



STYLE GUIDE

WEST COAST IPA

WHAT IS A WEST COAST IPA

A West Coast IPA is a Dry, sharply bitter, clear example of an American IPA. The balance is hop-forward, with a clean fermentation profile, dryish finish, and clean, supporting malt allowing a creative range of hop character to shine through.

The first modern American craft beer adaptation of this traditional English style is generally believed to be Anchor Liberty Ale, first brewed in 1975 and using whole Cascade hops. The style has evolved beyond that original beer, which now tastes more like an American Pale Ale in comparison.

STYLE COMPARISON

Stronger and more highly hopped than American Pale Ale. Compared to English IPA, has less caramel, bread, and toast. Often more American or New World hops. Fewer yeast-derived esters. Less body and often a more hoppy balance, and slightly stronger than most examples. Less alcohol than a Double IPA but with a similar balance.

VITAL STATS

ABV: 6.3%-7.5%
IBU: 50-70
SRM: 4.0-12.0

AROMA

A prominent to intense hop aroma often featuring American or New world hop characteristics, such as citrus, floral, pine, resin, spice, tropical fruit, stone fruit, berry, or melon. Low to medium-low clean, grainy maltiness supports the hop presentation. Generally clean fermentation profile.

APPEARANCE

Color ranging from medium gold to light reddish-amber. Clear but chill haze is acceptable at low temperatures. Hop haze is allowable at any temperature. Medium-sized, white to off-white head with good persistence.

FLAVOR

Medium to very high hop flavor (same descriptors as aroma). Low to medium-low clean and grainy maltiness, possibly with light caramel and toast flavors. Medium-high to very high bitterness. Dry to medium-dry finish.

MOUTHFEEL

Medium-light to medium body with a smooth texture. Medium to medium-high carbonation. No harshness.



WHAT IS CHILL HAZE

The information relayed in this info sheet was provided by Stone Brewery, who put out a blog article when they started to notice chill haze in their IPAs that traditionally were always crystal clear.



Some West Coast IPAs have noticeable haze formation and even 'floaties.' This phenomenon is a colloidal haze that forms when proteins from the malt form a loose bond with polyphenols from hops.

This haze compound forms at colder temperatures (hence the name) and, normally, when the beer warms up, the haze disappears. However, if the beer is stored refrigerated (as it should be) the haze particles will not dissolve as the beer warms, and then it becomes known as permanent haze. Permanent haze tends to clump together in the beer and stay there. These permanent haze clumps are known as floaties. 'Hop haze' is a permanent haze brought on my aggressive dry-hopping. This is different than chill haze and only happens when large quantities of hops are used in dry hopping. To eliminate hop haze, brewers can add lower alpha acid level hops in the first hop addition.

Some beers will normally develop a little bit of haze as they age and this is perfectly normal.

How do we prevent chill haze? There are a few ways that we can troubleshoot this issue in the brewery:

- Reduce the wort's exposure to oxygen and ensure a sufficient cold break during cooling (in other words, chill your wort fast enough after the boil and before primary fermentation).
- We need to closely monitor the composition of our malt. In years where malt has higher protein or beta glucan levels we can see more haze form in our beer. Dry-hopped beers tend to form more haze because the increased hopping adds more polyphenols to bond with the proteins.
- Another method attempts to remove the chill haze just before packaging. We can chill the beer after fermentation close to freezing and age it for several days or weeks before filtration, which forces the chill haze particles to form in the beer. Then, when the beer is filtered, the haze particles are trapped on the filter bed leaving the beer clear.
- Brewers can add Irish Moss, Whirlfloc, or other types of protein flocculants in the brewhouse. These compounds bond with the proteins during the kettle boil, creating larger, solid particles that are settled out as "trub" in the whirlpool. These are added during the kettle boil because wort needs to be super clear before adding yeast. Excess protein in wort can impact yeast performance and beer flavor. Add added benefit is that the decanting of clear wort off the trub effectively removes much of the protein that would otherwise go on to form chill haze.
- Some breweries add chillproofing agents such as silica gel (removes proteins), PVPP (removes polyphenols), or papain to the cold beer as it ages. These products react with either protein or polyphenol and form large haze particles that are easily filtered out. One downside to silica gel is that it may remove proteins that are responsible for head stabilization.

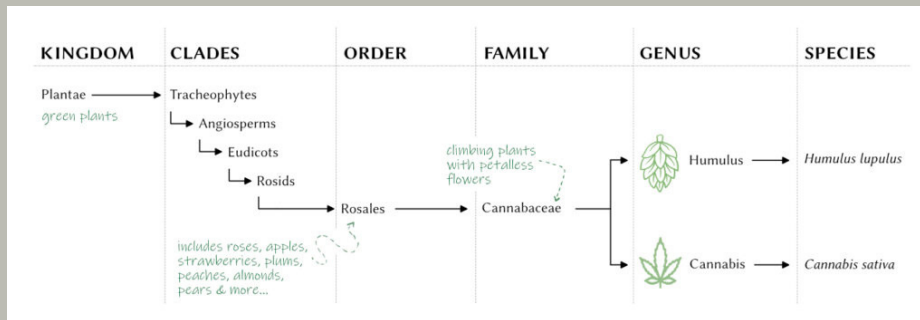
It's important to keep a couple of things in mind when looking at a beer with chill haze: chill haze will NOT affect beer taste at all. There is no flavor associated with chill haze. Additionally, there may be a slight increase in foaming as the beer is poured. The haze particles form nucleation points for CO₂ bubbles (like in the bottom of our taproom glassware). Again, this is not a flavor issue at all.



WHAT DOES "DANK" MEAN, EXACTLY?

DANK IPA

Certain hop varieties are known to exhibit the familiar smell of marijuana. That's no coincidence! The *Humulus lupulus* (hops) plant and the *Cannabis sativa* (marijuana) plant are actually cousins. As a result, they have a similar oil makeup, which is the reason for the familiar 'dank' smells between the two. In fact, if you're in the brewery for a wet hopped IPA brew day, you'll notice that those whole cone hops do smell a lot like weed.



The similarities don't stop with just the aroma compounds, though. The primary compound responsible for the bittering quality in hops is a terpenoid. A similar terpenoid is the primary active ingredient in 'dank' marijuana.

There are certain types of hops that exhibit a stronger 'dank' aroma and flavor profile than others, imparting a particularly strong essence of earthy-ness and grassy-ness.

Why are we calling this beer a Dank IPA and not just a West Coast IPA? Although it is a West Coast IPA at its core, we're looking to really amp up the pungent, funky, and odiferous aromas and flavors in this one. We want to make sure that Hop Heads know immediately that this IPA is going to be DANK so we decided to modify the style name to really leave no doubt for the consumers.

Why are we brewing a Dank IPA in the first place? Since the start of the pandemic, we've hosted a number of virtual beer tastings with our Head Brewers over the years. At the end of these sessions we always asked the same question: "What do you want us to brew that you've not seen us do before?" The answer 9 times out of 10 was "a SUPER dank IPA." So, we decided to listen to the people and give them what they're craving! The All You Need Is Dank was our first go at the Dank IPA and we're hoping Still Waters Run Dank is dripping with even more piney, resinous, and grassy goodness.