Open colorings

Let X be a topological space. We say that OCA(X) holds if and only if for every open partition $[X]^2 = K_0 \cup K_1$, either:

1. There exists an uncountable $H \subseteq X$ such that $[H]^2 \subseteq K_0$ (0-homogeneous), or else

2. There is a family $\langle H_n : n \in \omega \rangle$ such that $X = \bigcup_{n\in\omega} H_n$ and $[H_n]^2 \subseteq K_1$ for every $n \in \omega$ ($\sigma$-1-homogeneous).

This statement is due to Todorčević and holds for the real line. In 80's, Todorčević showed that it is relative consistent with ZFC that: OCA(X) holds for every subspace X of the real line (OCA). In order to generalize this statement, Todorčević conjectured that the following is relative consistent with ZFC: If X is a regular space with no uncountable discrete subspace, then OCA(X) holds. I will talk about the situation of OCA(X) for the Sorgenfrey line and their subspaces.