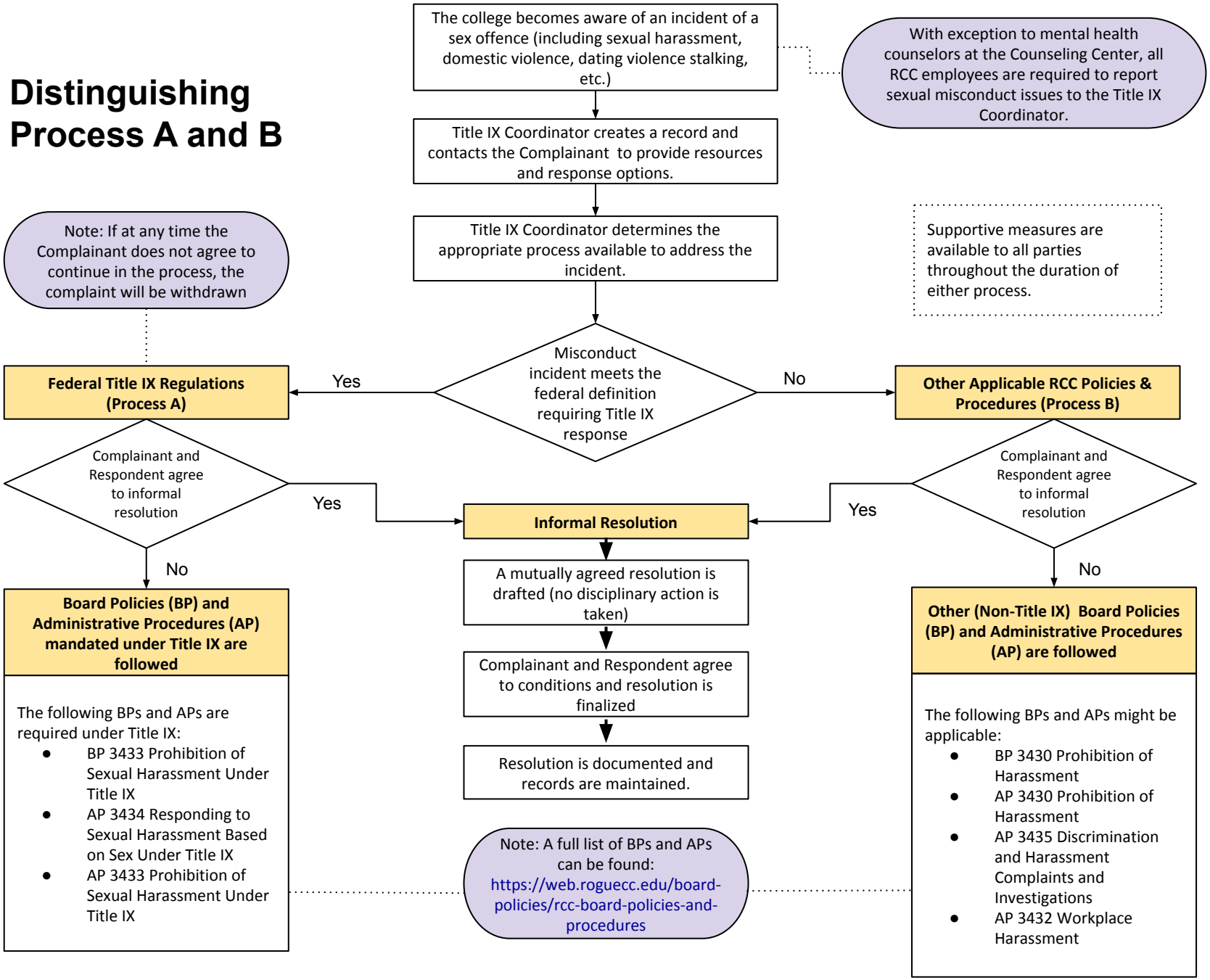Distinguishing Process A and B