value.	EVERGROWX.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	EVERGROWX.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	EVERGROWX.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	EVERGROWX.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	EVERGROWX.sol	L: 170 C: 20
SWC-109	Pass	Uninitialized Storage Pointer.	EVERGROWX.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	EVERGROWX.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	EVERGROWX.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	EVERGROWX.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	EVERGROWX.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	EVERGROWX.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	EVERGROWX.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	EVERGROWX.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	EVERGROWX.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	EVERGROWX.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	EVERGROWX.sol	L: 0 C: 0
SWC-120	Low	Potential use of block.number as source of randommness.	EVERGROWX.sol	L: 425 C: 22, L: 485 C: 34,L: 528 C: 53,L: 529 C: 33
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	EVERGROWX.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	EVERGROWX.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	EVERGROWX.sol	L: 0 C: 0





ID	Severity	Name	File	location
SWC-124	Pass	Write to Arbitrary Storage Location.	EVERGROWX.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	EVERGROWX.sol	L: 0 C: 0
SWC-126	Pass	Insufficient Gas Griefing.	EVERGROWX.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	EVERGROWX.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	EVERGROWX.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	EVERGROWX.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U +202E).	EVERGROWX.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	EVERGROWX.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	EVERGROWX.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	EVERGROWX.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	EVERGROWX.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	EVERGROWX.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	EVERGROWX.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.



# Smart Contract Vulnerability Details

## SWC-120 - Weak Sources of Randomness from Chain Attributes

### CWE-330: Use of Insufficiently Random Values

#### Description:

Solidity allows for ambiguous naming of state variables when inheritance is used. Contract A with a variable x could inherit contract B that also has a state variable x defined. This would result in two separate versions of x, one of them being accessed from contract A and the other one from contract B. In more complex contract systems this condition could go unnoticed and subsequently lead to security issues.

Shadowing state variables can also occur within a single contract when there are multiple definitions on the contract and function level.

#### Remediation:

Using commitment scheme, e.g. RANDAO. Using external sources of randomness via oracles, e.g. Oraclize. Note that this approach requires trusting in oracle, thus it may be reasonable to use multiple oracles. Using Bitcoin block hashes, as they are more expensive to mine.

#### References:

How can I securely generate a random number in my smart contract?)

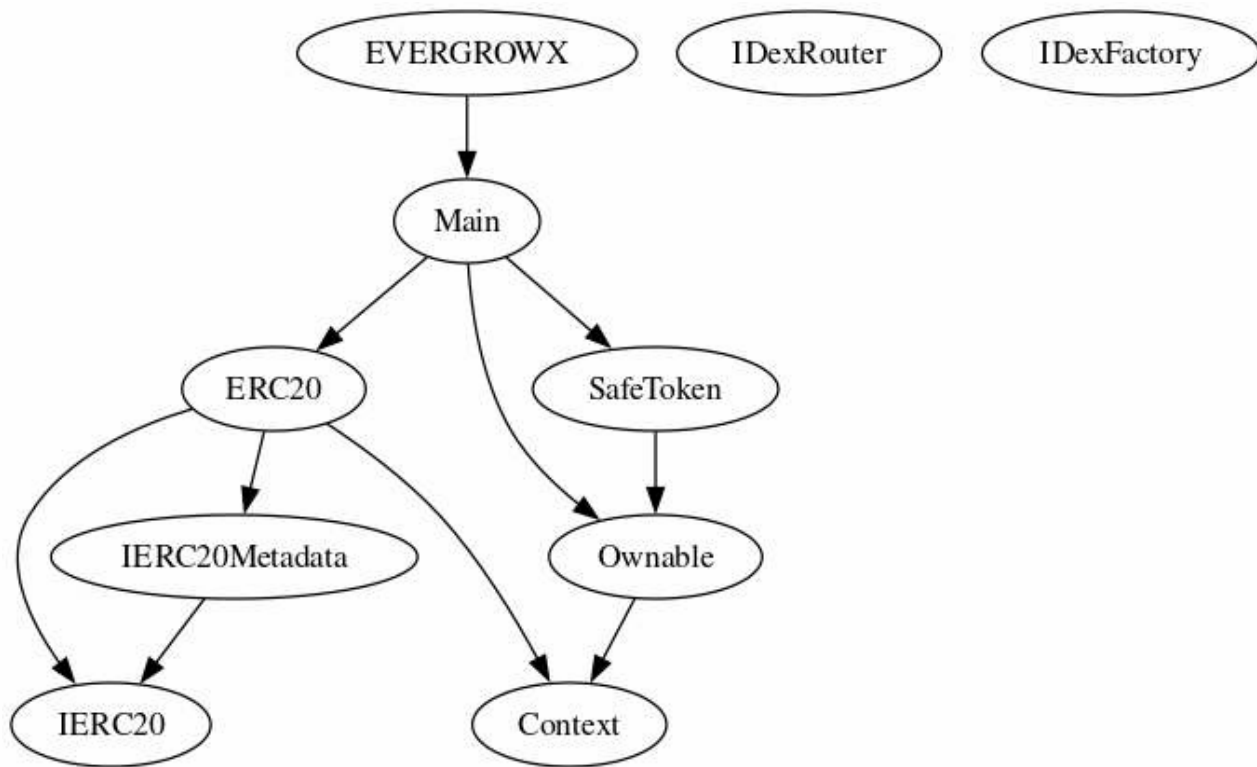
When can BLOCKHASH be safely used for a random number? When would it be unsafe?

The Run smart contract.



# Inheritance

The contract for EVERGROW X has the following inheritance structure.



# Smart Contract Advance Checks



ID	Severity	Name	Result	Status
EGCX-01	Low	Potential Sandwich Attacks.	Pass	Not-Found
EGCX-02	Informational	Function Visibility Optimization	Pass	Resolved
EGCX-03	Low	Lack of Input Validation.	Pass	Resolved
EGCX-04	High	Centralized Risk In addLiquidity.	Fail	Detected
EGCX-05	Low	Missing Event Emission.	Pass	Resolved
EGCX-06	Low	Conformance with Solidity Naming Conventions.	Pass	Not-Found
EGCX-07	Low	State Variables could be Declared Constant.	Pass	Not-Found
EGCX-08	Low	Dead Code Elimination.	Pass	Not-Found
EGCX-09	High	Third Party Dependencies.	Pass	Not Detected
EGCX-10	High	Initial Token Distribution.	Pass	Not-Found
EGCX-11	High	A special ownership library is used for this contract named SharedOwnable.	Pass	Not Detected
EGCX-12	High	Centralization Risks In The X Role	Pass	Not-Found
EGCX-13	Informational	Extra Gas Cost For User..	Pass	Not Detected
EGCX-14	Medium	Unnecessary Use Of SafeMath	Pass	Not Detected



ID	Severity	Name	Result	Status
EGCX-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Pass	Not Detected
EGCX-16	Medium	Taxes can be up to 100%	Pass	Not Detected
EGCX-17	Logical Issue	Highly Permissive Role Access.,`	Pass	Not Detected
EGCX-18	Critical	Stop Transactions by using Enable Trade.	Fail	Detected



## EGCX-04 | Centralized Risk In addLiquidity.

Category	Severity	Location	Status
Coding Style	 High	EVERGROWX.sol: L: 573 C: 14	 Detected

### Description

`uniswapV2Router.addLiquidityETH{value: ethAmount}(address(this), tokenAmount, 0, 0, owner(), block.timestamp);`

The `addLiquidity` function calls the `uniswapV2Router.addLiquidityETH` function with the `to` address specified as `owner()` for acquiring the generated LP tokens from the EGX-WBNB pool.

As a result, over time the `_owner` address will accumulate a significant portion of LP tokens. If the `_owner` is an EOA (Externally Owned Account), mishandling of its private key can have devastating consequences to the project as a whole.

### Remediation

We advise the `to` address of the `uniswapV2Router.addLiquidityETH` function call to be replaced by the contract itself, i.e. `address(this)`, and to restrict the management of the LP tokens within the scope of the contract's business logic. This will also protect the LP tokens from being stolen if the `_owner` account is compromised. In general, we strongly recommend centralized privileges or roles in the protocol to be improved via a decentralized mechanism or via smart-contract based accounts with enhanced security practices, f.e. Multisignature wallets.

1. Indicatively, here are some feasible solutions that would also mitigate the potential risk:

2. Time-lock with reasonable latency, i.e. 48 hours, for awareness on privileged operations;

3. Assignment of privileged roles to multi-signature wallets to prevent single point of failure due to the private key;

Introduction of a DAO / governance / voting module to increase transparency and user involvement

### Project Action







Liquidity get added to the contract, and this can be recovered with the Withdrawal function.



## EGCX-18 | Stop Transactions by using Enable Trade.

Category	Severity	Location	Status
Logical Issue	 Critical	EVERGROWX.sol: L: 414 C: 14	 Detected

### Description

Enable Trade is present on the following contract and when combined with Exclude from fees it can be considered a whitelist process, this will allow anyone to trade before others and can represent an issue for the holders.

### Remediation






We recommend the project owner to carefully review this function and avoid problems when performing both actions.

### Project Action








# Technical Findings Summary

## Classification of Risk

Severity	Description
 Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
 High	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
 Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
 Low	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
 Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

## Findings

Severity	Found	Pending	Resolved
 Critical	1	0	0
 High	1	0	0
 Medium	0	0	0
 Low	0	0	2
 Informational	0	0	0
Total	2	0	2



# Social Media Checks

Social Media	URL	Result
Twitter	<a href="https://twitter.com/evergrow_x">https://twitter.com/evergrow_x</a>	Pass
Other	<a href="https://www.tiktok.com/@evergrow_x">https://www.tiktok.com/@evergrow_x</a>	Pass
Website	<a href="http://EvergrowX.dev">http://EvergrowX.dev</a>	Pass
Telegram	<a href="https://t.me/evergrowx">https://t.me/evergrowx</a>	Pass

We recommend to have 3 or more social media sources including a completed working websites.

**Social Media Information Notes:**

**Auditor Notes:** undefined

**Project Owner Notes:**



# Assessment Results

## Score Results

Review	Score
Overall Score	80/100
Auditor Score	80/100
Review by Section	Score
Manual Scan Score	24/33
SWC Scan Score	35 /37
Advance Check Score	21/30

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 80 Points, if a project does not attain 80% is an automatic failure. Read our notes and final assessment below.

## Audit Passed



## Assessment Results

### Important Notes:

- The contract has a process to add liquidity to its own address, lock it and later can be withdrawn by safeManager.
- SafeManager can withdraw tokens and liquidity from the contract.
- The owner needs to enable trade or launch the contract.
- The customer will do kyc with pinksale.
- Please DYOR on the project.

**Auditor Score =80**  
**Audit Passed**





# Appendix

## Finding Categories

### Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

### Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

### Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how `block.timestamp` works.

### Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

### Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

### Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

### Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different requirements on the input variables than a setter function.



## Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.



## Disclaimer

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