



Surf Finance

DeFi's Next Big Wave

Whitepaper v6

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<https://surf.finance>

Discord: <https://discord.gg/ZduXSdd>

Telegram: https://t.me/surf_finance

Twitter: https://twitter.com/surf_defi

Introduction

Most of the recent DeFi projects have been totally unsustainable “yield farming” or “liquidity mining” dapps that essentially memed their way to the top before crashing spectacularly. These projects were destined to fail because they didn’t reward long-term holders, and they freely gave away most of their tokens to whales that immediately dumped them as a thank you. In addition to having poor tokenomics, some of these projects were actually created by malicious teams that “rugged” by pulling liquidity or minting and then selling enough tokens to drain all of the liquidity on Uniswap. As you can see, it’s getting pretty scary out there, but with your help, we can change that.

It’s time to protect each other. It’s time to stop investing in projects with unverified code, unaudited code, or an unfair distribution. It’s time to raise our standards and demand projects that focus on transparency, community, and sustainability. **It’s time to surf.**



Quick Facts

- **Token Symbol:** SURF
- **Initial Supply:** 0
- **Max Supply:** 10,000,000
- **Transfer Fee:** 1% (100% gets rewarded to **Whirlpool** stakers)
- **Passive Rewards:** The **Whirlpool** is a unique staking and rewards system that will be the heart of the ecosystem after farming ends
- **Fixed APY Farming:** SURF.Finance has beaches (farm pools) that mint and reward SURF tokens to stakers every block using a fixed APY of 1,000%. This does **not** guarantee a 1,000% return for investors. It simply means more SURF gets rewarded to stakers if the price drops. The max supply prevents fixed APY beaches from being unsustainable.
- **UNI Rewards:** One of the most exciting features is the integration of the UNI staking rewards contracts which enables stakers to earn both SURF **and** UNI from beaches that have a corresponding UNI staking rewards contract. Stakers will receive 100% of the UNI earned by their staked LP tokens. The website will show Uniswap's unicorn logo on the beaches that reward UNI in addition to SURF. USDT-ETH, USDC-ETH, DAI-ETH, and WBTC-ETH are the 4 beaches that will reward UNI to stakers at launch.
- **Governance:** The owner of the SURF contracts is not the dev team, but a governance contract controlled by all SURF holders
- **Dev Fee:** There is no presale, ICO, or premine, and the launch is designed in a way that guarantees bots don't have an advantage over humans. To further ensure a fair distribution, the team will be taking a 5% fee from deposits into secondary beaches (the team does not get any of the fee from deposits into the SURF-ETH beach) instead of the traditional 10%+ of the token supply. Most tokens are never able to surpass their initial price peak, so it was critical that SURF was designed to have a fair distribution which dramatically helps prevent unhealthy selloffs.

Overview

SURF.Finance is a financial experiment that aims to discover what happens when a transparent (and tubular) team fairly launches a governance token that is designed to reward long-term holders (aka hodlers). The project has two distinct phases:

Phase 1: Fair Distribution - The entire 10 million token supply will be fairly distributed during this farming phase to everyone that has staked Uniswap LP (liquidity provider) tokens in one of SURF's beaches (our word for a farm pool). By using a fixed APY calculation, each beach will mint less SURF per block as the price of SURF increases, and more SURF per block as the price decreases. The goal of this phase is to provide a strong foundation for Phase 2 by getting the majority of the SURF supply into the hands of hodlers. During this phase, the **Whirlpool** won't be active, but it will be accruing a mountain of SURF that will eventually get rewarded to those that provide SURF-ETH liquidity on Uniswap and stake their LP tokens in the **Whirlpool**.

Phase 2: Reward the Hodlers - Phase 2 starts the moment Phase 1 ends, which is when SURF #10,000,000 gets minted and rewarded to someone staked in a beach. The beaches will close, the **Whirlpool** will activate, and all of its accrued SURF will start getting paid out to those staking their SURF-ETH Uniswap LP tokens. There will also be many projects launching within the SURF ecosystem that will continually pay dividends to everyone staked in the **Whirlpool**. As a fairly distributed governance token, SURF will be controlled by those that value it the most. All of the most impactful parameters in the protocol can be adjusted through successful governance proposals, ensuring that the community of SURF hodlers can continually experiment and improve it.

Contracts

At launch, there will be three primary contracts that handle the core features of the SURF protocol (each explained in detail in the following pages), and two secondary contracts that handle creating, voting on, and executing governance proposals. All of these contracts can be reviewed from our public Github repo <https://github.com/SURF-Finance/contracts>.

Primary Contracts

- **SURF.sol:** SURF token contract (Modified ERC-20)
- **Tito.sol:** Farming/distribution contract (Heavily modified MasterChef.sol from SushiSwap)
- **Whirlpool.sol:** Long-term staking/rewards contract

Governance Contracts

- **Governor.sol:** Governance proposal contract (Lightly modified GovernorAlpha.sol from Compound)
- **Timelock.sol:** Timelock contract that adds a delay to the execution of successful governance proposals (Lightly modified Timelock.sol from Compound)

Disclaimer

The following pages contain an overview of the most important mechanics in each of SURF's primary contracts. We strongly recommend that you fully review the contracts to verify that our statements are accurate. SURF.Finance is a decentralized financial experiment that distributes a valueless governance token to those that want to participate. Never participate with more than you can afford to lose. Only trust the code.

SURF.sol

This is the SURF governance token contract that inherits and makes modifications to the Open Zeppelin ERC-20 contract. Here are some of the most important features in the contract:

- Declares and enforces the max supply of 10,000,000 SURF
- Extracts a **1% fee** from every SURF transfer and rewards it to those staking SURF-ETH LP tokens in the **Whirlpool**. The fee is intended for those exiting the ecosystem, so it is not taken from transfers involving the **Tito** or **Whirlpool** contracts. Token holders can make governance proposals to change the amount of the fee, or whitelist other contracts from paying the fee.
- Implements and modifies the YAM governance model, which is based on the Compound governance model
- Stores all of the locked LP tokens collected from the initial liquidity being added to the SURF-ETH Uniswap pool and the beach staking fee in the **Tito** contract, as well as the unstaking fee in the **Whirlpool** contract. SURF holders can migrate those LP tokens elsewhere in the future through a successful governance proposal.
- Implements **approveAndCall** and **transferAndCall** to make it easier for other projects to use SURF

Tito.sol

This is the farming contract that handles minting and distributing the entire supply of 10 million SURF tokens. The contract is a heavily modified version of MasterChef.sol (the frequently cloned farming contract created by SushiSwap) that fixes the fundamental flaws that made nearly every farming project over the last few months unsustainable. Here are some of the most important features in the contract:

- At launch, there are **25** secondary beaches (farm pools) for users to stake in that each accept a specific Uniswap LP token (e.g. DAI-ETH UNI-V2). These beaches mint and reward SURF tokens to stakers every block with a fixed **1,000%** APY using the following calculation:

SURF Per Block

$((\text{poolAPY} * \text{poolTotalLiquidityValue} / \text{surfPrice}) / \text{blocksPerYear})$

- The primary SURF-ETH beach will be trustlessly created by the contract a few hours after launch, and will have a fixed APY of **5,000%**
- There is a **10% fee** to stake LP tokens in any beach, and **no fee** to unstake. The staking fee increases SURF's sustainability, since it is used to directly benefit the long-term health of the project.
- When staking LP tokens in the primary SURF-ETH beach, the entire 10% staking fee will be permanently locked in the SURF token contract, ensuring SURF always has liquidity on Uniswap
- When staking LP tokens in any secondary beach, the 10% staking fee is distributed as follows:
 - Half of the staking fee is used to buy SURF tokens from Uniswap, which are then sent to the **Whirlpool** to be distributed to stakers once the max supply is hit
 - The other half of the staking fee will go to the dev team

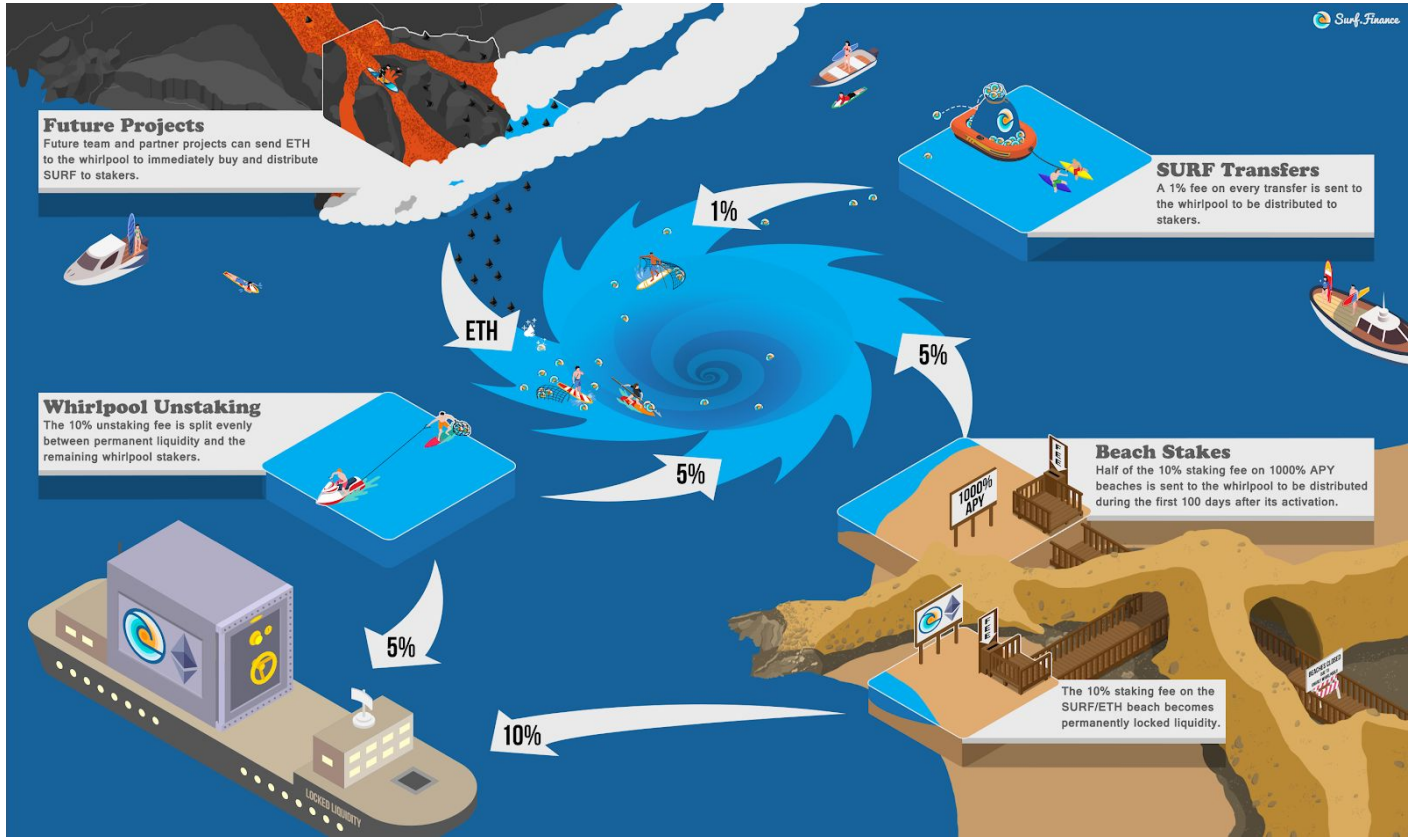
- The contract will have a **1,000 block Soft Launch** in which many mechanics are changed to make the initial distribution of SURF as fair as possible before switching to the fixed APY calculation. The full details of the **Soft Launch** are provided later in the whitepaper.
- Once the max supply has been hit, all of the beaches will reject new deposits and stop minting SURF, and users staked in the SURF-ETH beach will be able to migrate their staked LP tokens to the **Whirlpool** in a single transaction using the **migrateSURFLPtoWhirlpool** function

Whirlpool.sol

The **Whirlpool**'s primary function is to collect dividends from the other projects in the SURF ecosystem (of which there will be many) and distribute them along with the transfer fee, to everyone staking SURF-ETH LP tokens. Here are some of the most important features in the contract:

- At launch, the **Whirlpool** will start accruing a mountain of SURF tokens received from the 1% transfer fee in the SURF token contract, and the secondary beach staking fee in the **Tito** contract, but will not start distributing them until it becomes **activated** after the max supply is hit
- The following happens after activation:
 - Users will be able to stake SURF-ETH LP tokens to receive their proportional share of any pending and future rewards
 - Any SURF the **Whirlpool** received **before** activation gets distributed over **100 days** (daily payouts of 1% of the total). The first payout will be 24 hours after activation.
 - Any SURF the **Whirlpool** receives **after** activation will be immediately distributed
- There is **no fee** to stake SURF-ETH LP tokens in the **Whirlpool**, but there is a **10% fee** to unstake them. The unstaking fee increases SURF's sustainability, since it is used to directly benefit the long-term health of the project.
- The 10% unstaking fee is distributed as follows:
 - Half of the fee will be permanently locked in the SURF token contract, ensuring SURF always has liquidity on Uniswap
 - The other half of the fee is converted to SURF tokens and distributed to stakers
- Any other contract can pay dividends to the **Whirlpool** using the **addEthReward** function. **100%** of the ETH received is automatically and trustlessly used to buy SURF from Uniswap, which then gets rewarded to stakers.

SURF Ecosystem Rewards



The Soft Launch

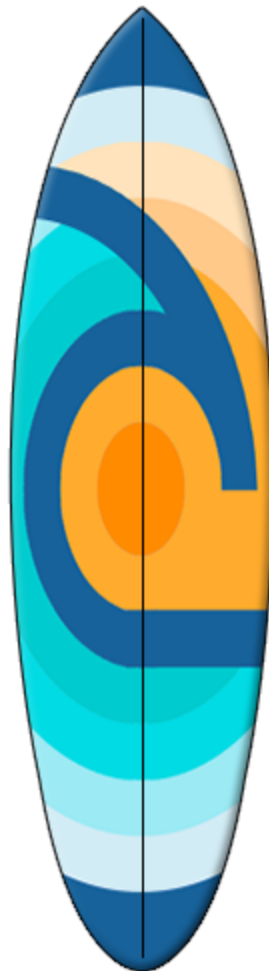
The goal of the **1,000 block Soft Launch** is to make the initial distribution of SURF as fair as possible by preventing all of the common ways a project launch can be manipulated.

- There will be approximately **2,500,000 SURF** minted by the end of the **Soft Launch**:
 - A static amount of **40 SURF per block** will be minted to each secondary beach, resulting in a total of **1,000,000 SURF** getting rewarded to stakers
 - A static amount of **1,000 SURF per block** (the same amount being minted to all of the secondary beaches combined) will be minted to the SURF-ETH beach once it becomes activated halfway through the **Soft Launch**, resulting in a total of **500,000 SURF** getting rewarded to stakers
 - **1,000,000 SURF** will be trustlessly minted and used to seed the initial SURF liquidity in the SURF-ETH Uniswap pool
- For at least the first 500 blocks, the half of the staking fee that would normally go to buying and sending SURF to the Whirlpool will instead be set aside in the contract to be used as the initial ETH liquidity in the SURF-ETH Uniswap pool
- Claiming SURF rewards or withdrawing LP tokens from a beach will not be possible until the SURF-ETH beach becomes active after 500 blocks
- Once 500 blocks have passed, anyone can call the **activateSurfPool** function on the contract which does the following:
 - Mints **1,000,000** new SURF tokens (10% of the total supply) to be used as the initial SURF liquidity in the SURF-ETH Uniswap pool

- Adds the initial liquidity to the SURF-ETH Uniswap pool using the newly minted SURF tokens and the ETH that had been set aside from the staking fees up until this point (this also means that the starting price of SURF is directly based on the total staking volume during the first 500 blocks)
- Permanently locks the LP tokens received from adding the initial liquidity to the SURF-ETH Uniswap pool in the SURF token contract, ensuring liquidity forever
- Uses the **50 ETH** donated by partner projects to make the first purchase of SURF from Uniswap, all of which gets distributed to **Whirlpool** stakers once the max supply is hit
- Sets the **surfPoolActive** variable to **true**, which opens the SURF-ETH beach to stakers, allows users to unstake from beaches and claim their pending SURF rewards, and starts using the staking fee to buy SURF from the Uniswap pool, which gets distributed to **Whirlpool** stakers once the max supply is hit
- After the **Soft Launch** ends, every beach starts minting SURF using the fixed APY calculation

The SURF Boards

The **SURF Boards** are special NFT's (non-fungible tokens) that provide some awesome benefits to anyone that owns one of the **100** that will be minted. Though there are juicy financial benefits to owning a **SURF Board**, none of them will be disclosed yet in an effort to make sure only the most dedicated surfers are interested. A private channel in the SURF Discord server will be created for all **SURF Board** owners to hangout and get early insight into all of SURF's upcoming developments. 20 **SURF Boards** are reserved for each member of the team, and 80 will be auctioned off on OpenSea using a 48-hour Dutch auction with a starting price of 10 ETH and an ending price of .01 ETH.



Launch Beaches

At launch, 25 different Uniswap LP tokens can be staked in their corresponding beach on SURF.Finance. After launch, SURF holders can create and vote on governance proposals to add or remove beaches.

ETH-USDT (Tether USD)

Token Address: 0xdAC17F958D2ee523a2206206994597C13D831ec7

LP Token Address: 0x0d4a11d5EEaaC28EC3F61d100daF4d40471f1852

DAI-ETH (Dai Stablecoin)

Token Address: 0x6B175474E89094C44Da98b954EedeAC495271d0F

LP Token Address: 0xA478c2975Ab1Ea89e8196811F51A7B7Ade33eB11

USDC-ETH (USD Coin)

Token Address: 0xA0b86991c6218b36c1d19D4a2e9Eb0cE3606eB48

LP Token Address: 0xB4e16d0168e52d35CaCD2c6185b44281Ec28C9Dc

WBTC-ETH (Wrapped Bitcoin)

Token Address: 0x2260FAC5E5542a773Aa44fBCfeDf7C193bc2C599

LP Token Address: 0xBb2b8038a1640196FbE3e38816F3e67Cba72D940

UNI-ETH (Uniswap)

Token Address: 0x1f9840a85d5aF5bf1D1762F925BDADdC4201F984

LP Token Address: 0xd3d2E2692501A5c9Ca623199D38826e513033a17

LINK-ETH (Chainlink)

Token Address: 0x514910771AF9Ca656af840dff83E8264EcF986CA

LP Token Address: 0xa2107FA5B38d9bbd2C461D6EDf11B11A50F6b974

AAVE-ETH (Aave)

Token Address: 0x7Fc66500c84A76Ad7e9c93437bFc5Ac33E2DDaE9

LP Token Address: 0xDfC14d2Af169B0D36C4EFF567Ada9b2E0CAE044f

SNX-ETH (Synthetix Network)

Token Address: 0xC011a73ee8576Fb46F5E1c5751cA3B9Fe0af2a6F

LP Token Address: 0x43AE24960e5534731Fc831386c07755A2dc33D47

MKR-ETH (Maker)

Token Address: 0x9f8F72aA9304c8B593d555F12eF6589cC3A579A2

LP Token Address: 0xC2aDdA861F89bBB333c90c492cB837741916A225

COMP-ETH (Compound)

Token Address: 0xc00e94Cb662C3520282E6f5717214004A7f26888

LP Token Address: 0xCFFdDeD873554F362Ac02f8Fb1f02E5ada10516f

YFI-ETH (yearn.finance)

Token Address: 0x0bc529c00C6401aEF6D220BE8C6Ea1667F6Ad93e

LP Token Address: 0x2fDbAdf3C4D5A8666Bc06645B8358ab803996E28

BAL-ETH (Balancer)

Token Address: 0xba100000625a3754423978a60c9317c58a424e3D

LP Token Address: 0xA70d458A4d9Bc0e6571565faee18a48dA5c0D593

DPI-ETH (DeFiPulse Index)

Token Address: 0x1494CA1F11D487c2bBe4543E90080AeBa4BA3C2b

LP Token Address: 0x4d5ef58aAc27d99935E5b6B4A6778ff292059991

ETH-AMPL (Ampleforth)

Token Address: 0xD46bA6D942050d489DBd938a2C909A5d5039A161

LP Token Address: 0xc5be99A02C6857f9Eac67BbCE58DF5572498F40c

HEX-ETH (Hex.win)

Token Address: 0x2b591e99afE9f32eAA6214f7B7629768c40Eeb39

LP Token Address: 0x55D5c232D921B9eAA6b37b5845E439aCD04b4DBa

PNK-ETH (Pinakion)

Token Address: 0x93ED3FBe21207Ec2E8f2d3c3de6e058Cb73Bc04d

LP Token Address: 0x343FD171caf4F0287aE6b87D75A8964Dc44516Ab

PICKLE-ETH (PICKLE.Finance)

Token Address: 0x429881672B9AE42b8EbA0E26cD9C73711b891Ca5

LP Token Address: 0xdc98556Ce24f007A5eF6dC1CE96322d65832A819

NUTS-ETH (Squirrel Finance)

Token Address: 0x84294FC9710e1252d407d3D80A84bC39001bd4A8

LP Token Address: 0x0C5136B5d184379fa15bcA330784f2d5c226Fe96

ATIS-ETH (Atlantis)

Token Address: 0x821144518dfE9e7b44fCF4d0824e15e8390d4637

LP Token Address: 0x490B5B2489eeFC4106C69743F657e3c4A2870aC5

LOCK-ETH (Sherlock Security)

Token Address: 0xB9464ef80880c5aeA54C7324c0b8Dd6ca6d05A90

LP Token Address: 0xa8D0f6769AB020877f262D8Cd747c188D9097d7E

aDAO-ETH (Aegis)

Token Address: 0x926dbD499d701C61eABe2d576e770ECCF9c7F4F3

LP Token Address: 0xC7c0EDf0b5f89eff96aF0E31643Bd588ad63Ea23

SHUF-ETH (Shuffle.Monster)

Token Address: 0x3A9FfF453d50D4Ac52A6890647b823379ba36B9E

LP Token Address: 0x260E069deAd76baAC587B5141bB606Ef8b9Bab6c

OTBC-ETH (Outside the Box Coin)

Token Address: 0x9720Bcf5a92542D4e286792fc978B63a09731CF0

LP Token Address: 0x08538213596fB2c392e9c5d4935ad37645600a57

HEZ-ETH (Hermes Network Token)

Token Address: 0xEEF9f339514298C6A857EfCfC1A762aF84438dEE

LP Token Address: 0x23d15EDceb5B5B3A23347Fa425846DE80a2E8e5C

TRADE-ETH (UniTrade) *Made a 25 ETH donation to the SURF community

Token Address: 0x6F87D756DAf0503d08Eb8993686c7Fc01Dc44fB1

LP Token Address: 0xd2E0C4928789e5DB620e53af29F5fC7bcA262635