

# | Taxes

**Taxes** are the idea that Citizens must pay a sum of Diamonds to the Government where they are put into the Treasure. The Diamonds in the Treasure are then used to fund Public Assignments which work to better all or a majority of Citizens.

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## | Tax Period

Every 10 Minecraft days, if a Citizen has played for a sum of more than 10 real minutes--not including time AFKing--they are required to pay their taxes within a 1 Minecraft day period of when they are next on the World or not AFK.

AFKing is defined as not speaking, moving or involving with the World.

The taxpayer, Citizen, must following the proper Taxpaying Process.

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## | Taxpaying Process

A Citizen will receive a signed book which explains how much they owe in taxes in their mailbox. They must deliver the signed tax book and the required amount of Diamonds to a *Public Tax Mailbox* within the tax period deadline. Tax books should be discarded via destruction (cactus, lava, fire) when they are completed or stored in a vault.

Taking Diamonds or signed tax books from a *Public Tax Mailbox* for personal use (not moving the tax money to the Treasure) is considered a Crime.

A *Public Tax Mailbox* is a mailbox which follows all Mailbox Construction and Placement rules but is located in Public Property and owned by the Government for use in collecting **Taxes**.

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## | Tax Calculation Process

To calculate **Taxes** a Citizen should:

1. Compute the Property Metric for all Properties they own.
2. Apply Implicit Tax Incentives to the Property Metrics.

3. Calculate the Default Tax Amount.
  4. Apply the Circumstantial Tax Value to their Default Tax Amount.
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## I Default Tax Amount

The **Default Tax Amount** is the amount of **Taxes** that is paid by default.

If a **Default Tax Amount** comes out with more than 2 decimals, it should be rounded to 2 decimal places.

## I For Citizens who are *not* Property Owners

Citizens who are not Property Owners owe the Government a tax of 3 Diamonds for every 27 stacks of items they own in storage containers where a stack is defined as a Minecraft item slot which contains something.

### Math

Let  $m$  be the amount of item stacks a player stores in containers at their Primary Residence.

Let  $d = \lfloor \frac{m}{27} \rfloor * 3$  be the final, default tax amount a Citizen owes.

## I For Citizens who are Property Owners

The equation below describes how to tax Citizens with different types of Properties.  
Generally speaking:

- Private Property Owners owe the default tax value
- Shared Private Property Owners owe extra tax based on the number of members who have resided (slept, stored, or used as their primary residence) in their Shared Private Property.
- Owned Property Owners owe double the taxes of a Private Property Owner.

### Math

Let  $P = [p_1, p_2, \dots, p_n]$  be a list which represents each property metric a Citizen owns where incentives have already been applied.

Let  $R = [r_1, r_2, \dots, r_n]$  be a list which represents the number of residents which have resided each Shared Private Property a Citizen owns.

If a Property isn't a Shared Private Property, the value of  $r$  should be a default value, 0.

$$\text{Let } f(p, r) = \begin{cases} \frac{p}{200}, & \text{if Property is a Private Property} \\ \frac{p}{200} * (1 + \frac{r}{10}), & \text{if Property is a Shared Private Property} \\ \frac{p}{100}, & \text{if Property is an Owned Property} \end{cases}$$

describe the operation to be performed on a Citizen's Property based on what kind of Property the particular property the Citizen owns is.

Let  $d = \sum_i f(P_i, R_i)$  be the default tax amount a Citizen owes.

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## | Circumstantial Tax Value

The **Circumstantial Tax Value** is a value which modifies the Default Tax Amount after all calculations. The **Circumstantial Tax Value** starts at 0.00 and can be adjusted by elected officials in increments of 0.05 per Elected Official. The **Circumstantial Tax Value** is calculated via the equation below.

### Math

Let  $c$  be the Circumstantial Tax Value

Let  $d$  be the Default Tax Amount

Let  $t = \lceil (c + 1) * d \rceil$  be the total tax amount

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## | Implicit Tax Incentives

**Implicit Tax Incentives** are motives to build or not build in certain Landarea by increasing or decreasing taxes in said Landarea.

**Implicit Tax Incentives** may also be referred to as Incentives or Incentives Programs.

If a Property Metric with all applicable incentives applied comes out with more than 2 decimals, it should be rounded to 2 decimal places.

All increases and decreases are added together before being applied to the Property Metric of the Property. The formula below describes how to compute incentives.

#### Math

Let  $x$  be the Property Metric of any given Property.

Let  $U$  be a multiset containing 1 and all applicable incentive values.

Let  $p = x * (1 + (\sum_i U_i))$  be the Property Metric with all applicable incentives applied.

## I Below the Ice Incentive

The **Below the Ice Incentive** aims to incentivize Citizens to build under the ice and disincentivize them from building above the ice.

Property which does not have ice above, below or inside of it is not considered in this incentive.

### I For Property Owners Under the Ice

Property Owners who own Property *under the ice* get a 30% reduction in **Taxes**.

*Under the ice* is defined as Property which is underneath the ice and leaves an at least 1 block gap between the ice and the property (Y61 inclusive).

Properties with larger (95% or more volumetric) portions *above the ice* are not considered *under the ice*.

$$u \cup \{-0.3\}$$

### I For Property Owners On or Above the Ice

Property Owners who own Property *above the ice* get a 30% increase in **Taxes**.

*Above the ice* is defined as Property which is above the ice (Y64 inclusive).

Properties with larger (95% or more volumetric) portions *under the ice* are not considered *above the ice*.

$$u \cup \{0.3\}$$

### I For Property Owners who Puncture the Ice

Property Owners who own Property *puncturing the ice* get a 15% increase in **Taxes**.  
*Puncturing the ice* is defined as Property which is at least partially in the ice (Y62 - 63 inclusive).

$$u \cup \{0.15\}$$

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## I Private Property over Owned Property Incentive

The **Private Property over Owned Property Incentive** aims to incentivize Citizens to build within Hard Land.

Owned Property gets a 60% increase in **Taxes**.

$$u \cup \{0.60\}$$